CONTRIBUTIONS OF THE ABC METHOD IN THE FIRM MANAGEMENT

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Summary. The information about cost provided by the ABC method can be used for various purposes in the enterprise by the administration of the activities or ABM (Activity Based Management). The most interesting contribution of the ABC/ABM model is the horizontal dimension of the administration of the activities and, beyond that, the administration of prices. The model supplies a representation of the activities which allows an identification of the cause-effect relationships that connects the activities. The analysis of these relationships of causality allows an operational and strategic administration of the costs. The ABC accountant information provides the manager with the information he/she needs to administrate the activities and to practice the programs of leading and reducing the costs. In practice there can be multiple applications of the administration of the activities to the enterprises that develop an ABC system. In this article the most important of them were shown, which constitute contributions of the ABC method to the management of the firm.

Key-words: ABM, administration through activities, portfolio of products, the map of the activities.

The information about the cost provided by the ABC method can be used for different purposes in the enterprise by the administration of the activities or ABM (Activity Based Management). The administration of the activities aims at the assembly of actions that can be practiced by the enterprise by improving the efficiency and the efficacy of the activities and the processes by using the information related to the prices of the activities, processes, products, clients and other calculation objects, provided by the ABC calculation method. Figure 1 schematically presents the articulation of the ABC/ABM model on the one hand with a vertical model of the allocation of the cost of resources on activities and the cost of activities on calculation models and, on the other hand, with a horizontal level of administration of the activities based on the knowledge of the inductors of cost of the activities and on the dimensions of the performances in their fulfillment.

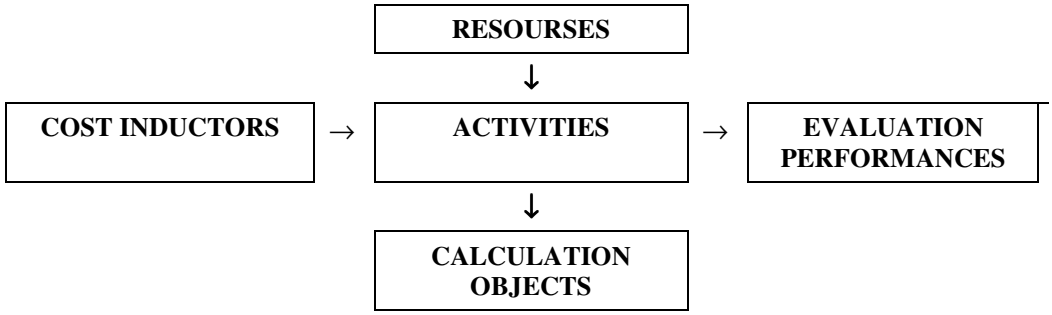

Fig. 1 ABC/ABM Model

The most interesting contribution of the ABM/ABC model is the horizontal dimension of the administration of activities and beyond, the administration of costs. The model provides a representation of the activities, allowing an identification of the cause-effect relationships that connects the activities between them, and the analysis of these relationships of causality allows an operational and strategic administration of the costs. The ABC accountant information gives the manager the information he/she needs to administrate the activities and to practice programs of leading and reducing costs. In practice there can be multiple applications of the administration of activities in the enterprises that develop the ABC

method. Further, a few of them will be presented without the details of the analysis that would exceed the object of this article.

The analysis of the profitability of the portfolio of products.

The first enterprises that acted to the calculation of the costs after the principles of the ABC method acquired a very different profitability of their product. To emphasize this, we consider the following example: The ALFA society presents the situation from table 1 regarding the production manufactured and has a classical system of cost calculation, where the assembly of the indirect expenses of the products is gathered in a single analysis center and is assigned on the products by a single work unit, respectively hour-worker (system I).

Explanation	Product A	Product B	Product C	Total
Production volume	80.000	11.000	65.000	156.000
Unitary sale price	91	95	65	-
Raw material/ unit of product	35	28	16	4.148.000
Direct labour/unit of product	16	8	12	2.148.000
Hours worker/ unit of product	2	1	1,5	265.500
Hours/unit of product	2	3	1	258.000
Total indirect expenses	-	-	-	5.253.100

Table no.1

The progressive automatization of the production process reduced the pertinence of the accountant information regarding the complete costs of the products. To consider this in the calculation of the costs, the unit of work hour-worker was replaced with the unit of work hour-machine (system II). However, the conditions of homogeneity of the costs are no longer respected in the classical calculation system of the costs from the ALFA society, where the human resources and the equipment are not consumed in the same proportion by all the products that use the services of the only analysis center. That is why, the society decided to introduce an accounting system based on activities, respectively the ABC method.

The full costs calculated by the ABC method are very different from the costs calculated in the classical accounting system, resulting from table no.2, especially as far as the B product is concerned.

Explanations	**Product A**	**Product B**	**Product C**
1.Sale price	91,00	95,00	65,00
2.Cost I (hour worker basis)	90,12	55,56	57,34
3.Net I (1-2)	0,88	39,44	7,66
4.Cost II (hour-machine basis)	91,72	97,08	48,36
5.Net II (1-4)	-0,72	-2,08	16,64
6. ABC full cost	87,84	107,61	51,35
7.Net ABC (1-6)	3,16	-12,62	13,65

Table no.2 The comparison of the full costs acquired through different accounting systems

Analyzing the data from table no. 2 we notice that at product B, the full cost and the profitableness are very different in the three ways of cost calculation. The B product seemed very profitable after the first calculation system, but it becomes inefficient if the hour-worker is replaced with the hour-machine as a single work unit, or if the ABC method is put into practice. The difference between the costs of the B

product is explained by the fact that the product is not a consumer of activities to a greater extent than the working hours lapse or machine working hours, that are work units appropriate for working level activities units. The exclusive use of the single working units for assigning the indirect costs of the B product triggers the underestimation of the costs of the B product because wasting the resources in activities of a higher level than that of the unit is proportionally more important than the consumption of activities of level unit, measured by single working units. As far as the A product is concerned, the change from the classical accounting system to the ABC method modifies equally the image profitableness of the A product that, from the position of the outsider (system I) or lean (system II), becomes profitable with a differential measure of profit of 4%. Regarding the C product, the three accounting systems point that it is profitable, but the net differential measure is doubled when we pass from system I to system II or ABC system. Table no. 3 shows the variation percentage of the full cost for the three products when we gradually pass from a system to another taking as a reference point the full costs of system I, that has at its base as a working unit, the hour per worker.

Products	The hour per working system	The machine working hour	The ABC system
A Product	90,12	+1,7%	-2,5%
B Product	55,56	+74,7%	+93,7%
C Product	57,35	-15,6%	-10,4%

Table no. 3 The compared evolution of the cost of the products

The results from table no. 3 can be placed on the same line with the majority of the results published in the accounting administration literature, relatively to the impact of the introduction of the ABC method on the full costs. They can be synthesized in the following way:

- the full costs of the products manufactured in large quantities, like the A and C products, regarding the ALFA society, are easily overevaluated in the administrative accounting classical systems, but in an increasing order, that rarely exceeds 10%. So, the profitableness is easily underevaluated. After the ABC analysis, we can notice the fact that the products which do not get too much credit from the management, insufficiently profitable, have a normal profitableness percentage for the large products on the strongly competing markets;
- the full costs of the manufactured in small quantity products as the B product, for the ALFA society, are strongly underevaluated in the classical accounting system and often in an increasing order, going up to 100%, even more in some extreme cases. Their excellent seeming profitableness most often conceals a failure of the sale prices, practiced to cover the assembly of costs of batch activities and of the sustaining of the product, that are done for the production of these small quantities. The example shown emphasizes the fact that the introduction of the accounting through activities generates a different image of the contribution of the products to the profitableness of the enterprise. Regarding the ALFA society, the products can be classified based on their contribution to the profitableness, resulting from table no. 4

Products	**Unitary differential measure**	**Sold quantity**	**Total profit**	**% of the total profit**
C Product	13,65	65.000	887.250	88,6%
A Product	3,16	80.000	252.800	25,3%
B Product	-12,62	11.000	-138.820	-13,9%
TOTAL			1.001.230	

Table no. 4 The relative contribution of the products to profitableness

Table no. 4 indicates the fact that a single C product contributes with almost 90% of the total profit of the enterprise, that two products, A and C, contribute with more than 100% of the total profit (almost 115%)

and B, the third product, involves a damage of the profitableness of the enterprise. Different studies made on the profitableness criteria of the products had similar results, even striking ones. Many times, 20% of the products of the enterprise generate profit and 80% of the products, which represent only 20% of the total amount business, hardly reach the balance or are easily lean- this is the case of the B product in the given example.

The administration of the activities based on the assembly of cause-effect relationships that connects the assembly of activities will allow the evaluation of different alternative solutions that aims at improving the profitableness of the products that are not profitable for the moment. Different solutions are considered , such as: the increase of the sale price, the analysis of the product concerning the reduction of its consumption of activities that have a high cost of production, the improvement of the production process etc.

The analysis of the clients` portfolio and the marketing politics

In the last 15 years the weight of the commercialization, distribution and marketing expenses in the structure of the costs has continuously increased at many enterprises, often succeeding in representing 15% up to 20% of the total costs. These expenses cannot be taken into account in the calculation of costs to evaluate the stocks. However, it is possible for them to be ascribed to the objects of calculation, the clients or the products that consume these activities.

The commercialization, distribution and marketing activities can be the object of the same type of analysis, like the support activities of the production. There is, at the same time, a hierarchy of the costs of these activities:

- the unit level activities;
- command level activities, similar with the production lot: all the activities connected by the taking and the treatment of the order, independently of the commanded products;
- activities of level of sustaining the client: assembly of one time realized administrative activities for every client;
- activities of level of sustaining the sign: an enrolling or publicity company.

Different clients can consume these activities differently. The scheduled politics, based on the application of a different measure equable to all clients to cover the commercialization, distribution and marketing expenses, can create great distortions in the clients` contribution to the profits of the enterprise. The ABC analysis will allow the establishment of a map of the assembly of the marketing activities, of the costs, of the inductors and of the dimensions of the performance. Based on this accountant information, it will be possible to establish a classification of the enterprise's clients, based on their contribution to the profitableness of the enterprise. The first enterprises that made this analysis acquired very surprising results, where 20 % of the clients had 300% profit, 75% of the clients were in a dead point and easily in loss and 5% of the clients had significant loses.

The administration of the activities will allow the analysis of different options to try to make the profitable clients that generate important loses. The map of the activities, combined with the ABC accounting information, will allow the imaging of alternative commercialization and distributions of the products scripts, to improve the profitableness of some clients that consume more activities without paying their price.

The analysis of the relationships with the suppliers

Another application of the approach of the administration of activities is to make a detailed analysis of the assembly of activities that are involved in the supplying policy of the enterprise and in the administration of the relationships with the suppliers. The objective is no longer to reduce the acquisition price of the suppliers, but to decrease the total cost of the suppliers and of the assembly of interfacing activities, regardless of their position in the organization of the enterprise. The map of the activities allows the identification of the assembly of the activities that occur in the supplying policy and the accountings through activities indicate the cost of the resources involved in these activities. An important part of the activities of the supplying process, like the commands, the reception, the control of the quality at the entrance, the payment of the suppliers, are activities of lot level. Their taking into consideration in a

classical accounting administration system, based on the percentage of the increase of the suppliers, risks to trigger important distortions in the cost of the products, as there are important differences of production volume between products.

The disposal of ABC information on the supplying activities and of the consumption for different products of the enterprise allows the management to reconsider the assembly of the supplying system, to modify and negotiate the commitments with the suppliers that would reduce the cost for the two partners, through the electronic transfer of the funds for the deliveries on time and/or the suppressing of the quality controls at the reception. The approach is to optimize the assembly of the process, by using the available accounting information about the cost of different activities that make up the supplying process.

The outlook of the new products

It presents importance the solution chosen in the moment of the conception and the developing product for the future cost of the production. The technical conception choices, the choice of the components of the product conditions more than 80% of the total production costs on the assembly of the cycle of life of the product.

Two accounting innovations, the ABC method and the "Target costing" one, made possible the control of the costs in the moment of the conception stage of the new product. The accounting information supplied by the ABC system can be used to give the engineers of conception and of the developing the new products information on the consequences of their choices, about the future production cost of the product they are just making.

The map of the activities and the suitable cost for every activity allow the engineers to compare the cost of different technical solutions that are possible in the moment of the conception of the product. The ABC analysis allows seeing that the multiplication of the different components increases the cost with the supporting activities of the production and that the referring to common marks would allow the drastic reduction of the costs of the supporting activities. A strategy of differentiation will be less expensive for the enterprise when the solution of the conception of the product aims more at the using of standard marks and the postponement, as much as possible of the personalization of the product.

Conclusions

The ABC method has two complementary orientations: one which concerns the calculation and the analysis of the costs and another one which aims it as an instrument of measuring the performances of the enterprise. The superior quality of the accounting information about the costs, acquired through the ABC method, allows making the best decisions concerning the conception and the manufacturing of the products, the externalization of some products or components, the orientation towards the client, the relationships with the suppliers, as shown above. The map of the activities supplied by the ABC method allows the redressing of the managers` attention towards the elimination of non-productive valueless activities, which leads to the diminishing of the costs of the enterprise, without a reduction of the value of the product offered to the clients. The suppressing of these activities assumes solving the problem upstream and downstream.

Also, the ABC method allows the comparison of the performance level reached by different organizational structures to accomplish an activity with an internal or external reference level of the enterprise.

Besides the shown advantages, the ABC/ABM can be the object of criticism. The main disadvantage of the ABC/ABM model is that the administration through activities doesn`t help to the increase of the competitiveness but has to be filled with the orientation to the final consumer. On the other hand, the orientation of the enterprise towards the satisfaction of the client no matter what leads to the privilege of a more external orientation of the accounting administrative system. However, this external orientation doesn`t remove the necessity of disposing the accounting information about the development of the processes and the phenomena inside the enterprise, to compare with the competition. The accounting through activities does not have as objective the supplying of an accounting information in time to sustain the current administration of the operations, but the supplying of a pertinent information in making the medium and long term strategic decision.

Another problem that the representation of the enterprise assigns as an assembly of activities and processes is that of its articulation with the structure of responsibilities that correspond most often to an organization

through functions rather than through processes. In some cases, the structure of the accounting re-grouping centers through activities that ensure a relative precision of the costs does not correspond to the structure of the accounting re-grouping centers through responsibility centers. The replacement of the traditional system, based on responsibility centers, through an ABC system would risk paralyzing the administration of the enterprise because the ones to blame would not have an information on the responsibility they have.

In practice, the ABC systems, in the majority of cases, were developed simultaneously and remained independent of the traditional accounting system, even if it inspired them for part of the information that they needed. The traditional accounting system was not modified and continued to work as before. This fact maintained the articulation of the system of accounting information with the authority system and allowed the comparison with past data and assured the continuity in the analysis of the accounting information. The ABC system that works independently is used for the analysis of the costs of the cost objects, once or twice a year, and for the analysis of the strategic decision concerning the policy of the product, the decisions of externalization, etc.

In conclusion, a stage of the cost of the cost objects, calculated after the ABC principles, updated once or twice a year, can generate pertinent information to guide the making of a strategic decision.

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