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**ABSTRACT**

Activity-based costing (ABC) is a costing methodology that identifies activities in an organization and assigns the cost of each activity with resources to all products and services according to the actual consumption by each. The concept of ABC was first defined in the late 1980s by Robert Kaplan and William Burns. Initially ABC focused on manufacturing industry where technological developments and productivity improvements had reduced the proportion of direct labour and material costs, but increased the proportion of indirect or overhead costs. Activity analysis is the process of identifying appropriate output measures of activities and resources (cost drivers) and their effects on the costs of making a product or providing a service. Activity-based costing is more effective when used in long-term rather than in short-term. Activity-based costing (ABC) is a methodology for more precisely allocating overhead to those items that actually use it.

**KEYWORD:**

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**INTRODUCTION**

Activity analysis is the process of identifying appropriate output measures of activities and resources (cost drivers) and their effects on the costs of making a product or providing a service. There are a number of costing models used in the domain of business and Activity-Based Costing is one of them. In activity-based costing, various activities in the organization are identified and assigned with a cost.

When it comes to pricing of products and services produced by the company, activity cost is calculated for activities that have been performed in the process of producing the products and services. In other words, activity-based costing assigns indirect costs to direct costs. These indirect costs are also known as overheads in the business world.

This type of costing system usually allocates costs based on a single volume measure, such as direct labour hours or machine hours. While using such a simplistic volume measure to allocate overheads as an overall cost driver, this approach seldom meets the cause-and-effect criteria desired in accurate cost allocation. This method of costing has become increasingly inaccurate as the relative proportion of overhead costs has risen. This distortion of costs can result in inappropriate decision making.

ABC is therefore an alternative approach to the traditional method or arbitrary allocation of overheads to product, services and customers.

**COMPARISON OF TRADITIONAL COSTING AND ABC**

The traditional method of costing relied on the arbitrary addition of a proportion of overhead costs on to direct costs to attain a total product cost. The traditional approach to cost allocation relies on three basic steps.

1. Accumulate costs within a production or non-production department.
2. Allocate non-production costs to production departments.
3. Allocate the resulting production department costs to various products, services or customers.

In contrast to traditional cost accounting systems, ABC systems first accumulate overheads for each organisational activity. They then assign the costs of these activities to products, services or customers (referred to as cost objects) causing that activity. The initial activity analysis is clearly the most difficult aspect of ABC.

Activity analysis is the process of identifying appropriate output measures of activities and resources (cost drivers) and their effects on the costs of making a product or providing a service. ABC systems have the flexibility to provide special reports so that management can take decisions about the costs of designing, selling and delivering a product or service. The key aspect is that ABC focuses on accumulating costs via activities, whereas traditional cost allocation focuses on accumulating costs within functional areas.

The main advantage of ABC is that it minimises or avoids distortions on product costs that might occur from arbitrary allocation of overhead costs.

**Let us take an example.** There are a number of activities performed in a business organization and these activities belong to many departments and phases such as planning, manufacturing, or engineering. All these activities eventually contribute to producing products or offering services to the end clients. Quality Control activity of a garment manufacturing company is one of the fine examples for such an activity. By identifying the cost for the Quality Control function, the management can recognize the costing for each product, service, or resource. This understanding helps the executive management to run the business organization smoothly.

### IMPLEMENTING ABC IN THE ORGANIZATION

- 1. A Core Team :** If an organization is planning to implement activity-based costing, commissioning a core team is of great advantage. If the organization is small in scale, a team can be commissioned with the help of volunteers, who will contribute their time on part-time basis. This team is responsible for identifying and assessing the activities that should be revised in order to optimize the product or service. The team should ideally consist of professionals from all practices in the organization. However, hiring an external consultant could also become a plus.
- 2. The Software:** When implementing activity-based costing, it is advantageous for an organization to use computer software for calculations and data storage. The computer software can be a simple database that will store the information such as customized ABC software for the organization or a general-purpose off-the-shelf software.
- 3. The Procedure:** The procedure for successful implementation of activity-based costing in an organization is as follows:
  - Identification of a team that is responsible for implementing activity-based costing.
  - The team identifies and assesses the activities that involve in products and services in question.
  - The team selects a subset of activities that should be taken for activity-based costing.
  - The team identifies the elements of selected activities that cost too much money for the organization. The team should pay attention to detail in this step as many activities may shield their cost and may look innocent from the outside.
  - The fixed costs and variable costs related to activities are identified.
  - The cost information gathered will be entered to the ABC software.
  - The software then performs calculations and produces reports to support management decisions.
  - Based on the reports, management can identify the steps that should be taken to increase profit margins in order to make the activities more efficient.
- 4. Things to be kept in mind:** Sometimes, organizations face the risk of spending too much time, money and resources on gathering and analysing data required for activity-based costing model. This can eventually lead to frustration and the organization may give up on ABC eventually.

### THE ACTIVITY BASED COSTING PROCESS FLOW

Activity-based costing is best explained by walking through its various steps. They are:

- 1. Identification of costs:** The first step in ABC is to identify those costs that we want to allocate. This is the most critical step in the entire process, since we do not want to waste time with an excessively broad project scope. For example, if we want to determine the full cost of a distribution channel, we will identify advertising and warehousing costs related to that channel, but will ignore research costs, since they are related to products, not channels.

2. **Secondary Cost pools:** Create cost pools for those costs incurred to provide services to other parts of the company, rather than directly supporting a company's products or services. The contents of secondary cost pools typically include computer services and administrative salaries, and similar costs. These costs are later allocated to other cost pools that more directly relate to products and services. There may be several of these secondary cost pools, depending upon the nature of the costs and how they will be allocated.
3. **Primary cost pools:** Create a set of cost pools for those costs more closely aligned with the production of goods or services. It is very common to have separate cost pools for each product line, since costs tend to occur at this level. Such costs can include research and development, advertising, procurement, and distribution. Similarly, you might consider creating cost pools for each distribution channel, or for each facility. If production batches are of greatly varying lengths, then consider creating cost pools at the batch level, so that you can adequately assign costs based on batch size.
4. **Measuring activity drivers:** Use a data collection system to collect information about the activity drivers that are used to allocate the costs in secondary cost pools to primary cost pools, as well as to allocate the costs in primary cost pools to cost objects. It can be expensive to accumulate activity driver information, so use activity drivers for which information is already being collected, where possible.
5. **Allocate costs in secondary pools to primary pools:** Use activity drivers to apportion the costs in the secondary cost pools to the primary cost pools.
6. **Charge costs to cost objects:** Use an activity driver to allocate the contents of each primary cost pool to cost objects. There will be a separate activity driver for each cost pool. To allocate the costs, divide the total cost in each cost pool by the total amount of activity in the activity driver, to establish the cost per unit of activity. Then allocate the cost per unit to the cost objects, based on their use of the activity driver.
7. **Preparation of reports:** Convert the results of the ABC system into reports for management consumption. For example, if the system was originally designed to accumulate overhead information by geographical sales region, then report on revenues earned in each region, all direct costs, and the overhead derived from the ABC system. This gives management a full cost view of the results generated by each region.
8. **Act on the information:** The most common management reaction to an ABC report is to reduce the quantity of activity drivers used by each cost object. Doing so should reduce the amount of overhead cost being used.

## USES OF ACTIVITY BASED COSTING

The fundamental advantage of using an ABC system is to more precisely determine how overhead is used. Once you have an ABC system, you can obtain better information about the following issues:

1. **Activity costs:** ABC is designed to track the cost of activities, so you can use it to see if activity costs are in line with industry standards. If not, ABC is an excellent feedback tool for measuring the ongoing cost of specific services as management focuses on cost reduction.
2. **Profitability to customer:** Though most of the costs incurred for individual customers are simply product costs, there is also an overhead component, such as unusually high customer service levels, product return handling, and cooperative marketing agreements. An ABC system can sort through these additional overhead costs and help you determine which customers are actually earning you a reasonable profit. This analysis may result in some unprofitable customers being turned away, or more emphasis being placed on those customers who are earning the company its largest profits.
3. **Distribution cost:** The typical company uses a variety of distribution channels to sell its products, such as retail, Internet, distributors, and mail order catalogs. Most of the structural cost of maintaining a distribution channel is overhead, so if you can make a reasonable determination of which distribution channels are using overhead, you can make decisions to alter how distribution channels are used, or even to drop unprofitable channels.
4. **Make or buy:** ABC provides a comprehensive view of every cost associated with the in-house manufacture of a product, so that you can see precisely which costs will be eliminated if an item is outsourced, versus which costs will remain.
5. **Margins:** With proper overhead allocation from an ABC system, you can determine the margins of various products, product lines, and entire subsidiaries. This can be quite useful for determining where to position company resources to earn the largest margins.

6. **Minimum price:** Product pricing is really based on the price that the market will bear, but the marketing manager should know what the cost of the product is, in order to avoid selling a product that will lose a company money on every sale. ABC is very good for determining which overhead costs should be included in this minimum cost, depending upon the circumstances under which products are being sold.
7. **Production facility cost:** It is usually quite easy to segregate overhead costs at the plant-wide level, so you can compare the costs of production between different facilities.

Clearly, there are many valuable uses for the information provided by an ABC system. However, this information will only be available if you design the system to provide the specific set of data needed for each decision. If you install a generic ABC system and then use it for the above decisions, you may find that it does not provide the information that you need. Ultimately, the design of the system is determined by a cost-benefit analysis of which decisions you want it to assist with, and whether the cost of the system is worth the benefit of the resulting information.

### PROBLEMS WITH ACTIVITY BASED COSTING

Many companies initiate ABC projects with the best of intentions, only to see a very high proportion of the projects either fail, or eventually lapse into disuse. There are several reasons for these issues, which are:

1. **Installation time:** ABC systems are notoriously difficult to install, with multi-year installations being the norm when a company attempts to install it across all product lines and facilities. For such comprehensive installations, it is difficult to maintain a high level of management and budgetary support as the months roll by without installation being completed. Success rates are much higher for smaller, more targeted ABC installations.
2. **Targeted usage.** The benefits of ABC are most apparent when cost accounting information is difficult to discern, due to the presence of multiple product lines, machines being used for the production of many products, numerous machine setups, and so forth – in other words, in complex production environments. If a company does not operate in such an environment, then it may spend a great deal of money on an ABC installation, only to find that the resulting information is not overly valuable.
3. **Cost pool volume:** The advantage of an ABC system is the high quality of information that it produces, but this comes at the cost of using a large number of cost pools – and the more cost pools there are, the greater the cost of managing the system. To reduce this cost, run an ongoing analysis of the cost to maintain each cost pool, in comparison to the utility of the resulting information. Doing so should keep the number of cost pools down to manageable proportions
4. **Multi-department data sources:** An ABC system may require data input from multiple departments, and each of those departments may have greater priorities than the ABC system. Thus, the larger the number of departments involved in the system, the greater the risk that data inputs will fail over time.
5. **Project basis:** Many ABC projects are authorized on a project basis, so that information is only collected once; the information is useful for a company's current operational situation, and it gradually declines in usefulness as the operational structure changes over time.
6. **Reporting of unused time.** Employees usually mask these activities by apportioning more time to other activities. These inflated numbers represent misallocations of costs in the ABC system, sometimes by quite substantial amounts.
7. **Separate data set.** An ABC system rarely can be constructed to pull all of the information it needs directly from the general ledger. Instead, it requires a separate database that pulls in information from several sources, only one of which is existing general ledger accounts

### CONCLUSION AND FINDINGS

- a) Failure to connect the outcomes from the activity-based costing usually hinders the success of the implementation. This usually happens when the decision makers are not aware of the "big picture" of how activity-based costing can be used throughout the organization. Understanding the concepts and getting actively involved in the ABC implementation process can easily eliminate this.
- b) If the business organization requires quick fixes, activity-based costing will not be the correct answer. Therefore, ABC should not be implemented for situations where quick wins are required

- c) The broad range of issues noted here should make it clear that ABC tends to follow a bumpy path in many organizations, with a tendency for its usefulness to decline over time.
- d) The key point is to construct a highly targeted ABC system that produces the most critical information at a reasonable cost.
- e) If that system takes root in your company, then consider a gradual expansion, during which you only expand further if there is a clear and demonstrable benefit in doing so.
- f) The worst thing you can do is to install a large and comprehensive ABC system, since it is expensive, meets with the most resistance, and is the most likely to fail over the long term.
- g) Activity-based costing is a different way of looking at an organization's costs in order to optimize profit margins.
- h) If ABC is implemented with the correct understanding for the correct purpose, it can return a great long-term value to the organization.
- i) The system can be used for the targeted reduction of overhead costs. ABC works best in complex environments, where there are many machines and products, and tangled processes that are not easy to sort out.
- j) Conversely, it is of less use in a streamlined environment where production processes are abbreviated

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