

# ACTIVITY-BASED COSTING APPLIED TO AN ACCOUNTING COMPANY

Carmen Elena ANTON<sup>1</sup>

**Abstract:** *The paper approaches the application of the Activity-Based Costing (ABC) calculation method within an accounting services company. The method is among the modern methods used in the calculation of the cost which takes into consideration a more cautious distribution of resources based on the activities that lead to the achievement of an objective. The purpose of the study is the distribution of costs to the groups of significant services performed by the accounting company: bookkeeping services, general accounting services and the preparation of financial statements and analysis. The ABC method starts from the organization of the company by processes and activities and from a less subjective allocation of overheads compared to the traditional method.*

**Key words:** *Activity-Based Costing, activities, processes, cost inducers, accounting services.*

## 1. Introduction

The Activity Based Costing (ABC) calculation method is among the modern calculation methods emphasizing the analysis and strict distribution of overheads. In the specialized literature, terms such as *activity-based costing*, *process costing*, *transaction costing* or *event costing* are interpreted with the same meaning. In the United States of America (USA), the foundations of the calculation system that appeared under the name Activity-Based Costing (ABC) were built by the group „International Consortium for Advanced Processing" (C.A.M.I) (Căpuşneanu, 2013) and were established at the end of the '80s. The ABC method goes beyond the concept of a cost calculation system and is considered a new way of approaching business management, which improves the company's performance by focusing on the causes of costs determined by the processes carried out in the organization.

The extremely competitive environment nowadays has forced organizations to implement advanced costing systems (Ghanbari, et al., 2016) to prevent problems encountered by accountants and cost managers regarding the inaccuracy of productivity and cost estimation (Oker and Adiguzel, 2016).

The ABC method was developed by Robert S. Kaplan in the early 1980s as an

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<sup>1</sup> Transilvania University of Braşov, [carmen.anton@unitbv.ro](mailto:carmen.anton@unitbv.ro), ORCID ID: 0000-0002-9154-0752

alternative to the traditional costing system (TCS). ABC is a costing system that uses activities to assign the cost of resources to products or services (Oker and Ozyapici, 2013). Various studies on activity-based costing outlined barriers to the implementation of the method and the problems encountered both during the implementation process and during the use of the system (Zaneta Pietrzak, et al., 2020). The ABC system and its implementation issues were also studied by Clarke and Mullins (2001), Askarany and Yazdifar (2007), ElGammal et al. (2016), Quinn et al. (2017) and Hudakova and Bajus (2015).

Starting from the analysis of the production cost, which includes the material expenses and the direct salary expenses to which the shares of the overheads are added and from the need for the precise management of the overhead expenses (50% - 60% of the cost are overheads expenses), the application of the ABC method determines the possibility of tracking them by individual products or groups of products, taking into account that activities and processes consume resources (Căpuşeanu, 2013). The ABC method relies on the principle that processes consist of activities that consume resources.

Consequently, each company must analyse the processes, activities and resources necessary to obtain the products. The analysis of the ABC method (Căpuşeanu, 2013) leads to the following grouping: „family of processes, processes, activities and operations" - the family of processes refers to a set of inter-connected processes, the processes are a grouping of several activities, and the activity is a grouping of several operations that contribute to achieving an objective. Determining exact costs is influenced by accurately identifying cost drivers known as *cost drivers*. *Cost drivers* are the units of measure used to allocate overheads. They are determined with great care, since the wrong choice can lead to the wrong distribution on the cost bearers and, finally, to the determination of costs that do not reflect reality. We exemplify a general description of the activities and cost drivers at the level of an accounting services company:

*Activities and cost drivers for the financial – accounting services* Table 1

<b>Activities</b>	<b>(determinant) Cost drivers</b>
Secretary office activities – current serving of clients (guiding the clients, answering the phone, receiving orders etc.);	Number of processed orders
Selecting and negotiating the contracts with the clients;	Number of concluded contracts
Receiving the documents received for processing;	Number of received documents
Processing the documents in order to obtain synthesis records;	Number of processed documents
Clients' administration and analysis of their profitability;	Number of analysed clients
Attracting and keeping clients –setting and designing offers for the collaboration with new clients;	Number of targeted clients
Maintaining and developing the company's site, presenting the offer of accounting and consultancy services etc.	Number of presented offers

The implementation of the ABC method helps solving the problems related to the

profitability of the products, the profitability of the customers, cost quantification for customer acquisition and service activities.

Approaching cost management in a new way eliminates many of the shortcomings of conventional cost accounting, impacting economic decisions and product mix.

## 2. Research Methodology

The paper presents an approach to cost management for the services provided by an accounting company, and the example illustrates the impact of the ABC method on economic decisions referring to the allocation of resources through the implementation of improved cost management practices.

The purpose of the paper is to apply the ABC method in determining costs for a company whose business is the provision of accounting services. The working methodology addressed in the presentation of the study is the following:

- ✓ Identifying the cost of resources consumed in the accounting company within one month of activity
- ✓ Determining the activities for the execution of the range of accounting services;
- ✓ Determining the cost drivers per regrouping centres by activities and products;
- ✓ Establishing the costs of resources per the regrouping centres by activities;
- ✓ Determining the cost of the activities performed on the products made by the company;
- ✓ Tabular rendering of the application stages of the Activity Based Costing (ABC) method to determine the executed services cost.

The set goals require the study of specialized literature, systematic centralization, synthesis, analysis and case study. The architecture of the application of research methods is based on analysis and critical thinking (Andone et. al., 2013).

## 3. Research Results

To analyse the results of applying the method in a company providing accounting services, we consider the following groups of services: bookkeeping services, general accounting services and financial statements and analysis for which the amount of resources consumed are presented in the table below. Moreover, we identify the cost drivers for the resources consumed (number of employees, area of work space in square meters and number of work orders).

*Cost of consumed resource*

Table 2

<b>Resource cost</b>	<b>Value (lei)</b>	<b>Resource course drivers</b>
Wages	55,100	Number of employees
Office spaces	5,500	Area in sqm
Consumables	750	Number of orders
<b>Total costs</b>	<b>61,350.00</b>	

The activities leading to the execution of bookkeeping services, general accounting and the preparation of financial statements are: legal advice, production (data collection, preparation of payrolls, preparation of declarations, preparation of Value Added Tax journals, preparation of the accounting journal, verification of account sheets, preparation of the tax register, verification of depreciation plans, preparation and verification of account balances, verification of balances of debts and receivables, etc.) and consultancy and analysis. To facilitate the implementation of the method, the costs are distributed by activities. The cost regrouping centres by activity are presented in the table below:

*Regrouping centres by activity*

Table 3

<b>Regrouping centres</b>	<b>Number of employees</b>	<b>Area in sqm</b>	<b>Number of orders</b>
Legal advice	2	20	2
Production	7	90	5
Consultancy and analysis	1	10	1
<b>TOTAL</b>	<b>10</b>	<b>120</b>	<b>8</b>

The participation of resources in obtaining the services referred to depends on the degree of use in each activity, identifying the activities cost drivers (number of hours of legal advice, number of hours of accounting execution and number of consulting hours).

The allocation of the cost of resources by products/services performed, using the cost drivers of the activities and taking into consideration that for each service the values from the following table have been recorded, follows the methodology below.

*Cost drivers by activities and products/ services*

Table 4

<b>Regrouping centres by activity</b>	<b>Activity cost drivers</b>	<b>Bookkeeping services</b>	<b>General accounting services</b>	<b>Financial statements and analysis</b>	<b>Total</b>
Legal advice	Number of hours of legal advice	30	272	50	352
Production	Number of accounting execution	20	480	150	650
Consultancy and analysis	Number of hours of consultancy	40	80	56	176

**The work methodology** is rendered below, in the following stages.

**Stage I. Cost regrouping centres by activity** - includes the distribution of the costs of consumed resources (salary expenses, office space expenses, consumables expenses) on each activity centre (legal advice, production, consulting and analysis).

*Legal advice*

Table 5

<b>Designation</b>	<b>Calculation formula</b>	<b>Value (lei)</b>
Wages	(Total costs * no. of employees)/ Total employees	11,020
Office spaces	(Total costs * area in sqm)/ Total area in sqm	916.67
Consumables	(Total costs * No. of orders)/ Total numbers of orders	187.5

*Production*

Table 6

<b>Designation</b>	<b>Calculation formula</b>	<b>Value (lei)</b>
Wages	(Total costs * no. of employees)/ Total employees	38,570
Office spaces	(Total costs * area in sqm)/ Total area in sqm	4,125
Consumables	(Total costs * No. of orders)/ Total numbers of orders	468.75

*Consultancy and analysis*

Table 7

<b>Designation</b>	<b>Calculation formula</b>	<b>Value (lei)</b>
Wages	(Total costs * no. of employees)/ Total employees	5,510
Office spaces	(Total costs * area in sqm)/ Total area in sqm	458.33
Consumables	(Total costs * No. of orders)/ Total numbers of orders	93.75

The resource costs distribution by activities according to resource cost drivers is centralized in the table below.

*Resource costs distribution*

Table 8

<b>Resource costs</b>	<b>Legal advice</b>	<b>Production</b>	<b>Consultancy and analysis</b>	<b>Value (lei)</b>
Wages	11,020	38,570	5,510	55,100
Office spaces	916.67	4,125	458.33	5,500
Consumables	187.5	468.75	93.75	750
Total	12,124.17	43,163.75	6,062.08	61,350

**Stage II. The calculation of the cost per number for each of the cost drivers of the activities (number of hours of legal advice, number of hours of accounting execution, number of consulting hours)** – contains the determination of the cost of one hour of assistance for legal advice, the determination of the cost of organizing the accounting of a micro-entity – the cost of an hour of accounting execution, determining the cost of an hour of consulting and analysis.

*Cost for each cost driver by activity*

Table 9

<b>Designation</b>	<b>Calculation formula</b>	<b>Value (lei/hour)</b>
Legal advice	Total cost / no. of hours of assistance =12,124.17/352	34.44
Production	Total cost/no. of hours of work =43,163.75/650	66.41
Consultancy and analysis	Total cost / no. of hours of consultancy =6,062.08/176	34.44

**Stage III. Distribution of the cost of activities by products** - helps to determine the cost of resources consumed by each activity by range of products/services performed by the accounting company, i.e. from the total of 12,124.17 lei related to the legal advice activity, the amount of 1,033.31 lei is recorded for bookkeeping services, 9,368.68 lei for general accounting and 1,722.18 lei are distributed to the services of preparing financial statements and analysis. Likewise, the cost of resources related to production and consulting and analysis is distributed.

*Cost of legal advice by products*

Table 10

<b>Activity</b>	<b>Products</b>	<b>Calculation formula</b>	<b>Value (lei)</b>
<b>Legal advice</b>	<i>Bookkeeping services</i>	34.44 lei/hour *30 hours	1,033.31
	<i>General accounting services</i>	34.44 lei/hour *272 hours	9,368.68
	<i>Financial statements and analysis</i>	34.44 lei/hour *50 hours	1,722.18
<b>TOTAL</b>			12,124.17

*Cost of manufacture by products*

Table 11

<b>Activity</b>	<b>Products</b>	<b>Calculation formula</b>	<b>Value (lei)</b>
<b>Production</b>	<i>Bookkeeping services</i>	66.41 lei/ hour *20 hours	1,328.20
	<i>General accounting services</i>	66.41 lei/hour *480 hours	31,876.80
	<i>Financial statements and analysis</i>	66.41 lei/ hour *150 hours	9,958.75
<b>TOTAL</b>			43,163.75

*Cost of consultancy and products analysis*

Table 12

<b>Activity</b>	<b>Products</b>	<b>Calculation formula</b>	<b>Value (lei)</b>
<b>Consultancy and analysis</b>	<i>Bookkeeping services</i>	34.44 lei/hour *40 hours	1,377.75
	<i>General accounting services</i>	34.44 lei/hour *80 hours	2,755.49
	<i>Financial statements and analysis</i>	34.44 lei/ hour *56 hours	1,928.84
<b>TOTAL</b>			6,062.08

Therefore, a centralization of the distribution of the resource cost consumed for each range of services provided by the accounting company subject to the case study is achieved by applying the Activity Based Costing method, recording the value of 3,739.26 lei for bookkeeping services, 44,000.97 lei for accounting services general and 13,609.77 lei related to the preparation of financial statements and analysis.

*Results centralization and determination of the cost by analysed services* Table 13

<b>Designation</b>	<b>Bookkeeping services</b>	<b>General accounting services</b>	<b>Financial statements and analysis</b>	<b>Total</b>
Legal advice	1,033.31	9,368.68	1,722.18	12,124.17
Production	1,328.20	31,876.80	9,958.75	43,163.75
Consultancy and analysis	1,377.75	2,755.49	1,928.84	6,062.08
<b>TOTAL</b>	<b>3,739.26</b>	<b>44,000.97</b>	<b>13,609.77</b>	<b>61,350.00</b>

Based on the calculations made, it can be noticed that the total costs of the resources consumed (salary expenses, expenses regarding the premises where the activity is being carried out, expenses with consumable materials) were distributed taking into consideration the activity grouping centres by each group of services provided by the accounting company.

#### 4. Conclusion

The results determined through the ABC method help the management achieve an efficient allocation of resources, the analysis being more nuanced and refined. Compared to the ABC method, although the total costs are the same, the traditional method analyses the distribution of each type of expense according to a distribution basis that expresses a relationship with the overheads, and, as such, there is a high degree of subjectivity.

In the case of the ABC method, if activities and cost drivers are identified as close as possible to reality, the results obtained are less subject to subjectivity.

Carrying out a study of the ABC method compared to the traditional method leads to a detailed and in-depth analysis of the features of the two methods in order to choose and implement them to determine the cost of the activity results. The features of the two methods are presented in the table below:

*Comparison between the ABC method and the traditional method* Table 14

<b>ABC method</b>	<b>Traditional method</b>
Starts from the premises that products consume activities and activities consume resources. It uses the concept of a cost driver (cost determinant) which helps to distribute the expenses by activities	It uses a single criterion for the allocation of overheads called „allocation base”
Determining the cost per cost driver by relating the expenses connected to the R activity to the sum of the drivers related to activity R.	The overheads are distributed according to the additional coefficient (allocation) (K) determined by relating the expenses to be distributed to the sum of the allocation bases: $K = \frac{\sum \text{expenses to be distributed}}{\sum \text{of the distribution bases}}$
Establishing the shares of overheads related to each product in each activity. If there are R activities, there will be R spending shares for each product.	Establishing the shares of overheads related to each product. If it is just an overhead allocation, each product gets a share of the overhead.

Source: adapted according to Corina-Graziella Bătcă-Dumitru, Daniela-Artemisa Calu, Andreea Gabriela Ponorică, (2020). *Contabilitate managerială*, CECCAR Publishing House, Bucharest, p. 128.

Modern production systems require cost management that responds as faithfully as possible to the consumption recorded for each individual product/service. Still, many companies apply the traditional cost allocation system that uses the direct cost relationship to allocate overheads, resulting in high costs. Considering the cutting-edge

technology of organizations, labour costs are reduced, but overheads increase, which requires their thorough analysis and resource-consuming activities.

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