

Determination of Product Costs Based on Resource Consumption Accounting- A Comparative Application

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Extensive Summary

In today's fast-changing business environment, the right tools are needed in order to use the scarce resources of companies more effectively. Companies should aim at not only allocating the resources effectively, but also developing and supporting an ideal management understanding. In this context, Resource Consumption Accounting (RCA) should be considered as a means of powerful tools to be used to increase the productivity and profitability.

Rapidly changing business conditions and the sense of profitability and productivity that they influence are pushing businesses to compete intensely. This competition, in particular, requires that effective managerial responses to timely technological changes be made in place, timely and accurately. Businesses that is aware of this need to use strategic cost and management tools to increase their profitability and competitiveness. Activity-based approaches such as activity-based costing and activity-based management are considered and considered to be important elements of strategic cost management. Because, in practice, traditional approaches seem to be inadequate to carry on with strategic objectives.

Today, the high share of indirect costs within total cost has led to the inefficiency of traditional cost methods in the distribution of general production costs. At this point, activity-based approaches have been developed to ensure that the overheads of production are distributed more accurately to the products. These approaches are Activity Based Costing and Time-Driven Activity Based Costing.

The Activity Based Costing (ABC) method is considered as a useful tool to provide a broad database for strategic management decisions, while offering a more precise structure than the traditional methods for loading the general production costs into the products. Nevertheless, the method is disadvantageous to enterprises in that it is expensive and time consuming to install and update costs. The Time-Driven Activity Based Costing (TDABC) method is an improved method to overcome the disadvantages

of ABC. Unlike ABC, in TDABC, cost factors are transformed into time equations, so that even if production conditions change, the system becomes easily adaptable to changes through the updating of equations. However, as a cost-effective way, it is only possible to determine the costs of operating capacity that can not be utilized in a timely manner. However, although not all of the cost factors are related to the time factor, the cost effect is confronted as a factor that only reduces the advantages of the time-consuming method. The Resource Consumption Accounting method emerges as a powerful costing and management tool that focuses on the resources that form the focal point of the German Cost Accounting system in its activities and cost calculations, which form the basis of activity-based approaches.

RCA recognizes that the basis of the costs is the sources, so it provides detailed information to the decision maker by classifying the cost data in different ways, focusing on the resources. RCA allocates resource costs as fixed and variable (proportional), thus allowing the calculation of idle capacity costs. This distinction also prevents the idle capacity costs from being loaded into the products. RCA differs from other methods in that it attaches importance to determination of idle capacity costs, substituting the cost of substitution in the determination of depreciation costs. As a result, RCA is a more advanced costing system than ABC and process-based ABC.

In this context, it is aimed to reveal the contribution of RCA to the management of the elements that distinguish it from other costing methods based on its activities. For this purpose, first of all, the characteristics and application stages of RCA were included in the study, and later the cost was determined according to RCA using the data of an operator. However, the cost calculations were made using RCA and TDABC methods to compare the results obtained by the application of RCA with the results obtained by ABC and TDABC methods, and the results are presented comparatively.

In the study, firstly the processes of the sample business were examined and the activities carried out in the business and the resources used were determined. The resources are divided into variable and fixed. Resource pools were created and resources were assigned to pools. The practical capacity and the theoretical capacity of the resource pools have been determined, the fixed costs have been determined to the theoretical capacity and the variable costs have been associated with the practical capacity to determine the costs per resource effect. At the next stage, based on the consumption of the resource pools of the activities, the shares of the resource pools of each activity were determined. Finally, the costs collected during the activities are distributed to the products.

The total cost of resources used by the sample business is 88.350 TL. A total of 28,750 TL in the labor resource pool, a total of 46,600 TL in the machine resource pool, and 13,000 TL in the support resource pool have been collected. At the end of the distribution period according to RCA the sum of the resource costs distributed to the products is calculated as 74,527 TL and the idle capacity cost is calculated as 13,823 TL. Thus, the distribution of idle capacity costs to products is prevented. As a result, product costs are determined to be close to reality. At the same time, useful information is provided to management of the elimination of idle resources.

At the same time in the study, product costs were calculated for ABC and TDABC using sample application data. As can be seen from the application part of the workshop, there is a huge difference between the product costs calculated by all

three methods. It is clear that even a small difference in product costs is very important when we think of a very high production volume and that this will deeply affect the results of the operation. For this reason, it is considered appropriate to use the most developed product-based approach of RCA in determining product costs.

In order for RCA to be successfully implemented in the business, detailed construction of cost centers, sorting of resource costs according to type and behavior, precondition for the success of the activity volume and capacity estimation system. In addition to all of these, an integrated data collection and processing system such as the Enterprise Resource Planning Program needs to be found in order for RCA to be implemented in enterprises.