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Cost Allocation and Activity-Based Costing Systems

LEARNING OBJECTIVES

After studying this chapter, you will be able to

- 1. Explain the major purposes for allocating costs.
- 2. Explain the relationship between activities, resources, costs, and cost drivers.
- **3.** Use recommended guidelines to charge the variable and fixed costs of service departments to other organizational units.
 - **4.** Identify methods for allocating the central costs of an organization.
- **5.** Use the direct, step-down, and reciprocal allocation methods to allocate service department costs to user departments.
 - **6.** Describe the general approach to allocating costs to products or services.
- 7. Use the physical units and relative-sales-value methods to allocate joint costs to products.
 - 8. Use activity-based costing to allocate costs to products or services.
 - **9.** Identify the steps involved in the design and implementation of activity-based costing systems.
 - 10. Calculate activity-based costs for cost objects.
 - 11. Explain why activity-based costing systems are being adopted.
 - 12. Explain how just-in-time systems can reduce non-value-added activities

A univer sity's computer is used for teaching and for gover nm ent-fun ded research. How much of its cost should be assigned to each task? A city create s a special police unit to investigate a series of related assaults. What is the total cost of the effort? A company uses a machine to make two differe nt prod ucts. How much of the cost of the machine belongs to each prod uct? These are all problems of cost allocation, the subject of this chapter. Univer sity preside nts, city managers, corporate executives, and others all face problems of cost allocation.

Cost Accounting System.
The techniques used to determine the cost of a product or service by collecting and classifying costs and assigning them

to cost objects.

This is the first of three chapter s on **cost acc ount ing syste ms**—the tech-niques used to deter mine the cost of a prod uct or service. A cost accounting system collects and classifies costs and assigns them to cost objects. The goal of a cost accounting system is to measure the cost of designing, developing, prod ucing (or purchasing), selling, distributing, and servicing part icular prod ucts or services. Cost allocation is at the heart of most cost accounting systems.

The first part of this chapter describes general approa ches to cost allocation. Although we present some factors to consider in selecting cost-allocation methods, there are no easy answers. Recent attempts to improve cost-allocation methods have focused on activity-based costing, the subject of the last part of this chapter.

COST ALLOCATION IN GENERAL

As Chapter 4 pointed out, cost allocation is fun damentally a problem of linking (1) some cost or groups of costs with (2) one or more *cost objectives*, such as products, depart ments, and divisions. Ideally, costs should be assigned to the cost objective that *caused* it. In short, cost allocation tries to identify (1) with (2) via some function representing causation.

Cost-Allocation Base. A cost driver when it is used for allocating costs.

Linking costs with cost objectives is accomplished by selecting cost drivers. When used for allocating costs, a cost driver is often called a **cost-all ocation bas e**. Major costs, such as newsprint for a newspaper and direct professional labour for a law firm, may each be allocated to depart ments, jobs, and projects on an item-by-item basis, using obvious cost drivers such as tonn es of newsprint consum ed or direct-labour-hours used. Other costs, take n one at a time, are not important enough to justify being allocated individually. These costs are *pooled* and then allocated together. A **cost pool** is a group of individual costs that is allocated to *cost objectives* using a single cost driver. For example, building rent, utilities cost, and janitorial services may be in the same cost pool because all are allocated on the basis of square metres of space occupied. Or a university could pool all the operating costs of its registrar's office and allocate them to its colleges on the basis of the number of students in each faculty. In summary, all costs in a given cost pool should be caused by the same factor. That factor is the cost driver.

Cost Pool. A group of individual costs that is allocated to cost objectives using a single cost driver.

Many different terms are used by companies to describe cost allocation in practice. You may encounter terms such as *allocate*, *attribute*, *reallocate*, *trace*, *assign*, *distribute*, *redistribute*, *load*, *burden*, *apportion*, and *reapportion*, which can be used interchangeably to describe the allocation of costs to cost objectives.

Three Purposes of Allocation

Managers within an organizational unit should be aware of all the consequences of their decisions, even consequences outside of their unit. Examples are the addition of a new course in a university that causes additional work in the registrar's office,

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