

Activity based costing

Definition and concept

'An approach to the costing and monitoring of activities which involves tracing resource consumption and costing final outputs. Resources are assigned to activities, and activities to cost objects based on consumption estimates. The latter utilise cost drivers to attach activity costs to outputs.'

CIMA Official Terminology, 2005

A development of the principles of activity based costing (ABC) is activity based management (ABM).

Operational ABM is defined as:

'Actions, based on activity driver analysis, that increase efficiency, lower costs and/or improve asset utilisation.'

CIMA Official Terminology, 2005

Strategic ABM is defined as:

'Actions, based on activity based cost analysis, that aim to change the demand for activities so as to improve profitability.'

CIMA Official Terminology, 2005

The main focus of this topic gateway is ABC. However, the development of ABC into ABM will be discussed further under Application.

Context

In the current syllabus, CIMA students will learn and may be examined on this topic in Paper P1, Management Accounting Performance Evaluation, Chapter 8, Developments in management accounting, and Paper P2, Management Accounting Decision Management, Chapter 10, Activity based approaches. Study systems for these papers are available from CIMA Publishing.

Related concepts

Activity based management; activity based budgeting; time driven activity based costing.

Alternative approaches

Traditional costing approaches.

Overview

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.

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.

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.

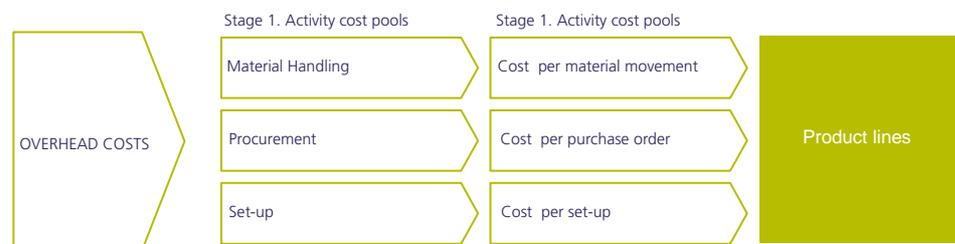


Figure 1. Framework of activity based costing

Application

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.

Steps in development of an ABC System

ABC uses cost drivers to assign the costs of resources to activities and unit cost as a way of measuring an output.

There are four steps to implementing ABC.

1. Identify activities

The organisation needs to undertake an in-depth analysis of the operating processes of each responsibility centre. Each process might consist of one or more activities required to produce an output.

2. Assign resource costs to activities

This involves tracing costs to cost objects to determine why the cost occurred. Costs can be categorised in three ways:

- i. Direct – costs that can be traced directly to one output. For example, the wood and paint that it takes to make a chair.
- ii. Indirect – costs that cannot be allocated to an individual output, that is, they benefit two or more outputs, but not all outputs. For example, maintenance costs or storage costs.

- iii. General/administration – costs that cannot be associated with any product or service. These costs are likely to remain unchanged, whatever output is produced. For example, salaries of administration staff, security costs or depreciation.
3. Identify outputs
Identify all of the output for which an activity segment performs activities and consumes resources. Outputs might be products, services or customers.
4. Assign activity costs to outputs
This is done using activity drivers. Activity drivers assign activity costs to outputs (cost objects) based on the consumption or demand for activities.

ABC in practice

ABC activities have been around for nearly 20 years and many companies in a variety of sectors have implemented activity based thinking. ABC and ABM have brought about radical changes in cost management systems. The principles and philosophies of activity based thinking apply equally to service companies, government agencies, process and manufacturing industries.

Management practices and methods have changed over the last decade and will continue to change. Organisations have moved from managing vertically to managing horizontally. There has also been a move from a function orientation to a process orientation.

However, management information systems to track and provide information about the horizontal aspects of business have lagged significantly behind managers' needs. ABC and ABM fill this information gap by providing cost and operation information that mirrors a horizontal view.

ABC focuses on accurate information about the true cost of products, services, processes, activities and customers. Using ABC, organisations gain a thorough understanding of their business processes and cost behaviour during ABC analysis. Management then applies this insight to improve decision making at operating and strategic levels. This is then known as ABM. Simply, ABM is ABC in action.

Better management activity based costing survey: how ABC is used in the organisation

This detailed study of how organisations are practically applying ABC can be found on the BetterManagement.com website (to access this study you must register, and then click on the link to activity based management in the top left hand corner of the home page). Available from: www.bettermanagement.com [Accessed 4 November 2008]

The study was carried out in July 2005 to determine the state of ABC within over 500 organisations across numerous industries of different sizes and locations. It provides a useful and interesting insight into how ABC is used in organisations.

Reported benefits

- ABC provides a more accurate method of costing of products and services.
- It allows for a better and more comprehensive understanding of overheads and what causes them to occur.
- It makes costly and non-value adding activities more visible, so allowing managers to focus on these areas to reduce or eliminate them.
- It supports other management techniques such as continuous improvement, scorecards and performance management.

Reported drawbacks

- ABC can be difficult and time consuming to collect the data about activities and cost drivers.
- It can be costly to implement, run and manage an ABC system.
- Even in ABC some overhead costs are difficult to assign to products and customers. These costs still have to be arbitrarily applied to products and customers.

Case studies

Technical Matters: Activity-based costing. (PDF 99KB). This article, published in Financial Management (March 2005), provides a case study of implementation of an activity based costing system in the Crown Prosecution Service (CPS). Available from: www.cimaglobal.com/financialmanagement [Accessed 8 November 2007].