

*Full Length Research Paper*

# **Applying activity based costing model on cost accounting of provider of universal postal services in developing countries**

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**One of the effects of the current postal legislation is that a request by the public postal operators must publish accounting data on their operations while respecting a number of criteria. The obligation of the public operator involves keeping separate accounts for reserved and unreserved services. Directive of European Parliament and of the Council from the 1997 includes guide for the issue of mechanism for the allocation of costs, which should be kept in the preparation of these financial statements. According to the provisions of the directive 97/67/EC, such accounts must be verified and made public in accordance with common standards that apply to the commercial activities of certain countries. In this paper, authors have presented the necessity of compliance with mentioned legislation through the application of activity based costing (ABC) method for calculation of costs to the business of the public postal operator. Observed the operator of one of the developing countries, that is his business has applied ABC method for calculation of costs, with some of its modifications, and results were obtained that fully meet the requirements of the directive and significantly simplify the accounting system of the operator.**

**Key words:** Directive 97/67/EC, costs, ABC, public postal operator.

## **INTRODUCTION**

The regulatory framework regulating the process of liberalization of the European postal market is necessary not only to ensure high quality of the process, but primarily to avoid cross-subsidies principle (when a service or group of services creates a financial surplus that is used to cover the losses generated by other services) between the reserved and unreserved areas of postal services (Brandt, 2007). Therefore, the pricing in line with the cost is a very important goal of national regulatory bodies, and to ensure transparency, information on cost-accounting systems of universal service providers are necessary.

For postal traffic, allocation of costs for services is the most important point because in this business offer and perform various services using a single, common for all subjects, postal network, resulting in the creation of

general expenses. Article 14 (3) of Directive 97/67/EC provides clear rules on the allocation of costs of postal services, which are widely accepted by the universal service providers and national regulatory bodies (Directive 97/67/EC, Directive 2002/39/EC). As long as these rules are well accepted by private operators, they should not be changed. The objectives of the research on the systems cost of universal service providers are:

- Scientific analysis of the different methods of calculating costs that are particularly useful for the postal and distribution businesses,
- collecting information and giving reviews on the current methods of cost accounting practice by service providers. The focus is on verifying and documenting the actual application of Article 14 of the national postal legislation,
- defining the minimum European requirements on transparency of cost and description of critical points of the system,
- identify best practices/guidelines, which make possible

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to avoid the appearance of cross-subsidies and the achievement of separation of accounts,  
 - Creation of recommendations on transparency in the billing system for the European Commission.

#### **ARTICLE 14 OF DIRECTIVE 97/67/EC AND THE RULES ON ALLOCATION OF COSTS**

The system of accounting and separation costs is closely regulated by Article 14 of Directive 97/67/EC. Directive provides specific rules on the allocation of costs that are accepted by the universal service providers and national regulators (Directive 97/67/EC):

1. Member States shall take the measures necessary to ensure, within two years of the date of entry into force of this Directive, that the accounting of the universal service providers is conducted in accordance with the provisions of this Article.

2. The universal service providers shall keep separate accounts within their internal accounting systems at least for each of the services within the reserved sector on the one hand and for the non-reserved services on the other. The accounts for the non-reserved services should clearly distinguish between services which are part of the universal service and services which are not. Such internal accounting systems shall operate on the basis of consistently applied and objectively justifiable cost accounting principles.

3. The accounting systems referred to in paragraph 2 shall, without prejudice to paragraph 4, allocate costs to each of the reserved and to the non-reserved services respectively in the following manner:

(a) Costs which can be directly assigned to a particular service shall be so assigned;

(b) Common costs, that is costs which cannot be directly assigned to a particular service, shall be allocated as follows:

(i) Whenever possible, common costs shall be allocated on the basis of direct analysis of the origin of the costs themselves;

(ii) when direct analysis is not possible, common cost categories shall be allocated on the basis of an indirect linkage to another cost category or group of cost categories for which a direct assignment or allocation is possible; the indirect linkage shall be based on comparable cost structures;

(iii) when neither direct nor indirect measures of cost allocation can be found, the cost category shall be allocated on the basis of a general allocator computed by using the ratio of all expenses directly or indirectly assigned or allocated, on the one hand, to each of the reserved services and, on the other hand, to the other services.

4. Other cost accounting systems may be applied only if they are compatible with paragraph 2 and have been approved by the national regulatory authority. The Commission shall be informed prior to their application.

5. National regulatory authorities shall ensure that compliance with one of the cost accounting systems described in paragraphs 3 or 4 is verified by a competent body which is independent of the universal service provider. Member States shall ensure that a statement concerning compliance is published periodically.

6. The national regulatory authority shall keep available, to an adequate level of detail, information on the cost accounting systems applied by a universal service provider, and shall submit such information to the Commission on request.

7. On request, detailed accounting information arising from these systems shall be made available in confidence to the national regulatory authority and to the Commission.

8. Where a given Member State has not reserved any of the services reservable under Article 7 and as not established a compensation fund for universal service provision, as permitted under Article 9(4), and where the national regulatory authority is satisfied that none of the designated universal service providers in that Member State is in receipt of State subvention, hidden or otherwise, the national regulatory authority may decide not to apply the requirements of paragraphs 2, 3, 4, 5, 6 and 7 of this Article. The national regulatory authority shall inform the Commission of all such decisions.

Research on the application of Article 14 of the Directive in national postal legislation shows that all countries applied or intends to apply the provisions of this Article. This means that the most important aspects of the cost covered in accordance with Article 14 (Blagojević et al., 2009; Blagojević and Marković, 2008).

The main tasks of national regulatory authorities are preserving universal service, prevention of discrimination, promotion of competition, while each operator seeks to provide universal service without a deficit. The stated aspirations and expectations often cause conflicts in the regulatory process. They are mainly related to the problem of availability of data on costs because operators often are not able (or not) to provide detailed information about them (Australian National Audit Office, 2002). Information on cost-accounting systems of universal service providers are necessary in order to introduce transparency in the costs of all types of services and prevent cross-subsidies principle between the reserved and unreserved areas.

Transparent cost-accounting systems guarantee fast and simple price approval procedure and, thanks to its such characteristics, reduce transaction costs of providers and national regulators (Bacon and Coughlin, 2004).

Evaluating different methods of cost accounting that can be applied in the postal sector, also are taken into

account the rules on calculating the costs defined in Article 14, which represent the theoretical approach, as well as their application by the universal service providers, private operators and other companies.

The objectives that the universal service providers want to achieve by any method of cost calculation are (Calzada, 2009):

- determining price,
- Offer of profitable services,
- motivating management to achieve efficient operations.

The objectives that the national regulator wants to achieve by any method of cost calculation are approving the price, which includes checking that prices are cost oriented, preventing cross-subsidy principle, prevention of discrimination (Cremer et al., 2007).

Recommendations for universal service providers:

- distribution of costs per activity per annum
- Separating the costs of various regulated areas and different types of services
- Distinguishing the types of costs
- Planning costs (standard model calculation)
- Monthly accounting and separation costs between regions and users.

Relevant with the distribution of general expenses, which have no direct connection to three different areas of services (universal service, reserved and unreserved) should consider the following approaches:

- All universal service providers should to use activity based costing model for the distribution of costs across all three areas of service delivery,
- activity based costing model assumes that the costs aren't incurred only as a consequence of productive activities but also as a consequence of supporting activities (fully distributed costs),
- Overheads are assigned to an activity based on the extent to which this activity is used,
- General costs should be distributed to the activities of all three areas of services, based on carrier costs,
- All providers of universal service should prove a complete distribution of overhead costs based on accepted methods of distribution,
- in relation to the internal system of tariffs must govern the principle of avoiding transmission costs and revenues between service areas or between postal sector and other sectors such as financial services, logistics and so on.

In allocation of costs, the cost drivers are of exceptional importance (Rodriguez and Storer, 2000). Cost driver is a factor or the case who has a systematic connection with a specific type of cost and the cost of that cause.

Used methods for allocation are techniques that locate at the relevant way operator's costs, in other words,

resource allocation is done by the activities and costs by activities. Accurate selection of resources, activities and cost drivers is crucial for the activity based costing analysis.

In those analysis, the cost drivers are a key determinant in describing the changes and increase of costs. Well-defined cost-allocation system should ensure a high percentage (from the practice over of 90%) of costs allocation of direct and indirect causes. It is important to:

- identify all activities in the chain of postal processes
- allocate the appropriate cost drivers in relation to the activities:

1. Identification of overheads
2. Analyzing the activities that represent the "epicenter" of costs
3. Defining individual processes/activities and the parameters of their cost drivers
4. Allocation capacity costs to the activities / processes
5. Consolidation of individual processes/activities to the main process/activity.

## METHODOLOGY

### Basics of the activity-based costing model-ABC

One innovative costing method designed to deal with deficiencies of traditional costing systems is Activity Based Costing (ABC). ABC, pioneered by Robin Cooper, Robert Kaplan and H. Thomas Johnson (Cooper, 1988a, 1988b, 1990; Cooper and Kaplan, 1988), is a costing methodology used to trace overhead costs directly to cost objects, that is, products, processes, services, or customers and help managers to make the right decisions regarding product mix and competitive strategies. ABC can radically change how managers determine the mix of their product line, price their products, identify the location for sourcing components, and assess new technology. Also, evident is the use of ABC to manage more effectively (Granof et al., 2000). The underlying assumption of this control method is that you can not manage costs, but activities that cause them. Each business activity using certain resources and that utilization results by the outcomes of the cost (but not necessarily the outcomes). Activities are conducted in order to make business processes that realize a value for the product, customer or other business processes. Activity-based costing as a modern method of calculation, aims to establish reliable information on costs of products and services. This method of calculation is based on the idea that products or services consume activities and activities consume resources (Roztocki et al., 1999). ABC reshape the way business manage costs, and represents a modern tool for managing complex business operations through a detailed analysis and evaluation of activities. In this regard, Olutunla and Obamuyi (2008) states that the equation specified profitability as dependent variable and loans, sales, age of business, size of business and interest rate as independent variables. All listed variables could be treated as elements of the ABC analysis conducted over the public postal operator. Also, at the example of Keelung Harbor (Lin and Yahalom, 2009) the authors design an evaluation system integrating balanced scorecard with activity-based budgeting and cost control to examine the rate of target achievement performance.

In that light, ABC analysis is an integral part of the activity-based budgeting.

In the earliest stage of development, the ABC was aimed to

establish reliable information on cost of products or services compared to traditional methods of cost (Ben-Arieh and Qian, 2003). Later its use spread to determine information about costs, and nonfinancial information on activities in order to provide a better basis for conducting business and the appropriate management activities.

ABC includes a new calculation procedure of the calculation cost of products/services, significantly different from those applied by the classical method of calculating costs. The difference is reflected in the conceptual basis of calculating costs and applied basis for allocation of overhead costs. Conceptual basis of the ABC are the different activities carried out within the production and nonproduction functional areas (Pohlen, 2000).

The choice of activities is a critical step in designing activity-based costing. Depends of the organizational structure, its size, and similar types of activity. The choice of activities must take into account the materiality criteria and objectives costing activities (Iltner et al., 2002). The analysis of the activities identified significant activities of the company and creates a clear and concise basis for describing business operations and for the determination of their costs and performance. This allows a better understanding of the functioning of enterprises and improvement of business performance (Granof et al., 2000). Using the cause of consumption of resources, ABC distributes overhead costs to activities. Cause consumption of resources is in fact the basis of cost sharing of resources by activities. In further proceedings the costs of the activities allocated to facilities using the cause of spending activities. Objects of spending are the end point to which the costs of each activity carried. They are the reason for the performance of the company and represent a starting point for defining the work, accordingly necessary activities for the production of products and customer satisfaction requirements (NERA, 1998). In theory, Cooper describes two stages in the ABC model (Cooper, 1987; Cooper, 1987b). In the first stage, costs are assigned to cost pools within an activity center, based on a cost driver. There is no equivalent step in a traditional costing approach. In the second stage, costs are allocated from the cost pools to a product based on the product's consumption of the activities.

#### **Case study - accounting costs of selected public postal operator by using activity-based costing methodology**

As previously noted, under the provisions of Article 14 of Directive 97/67/EC, the public postal operator is obliged to keep separate accounting records for reserved, universal postal services and postal service outside the domain of the universal postal service, a competent independent body must verify the selected billing system.

The essence of all methods that are used for this purpose is to allocate the costs (direct and common) by services in order to avoid the negative phenomenon of cross-subsidy. The most suitable of all methods, which also is recommended by the Directive, has activity based costing - ABC method. ABC method assumes that costs are not incurred only as a consequence of productive activities but also as a consequence of supporting activities (Narayanan, 2003). General-common costs should be distributed to the activities of all three areas of services based on cost drivers.

All universal service providers must demonstrate a complete distribution of overhead costs based on accepted methods of distribution. In relation to the internal system of tariffs must govern the principle of avoiding transmission costs and revenues between service areas or between postal sector and other sectors such as financial services, logistics and so on (Themido et al., 2000). Access to the costs of public postal operator, which implies that the total cost of the operator were involved in his duties, is helped many industrialized countries, as well as developing countries to accurately assess the economic and financial needs due to

providing universal postal services (Panzar, 2000). This approach, which represents the association between activity-based costing and improvement in financial (Cagwin and Bouwman, 2000) based on total costs, taking into account the additional costs of operators, which are fixed and variable, direct and indirect costs of all services that are included in liabilities, and costs of implementing operational and administrative activities on the whole territory covered. Determining the actual costs that arise when providing universal service is a difficult task that is put before the operators and regulators (Qian and Ben-Arieh, 2007). The purpose of cost management is to determine the difference between the costs of providing universal service and revenue arising from these services. Application of the ABC method will show in detail the main categories of costs by grouping processes or activities and rules that govern the allocation of costs for services that will serve as the basis for designing software solutions for managing the cost of internal accounting. It is necessary to identify all the resources that the operator uses to perform its mission, and identify costs of resources. This involves previously identifying the activities by technological processes and assigning the costs of resource to activities. At the end, activities are associated with the cost of services using the drivers through which we have monetary value of services. Forward, described the model will be applied to the public postal operator of selected developing country, and the implementation itself can be given in seven steps:

1. Identify resources required the operator to perform its mission, which includes the outline of capacity and employees that the operator has. Dealing of observed Post is done through the 131 postal network units (127 regular and 4 season), and the present tendency is turning unprofitable units in the "contracting-mail units". By the optimized organizational model, the largest number of employees is in the technology (76.8% of the total number of employees), while in the administration is employed 209 workers.
2. Identify the cost of resources required the operator to perform its mission - includes all positions expenditures, business, financial and other for the reference year. Realized expenditures in 2008 year amounted to 14,059,608 € and expenditures are higher than achieved in 2007 year by 6.3 and 5% less than planned. Achieved operating expenses make up 99.6% of the total accrued expenditures in 2008 year, while the share of financial expenses only 0.4%. The biggest share in total expenditures are the costs of employees (61.5%), which are 12.3% higher compared to the costs of employees in 2007 year.
3. Identify activities by technological processes and services - based on a general block diagram for the execution of postal services, makes the identification of activities for all types of services and summarized by the basic technological processes in the postal traffic. Performed the analysis of operational processes of each responsible segment. Each process may consist of one or more activities. ABC method identifying a group of activities within the organization through which the service must pass before being delivered to the user. In this case study, application of ABC methods at operation of the public postal operator has made the identification of all activities by technological processes taking place in postal traffic for all types of services. The database can make a table showing the relationship of activities and services in the form of APD (Activity-Product-dependence) matrices given below, Table 1, where are represented examples only for certain types of services.
4. Allocation cost drivers of resources by cost categories - some call this "traceability". Traceability refers to cost, that is follows costs to the cost object (postal service) to determine why they do promote. The total cost of each of the operational activities the must be estimated. The total number of hours spent on each activity in the year must be estimated. Based on these two estimates, one can calculate the cost for each carrier of the activities.
5. Relate activities with services using the categories of costs -

assigning activities to cost objects are done using the carrier activity. Appropriate categories of cost were assigned to each activity and, at that way, were calculated the cost for each service. EAD (Expense-Activity-Dependence) matrix is a matrix of depending costs and activities. In Table 3, this connection is shown only for certain types of services. There are many ways to get the value of the equity of certain activities in costs, and selected procedures based on the approaches in paragraph 4 affect the desired accuracy because the systematic evaluation were based on actual collected data. The sum of the values in each column must be 1, that is 100%.

6. Obtain currency values of activities-To obtain the currency values of each activity the following equation is applied:

$$TCA(i) = \sum_{j=1}^M Cost(j) \times EAD(i, j) \quad (1)$$

where:

TCA(i) = Total cost of activity i

M = number of expense categories

Expense (j)=Currency value of expense category j

EAD(i,j)=Entry i, j of Expense-Activity-Dependence matrix from step 5

Matrix gives consumption of resources by each activity. Total cost for each activity is obtained by adding all of kinds. Thus calculated the cost of activity can serve operator for pricing of individual services and to provide discount to "big customer" who actually perform any of these activities.

7. Obtain currency values of services- To obtain the currency values of each product the following equation is applied:

$$OCP(i) = \sum_{i=1}^N TCA(i) \quad (2)$$

where:

OCP(i)=Overhead cost of product/service i

N= Number of activities

TCA(i)=Currency value of activity j

## INTERPRETATION OF RESULTS

The results obtained by using ABC methodology to the cost accounting of elected public postal operator are given below this paper. The authors note that, because of the extensiveness of the data, all the results from the practical and technical reasons could not be shown in the paper, so only some are shown. As previously mentioned, in this case study has made the identification of all activities by technological processes taking place in postal traffic for all types of services. Based on the data, Table 1 was made and it shows the relationship of activities and services in the form of APD (Activity-Product-dependence) matrix that follows, where the given example only certain types of services. The columns are presenting the activities identified in the performance of postal services, and rows are categories of postal services (in the original sample is defined 35 types of

services).  $\surd$  mark indicates that the activity involved in performing certain services.

Then, for each type of service a certain number of workers active in its implementation was determined, as well as percentage of each service in the total income, which realized the operator. Results are shown in the following Table 2.

Combining a different approaches, below are the categories of costs and cost drivers. Approach in determining the cost drivers by categories of costs described below.

### Purchase price of sold goods

This category of cost belongs only to commercial services. Ponder for this category of cost is expressed as a percentage share of any specific services in income (eg, ponder for purchase price of sold good in parcels for internal traffic from 10 - 30 kg is 0.0011 because the percentage of these services in income is 0.0011).

### Costs of materials

**Cost of materials:** the first is defined percentage of technological stage in the entire technological process of execution services, based on studies and recommendations of the European Union of Postal Directive. For the letter established the following distribution:

- Collection 15%
- sorting 22%
- transport 10%
- Delivery 53%

For the parcels established the following distribution:

- Collection 13%
- sorting 22%
- transport 24%
- Delivery 41%

Ponder for this category of cost is computed as the percentage ratio of participation of each service revenue and the percentage of representation of the respective phases (eg, weight the cost of materials for letter in internal traffic up to 50 gr for each phase of the technological process is obtained by multiplying the percentage of representation these phases and the percentage share in the revenue the services, ie. For collection the letter in internal traffic up to 50 gr is calculated as  $0.13 \times 0.0011$  and it is 0.000143).

### Costs of materials for production

Cost of materials for production – this category of cost

**Table 1.** Activities and services in the form of APD (Activity-Product-Depedence) matrix.

Service	Activity										
	Collection	Sorting	Transport	Delivery	Collection of Telegrams	Sorting of telegrams	Delivery of telegrams	Preparation of hybrid mail	Discharge	Sale	Calculation
Letter up to 50 GR – Domestic traffic	√	√	√	√							
Letter up to 50 GR – International traffic	√	√		√							
Direct mail up to 50 gr	√	√	√	√							
Parcels up to 10 kg – Domestic traffic	√	√	√	√							
Parcels up to 10 kg – International traffic	√	√		√							
Sekograms in domestic and international traffic	√	√	√	√							
Express mail	√	√	√	√							
Financial services	√	√		√							
Unaddressed mail	√	√	√	√							
Hybrid mail								√			

**Table 2.** Relations between services, workers and income.

Services	Number of workers	Percentage of participation in the total number of workers	Participation in income	Percentage of participation in income
1 Letter up to 50 GR – Domestic traffic	72	7.92	852 048	5.87
2 Letter up to 50 GR – International traffic	123	13.53	1 455 582	10.03
3 Direct mail up to 50 gr	67	7.37	792 878	5.46
4 Parcels up to 10 kg – Domestic traffic	2	0.22	6 660	0.05
5 Parcels up to 10 kg – International traffic	1	0.11	3 330	0.02
6 Sekogramms in domestic and international traffic	1	0.11	-	-
33 Express mail	15	1.65	93 780	0.65
34 Financial services	223	24.53	2 563 908	17.68
35 Hybrid mail	5	0.55	397 817	2.74
SUM	909	100%	14 507 941	100%

belongs only to commercial services. Ponder for this category of cost is expressed as a percentage share of any specific services in income (eg, weight the cost of materials for production of packages in internal traffic from 10 - 30 kg is 0.0011 because the percentage of these services in income 0.0011).

- Fuel and energy costs are discussed from the aspect of cost of fuel for motor vehicles and heating costs. Weights for the cost of fuel for motor vehicles amounted as 27%

for letters, 63% for packages, 0% for financial services, 10% for commercial, in relation to cargo areas to which particular types of services take into vehicles. Weights for the heating costs are treated as weights depreciation, that is 24% of letters, packages 23%, 44% of financial services, 10% commercial.

- Costs of employees and representation are calculated as a percentage share of workers in each phase of delivery postal items. So, for packets in internal traffic from 10 - 30 kg weight for this category of cost, for

**Table 3.** Expense-Activity-Dependence (EAD) matrix.

		Costs											II	III
		I Operating expenses									Financial	Extra-		
		1. Direct costs of goods and materials						4. Other operating expenses					expenses	ordinary
Service	Activity	Purchase price of sold goods	Costs of materials	Costs of materials for production	Costs of "rezija" materials	Fuel and energy costs		2. Costs of employees and representation	3. Depreciation	Costs of transport services	Costs of mainten. of fixed assets and rents	Non-production services, taxes, contributions and other intangible costs		
						Cost of fuel for motor vehicles	Heating costs							
Letter up to domestic traffic	Collection	-	0,0088	-				0,01188				0,0088		
	sorting	-	0,006457	-	0,04521	0,05086	0,04521	0,008712	0,04521	0,0792	0,04521	0,006457	0,0587	0,0587
	Transport	-	0,00587	-				0,00792				0,00587		
	Delivery	-	0,031111	-				0,041976				0,031111		
Letter up to 50 gr – international traffic	Collection	-	0,015045	-				0,020295				0,015045		
	Sorting	-	0,011033	-	0,07725	0,0869	0,07725	0,014883	0,07725	0,1353	0,07725	0,011033	0,1003	0,1003
	Transport	-	0,01003	-				0,01353				0,01003		
	Delivery	-	0,053159	-								0,053159		

collecting, 0.13 x

0.0055 is 0.000715.

Depreciation

Letters 24%

Packages 23%

Financial services 44%

Commercial services 10%

- Costs of transport services in relation to the

percentage of participation of workers in the total number of workers. Eg., for packages in internal traffic from 10 to 30 kg of this ponder is 0.0055 because it is the percentage of participation in the total number of workers for this service.

- Costs of maintenance of fixed assets and rents according to the model applied for the calculation of depreciation costs, specifically for each category of services (24% of the letter, package 23%, financial 44%, commercial 10%).

- Non-production services, taxes, contributions and other intangible costs the same as the weight

of material costs.

- Financial expenses relate to percentage of participation in income.

- Extraordinary expenses relate to percentage of participation in income.

Based on the experiences of foreign postal administrations and observed record of traffic data of operator, below is given the percentage shares of individual technological stages according to types of services that are used for the accurate assessment of activity in certain types of

expenses. Given the example of letters and packages.

Percentage share of individual phases in the costs for the category of services "LETTERS" was obtained based on the experiences of European countries, and based on data obtained from the Post.

Letters:

Collection 15%  
Sorting 22%  
Transport 10%  
Delivery 53%

Percentage share of individual phases in the costs for the category of services "PARCELS" was obtained based on the experiences of European countries, and based on data obtained from the selected Post.

Parcels:

Collection 13%  
Sorting 22%  
Transport 24%  
Delivery 41%

As a result of the previously described procedures which occurred categorization of activities, services, costs, cost drivers, and, most importantly, the weight/ponders for each type of cost, were obtained the EAD matrix (Table 3) for each type of service due to can get the exact amount of the cost for each activity, which still result in calculating the cost of each service.

## Conclusion

The investment in time and money. A cost system based on ABC requires organizational changes, employee acceptance, investment in software and hardware, equipment for data collection, and so on. The proposed method is suitable because it provides a smooth transition from a traditional costing system to ABC, it does not require a high investment in sophisticated data collection systems, and it does not require a serious organizational restructuring. In addition, the EAD and APD matrices assist in the comprehension of how overhead costs are generated. These matrices can also be used for recognizing improvement opportunities. As a future step a software package based on this methodology can be developed that would trace overhead cost to products accurately, at low cost, and in short time.

Public postal operator observed in this work, and whose business has applied the ABC method, currently being developed and implemented software solution for cost calculation based on the ABC methodology, theoretically presented in this paper. Benefits that will come to the fore reflected, above all, an easier deployment of the main

categories of costs (among others, the costs of employees) for services and activities that are conducted themselves in the direction of execution services and complete customer satisfaction.

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