

Activity – Based Costing in Sport Organizations: Theoretical Background & Future Prospects

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Abstract

Costing systems in recent years have shown a significant development and activity-based costing (ABC) specifically has been considered as a major contribution to cost management, particularly in service businesses. The sport sector is composed to a great extent of service functions, yet considerably less have been reported of the use of activity based costing to support cost management in sport organizations. Since the power of information becomes continuously crucial for the implementation of effective business administration, the traditional methods of cost measurement proved insufficient on this issue, leading to the invention of ABC. The aim of this paper is twofold. First of all we want to present the main theoretical background of ABC and its substantiated benefits, and secondly to present some practical steps for the implementation of ABC in sport organizations.

Key Words: *activity-based costing, activity-based management, costing services, sport organizations, cost accounting, management accounting.*

Companies nowadays operate under volatile business environments that are strongly influenced by customer demands. Firm managers know that their customers buy value mainly in the form of quality products and services that are delivered on a timely basis for a reasonable and affordable price. Companies generate revenues and profits when customers identify value and buy their product or service. Consequently, companies' measure value as the revenues generated from a specific business activity. Under this framework managers will focus their attention internally to find the best ways of using their resources effectively, in order to create or maintain value in their products or services.

The aforementioned status however, required organizations to redesign their accounting information systems so as to provide customer-related, activity-based information. This need led to the creation of the Activity-based systems which are information systems that provide quantitative information about activities in an organization. Activity-based systems help managers to view the organization as a collection of related activities, thus enable managers to improve operating processes and make better pricing decisions. In brief, activity-based systems help managers identify value-adding activities, determine the resources needed for those activities, and estimate product costs. In the executing and reviewing stages, these systems help managers determine the full product or service cost, identify actions that will reduce the full product or service cost, and determine if cost-reduction goals for non value-adding activities were reached. Activity-based systems also help managers report the cost of inventory and determine the degree to which product goals were achieved. One of the most useful activity-based systems is the Activity-Based Management (ABM). Activity-based management (ABM) is an approach to managing an organization that distinguishes all major operating activities, determines what resources are consumed by each activity, identifies how resources are consumed by each activity, and categorizes the activities as either adding value to a product or service or not adding value. ABM enables managers to see their organization as a collection of value-creating activities (a value chain) operating as part of a larger system that includes suppliers' and customers' value chains (a supply network). This perspective helps managers work cooperatively both within and outside their organization to reduce costs by eliminating waste and inefficiencies and redirecting resources towards value-adding activities (Needles & Crosson 2002).

The above mentioned management accounting systems have gained lot of attention from both academics and practitioners since it is empirically proved to have a significant positive impact on the operations and performance of firms and organizations. In addition to their application on industrial and manufacturing companies these management systems have also been adopted by retail and wholesale organizations and by a wide range of service firms (Innes & Mitchell 1995, Innes et. al 2000, Drury & Tayles 2000).

Following the previous discussion the aim of this paper is twofold. First of all we want to present the main theoretical background of Activity-Based Costing and its substantiated benefits, and secondly to present some practical steps for the implementation of ABC in sport organizations. The sport sector is composed to a great extent of service functions, yet considerably less have been reported of the use of activity based costing to support cost management in sport organizations. According to our knowledge this paper is the first which investigates the issue of ABC on sport organizations, therefore this study adds to a growing body of research on management accounting.

The rest of the paper is organised as follows: The next chapter includes a general analysis of the Activity-Based Costing method and its implications, followed by a discussion of ABC in the service sector. The fourth chapter considers fruitful avenues for implementing ABC in sport organizations and the final chapter is dedicated to concluding remarks and prospects for future research.

Activity – Based Costing

Activity-based costing (ABC) is a method that calculates a more accurate product cost by identifying an organization's major operating activities, tracing the indirect costs to those activities, and allocating activity costs to products using a cost driver that is related to the cause of the cost.

For ABC product costing, managers identify and classify each activity, estimate the cost of resources for each activity, identify a cost driver for each activity and estimate the quantity of each cost driver, calculate an activity cost rate for each activity, and allocate all costs to cost objects based on the level of activity required to make the product or provide the service. Two tools—a cost hierarchy and a bill of activities—help in the implementation of ABC. To create a cost hierarchy, activities are identified and classified into four levels. Unit-level activities are performed each time a unit is produced. Batch-level activities are performed each time a batch of goods is produced. Product-level activities are performed to support the diversity of products in a manufacturing plant. Facility-level activities are performed to support a facility's general manufacturing process. A bill of activities is then used to compute the costs assigned to activities and the product or service unit cost (Drury 2000, Needles & Crosson 2002).

Activity Based Costing was used by American industrialists, in the middle 1970's, as an efficient method of cost accounting their products, not according to the volume of their production, but according to the activities needed for their production. The reason for the invention of ABC is the inefficiency of the traditional cost accounting methods in the US during the 1960's and 1970's. As Horngren (1977), Miller & Vollman (1985) and Johnson & Kaplan

(1987) argued, there are concealed factors that influence the common and the general industrial expenses and these needed to be distributed in a better way in order to be audited easier, thus increasing the managerial and production efficiency. Since the beginning of the 1990's, ABC started to become acceptable from the majority of researchers and cost accountants as a method that offers more timely and value relevant information for the factors that influence products costs, thus helping managers making rational business decisions.

The main differences between the traditional cost accounting methodology and the ABC is in the way of distributing costs and the influence the costs have on products. In the traditional method of cost accounting the general industrial expenses are grouped and distributed in the main cost centres such as production, administration, services, research and development, and then distributed to the products. ABC on the contrary allocates general industrial expenses according to the cost drivers that connect expenses with activities and then these expenses are transported to the products according to the influence these activities have on each product. The following *Figure 1* depicts the main differences between these two cost accounting procedures:

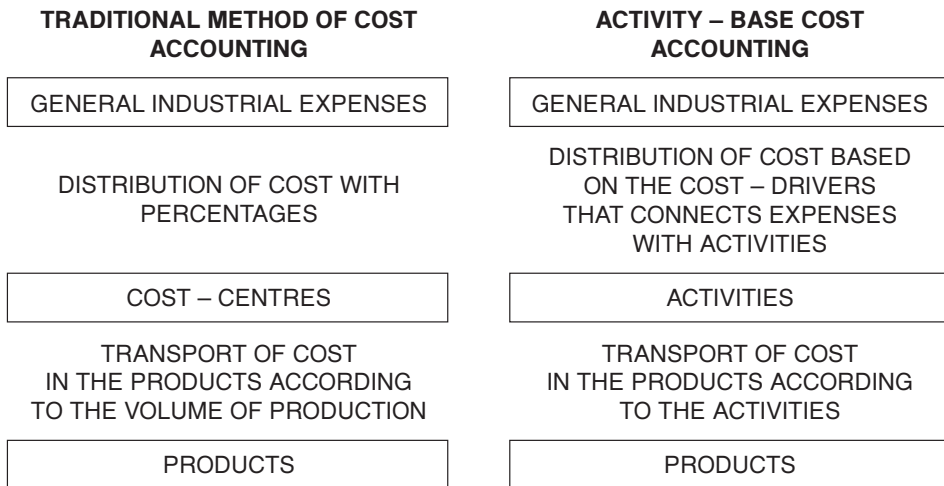


Figure 1: *Traditional vs Activity-Based Costing.*

ABC in the Service Organizations

Despite the fact that activity based costing was at first created in order to serve the cost management needs of industrial organizations, soon researchers considered the possibility of applying this particular methodology in

the service sector as well. Kaplan (1994) documents that since the early 1980's many firms operating in the service sector for instance logistic companies, banks and hospitals had already developed cost accounting models similar to ABC.

Moreover, Sephton & Ward (1990) argue that ABC can be applicable in the financial institutions because it can control the common costs and offer information regarding the cost in high risk financial products. Additionally, King et. al (1994) examined the possibility of implementing ABC in English hospitals and concluded that the British National Health System can benefit from the adoption of ABC because it is a method that can easily adapt in the specific needs and particularities of each institution.

Finally, Bagur et. al (2006) conducted a research regarding the implementation of cost management models in the Spanish public sector. By applying 28 semi-structured interviews in Catalanian town halls they concluded that in a major extent activity based cost systems are highly developed since they proved to be increasingly efficient in allocating indirect costs with a reasonable degree of accuracy. Put it another way, services do not suffer from serious over-costing or under-costing on a regular basis, meaning that the public sector spending decreases and on a national scale is beneficial for the Spanish economy.

It can easily be understood that health and public organizations are not the same as sport organizations by means of activities, management and operations. Sport organizations in Greece are somewhere between profit-making and non-profit making firms. They are financed by both the state and private equity funds, but they do still face costs that are generated by their main activities. Consequently, the application of an advanced cost accounting model like ABC could be proved useful for achieving more resourceful product costing, cost reduction, operational efficiency and profitability.

Abc in Sport Organizations

In order to utilize the Activity-Based Costing methodology in sport organizations, we must first understand the types of costs that are involved, the activities that take part and the products that are produced. Following this path we will accomplish to decrease the deficits and all the unnecessary costs, thus improving the quality of our products and gaining the confidence and satisfaction of our customers.

Regarding sport organizations there exist certain affairs such as some of those are privately financed (including private gymnasiums, football fields, tennis courts etc.), which bury a certain cost for the participants but on the contrary they offer high quality services organized within a professional level,

compared to the state owned sports clubs where the participation costs are affordable yet they lack organizational efficiency. Under this notion we differentiate the total cost in the cost of practicing in a specific sport activity (athletic product) which includes coaching and development programmes, team or athlete costs and in the remaining types of costs such as promotional and marketing costs, administrative costs, maintenance, finance costs etc. The cost of the athletic product can easily be distributed in the activities that are related to it, while the remaining cost can be spread according to the number of participants to a specific event or via special parameters like the time of utilization of a sport facility in an indicative period.

As activities we can report any type of work that takes place in the organization for instance teaching, training, conducting events etc. As sources of cost we can determine the building or facilities installations, employees, trainers and functional expenses. The cost objects are the main reasons that managers need timely and value relevant information for rational decision making.

To facilitate the application of ABC in sport organizations we must first recognize our cost objects; such can be the cost of a particular athletic activity, the cost of each training period or the cost that is included until the athlete's contract expires. In the second stage we must find and comprehend the activities which affect each cost object. For instance two basic activities within every sport organization is training and secretarial. However, within these two main activities, a lot of other less important activities exist. Thus, it is crucial that the researcher evaluates the necessity of these secondary activities and makes an activity tree, where below the two major activities follow the other secondary. The importance of this has to do with the balance of information so that ABC will help and not create chaos to the researcher. Following that, we must determine the sources of expenses that affect each activity and categorize them, and set them to the «cost pools» so that in the next stage to figure the cost of each activity. Additionally, the total cost of each activity is shared within the cost objects that already have been determined and then we concentrate on the cost objects for which we want information.

Overall, the steps for an efficient application of Activity-based Costing within sport organizations are en brevity the following:

1. Separation of sport organization within departments.
2. Determination of departments of study and final cost objects.
3. Recording of activities of each department.
4. Composition of the means that execute those activities.
5. Determination of the cost drivers (specifically how do the sources can be connected to the activities).
6. Apportionment of the total cost of each part with the contribution of the cost activity drivers.
7. Determination of the drivers that connect activities – cost receiver.

8. Transfer of the activities' cost to the total cost receivers (cost objects) that we have placed.

9. Calculation of total or per unit of cost objects depending on the aim of research.

10. Parameterization of steps 7 to 10 placing different recipients of cost (cost objects) for different type of results.

The aforementioned list contains the main steps (but not exhaustive) of an effective application of an ABC model in sport organizations. Activity-Based Costing is a discipline focusing on the management of activities within business processes as the route to continuously improving both the value received by customers and the profit earned in providing that value. ABC uses activity based cost information and performance measurements to influence management actions towards value creating activities.

Concluding Remarks & Future Research

Information always plays the key role to efficient management decision making and its importance is even more crucial when firms operate under volatile economic and business environments. ABC has been called upon to provide a more accurate picture of cost information and to enhance competitiveness.

Activity-Based Costing is a costing methodology that measures the cost and performance of cost objects, activities and resources. Cost objects consume activities and activities consume resources. Resource costs are assigned to activities based on their use of those resources, and activity costs are reassigned to cost objects (outputs) based on the cost objects' proportional use of those activities. Activity-based costing incorporates causal relationships (cost drivers) between cost objects and activities and between activities and resources.

Prior studies suggest that ABC has helped companies satisfy not only their needs for timely and value relevant cost information, but also to gain a number of management facilitating benefits such as improved customer profitability analysis, preparation of more relevant budgets etc. (Tayles & Drury 2001, Clarke et. al 1999, Hussain et. al 1998, Innes & Mitchell 1995). ABC over the years has gained confidence by researchers and managers and it has been applied in a wide range of business activities including industrial and manufacturing companies, service firms and public organizations.

Nonetheless, no research has been done until now regarding the implementation of ABC in sport organizations. The sport sector is composed to a great extent of service functions, yet considerably less have been reported of the use of activity based costing to support cost management in sport orga-

nizations. The aim of this study is to present a sound theoretical framework for implementing the activity based costing methodology within the emerging sport industry. We believe that efficient cost management is a very important issue that sport managers must take under consideration in order to achieve more resourceful product costing, cost reduction, operational efficiency and profitability.

However, many issues need to be considered regarding future research. First of all we must examine possible drawbacks and problems that are associated with the implementation of ABC. Additionally, we must examine how cost allocation efficiency can enhance the profit making ability of a sport organization and finally we must consider the case of Activity-Based Management and the way this model can lead sport managers to efficient decision making.

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