

## Managerial Accounting

Change Methods

Make or Buy

Product Mix

Production

Pricing Decision Making

Financial Reporting

Costing

Profit and Cost Centers

Variance Analysis

Budgeting

Discontinue

(Control)

Performance Evaluation

What are the Goals?

### BASIC COST TERMS

Cost: A sacrifice of resources. Distinguish from "expense"

Cost Object : Any activity or item for which a separate measurement of costs is desired.

Cost Driver: Any factor whose change "causes" a change in the total cost of a related cost object.

Note: Cost drivers can be factors other than volume

### BASIC COST TERMS (contd.)

Direct Costs -Costs that can be traced to a given cost object (product, department, etc.) in an economically feasible way.

Indirect Costs - Costs that cannot be traced to a given cost object in an economically feasible way. These costs are also known as overhead or burden

Cost Assignment - Direct costs are traced to a cost object.

Indirect costs are allocated or assigned to a cost object.

Product Costs - All costs that "attach" to the units that are produced and are not reported as expenses until the goods are sold (e.g., direct materials, direct labor, applied overhead).

Period costs - Costs that must be charged against income in the period incurred and cannot be inventoried (e.g., selling and administrative expenses).

Manufacturing Costs - The sum of direct materials, direct labor, and indirect manufacturing costs

Unit Costs - Total cost of units divided by units produced.

### Controllable Costs

Any cost that is primarily subject to the influence of a given manager of a given responsibility center for a given time period.

## COST BEHAVIOR

Variable Costs - Costs that change directly in proportion to changes in the related cost driver

Fixed Costs - Costs that remain unchanged for a given time period regardless of changes in the related cost driver.

### Functions for Cost Behavior

Semivariable Costs (part variable and part fixed) - Step costs

Major Assumptions Needed to Define Fixed and Variable Costs

Cost object,

Time span,

Linear functional form

Relevant range - the band of cost driver activity in which a specific relationship between a cost and a driver holds.

### The Impact of Inventory Accounting

What costs are assigned to inventory as products are manufactured?

GAAP requires Full Absorption Costing: the products fully absorb all manufacturing costs, including:

Variable manufacturing Costs: Material, Labor

Fixed manufacturing Costs: Overhead

Results in unitizing fixed costs: convert total fixed costs (TFC) to a unit cost by allocating TFC to the units produced.

### Traditional Costing System

Product Costs

Traced directly

Traced using  
machine hrs

Direct Costs

Direct Labor

Direct Materials

Overhead Costs

Indirect Labor

Indirect Materials

Depreciation allocation base - eg direct labor hrs,

## Example of Product Costing

Electron, Inc. produces 10,000 units in one month.

Variable manufacturing costs are:

• \$6/unit for material,

\$1/unit for direct labor, and

\$1/unit for variable overhead.

Fixed mfg overhead is \$50,000/month.

Unit costs are \$8 (variable) + \$50,000/10,000 (fixed) or \$13/unit.

How do these costs flow through Inventory Accounts?

### Product Costing Events

First half of November:

11/ 1: Purchase and receive \$60,000 of material (Nov. supply)

11/ 2: Requisition half of the materials to the factory floor (\$30,000)

11/ 5: Apply labor to the materials (\$5,000)

11/ 7: Recognize depreciation expense for the month (\$50,000)

11/ 8: Apply variable OH to the materials (\$5,000)

11/ 9: Transfer 5,000 completed calculators from WIP to FG Inventory

11/10: Ship 2,000 completed calculators to customer

How do Costs Flow through Inventory Accounts?  
Cash Mat's Inv

Raw

WIP Inv Inv

Goods

Fin

PP&E

Net = Payable

Wages

RE

Buy Materials -60 60

= materials to factory

Requisition half of -30 30 = Apply labor 5

= 5

depreciation)

(PP&E

Apply fixed OH

50 -50

=

Apply variable OH -5 5

=

inventory

Transfer to FG -65 65 = Sell 2,000 units -26 = -26

Key Strategic Management Decisions

! Pricing

! Dropping unprofitable products

Re-engineering/restructuring

Making new investments

Mergers & acquisitions

Targeting customer groups

Cost Information for Strategic Decisions

Product Costs

Pricing

Dropping unprofitable products

Process/Business Costs

Re-engineering/restructuring

Making new investments  
Mergers & acquisitions  
Targeting customer groups

! Customer Costs

Activity-Based Costing System

Product

Costs Activities that drive overhd

Direct Costs

Direct Labor

Direct Materials

Overhead Costs

Indirect Labor

Indirect Materials

Depreciation

## Examples of Overhead Activities

Purchase order processing  
Receiving/Inventorying materials  
Inspecting materials  
Processing accounts payable  
Facility maintenance  
Scheduling production  
Customer complaints  
Quality inspection/testing

## Typical Activity Cost Drivers

Number of alteration notices per product

Units produced

Number of receipts for materials/parts

Stockroom transfers

Direct labor hours

Set-up hours

Inspection hours

Facility hours

Number of customer complaints

## ABC Example

Dialglow Corporation manufactures travel clocks and watches. Overhead costs are currently allocated using direct labor hours, but the controller has recommended an activity-based costing system using the following data:

Activity Level

Activity Cost Driver Cost Clocks Watches

Production Setup No. of Setups \$120,000 10 15

Material Handling

& Requisition No. of Parts 30,000 18 36

Packaging

& Shipping #Units Shipped 60,000 45,000 75,000

Total Overhead \$210,000

Existing Cost System:

Allocate Total OH based on labor hours

(35,000 hours for travel clocks; 105,000 hours for watches.)

OH Rate:

$\$210,000 / 140,000 \text{ hours} = \$1.50/\text{hour}$

OH cost per Travel Clock:

$(\$1.50/\text{hr} * 35,000 \text{ hrs}) / 45,000 \text{ units} = \$1.167$

OH cost per Watch:

$(\$1.50/\text{hr} * 105,000 \text{ hrs}) / 75,000 \text{ units} = \$2.10$

Allocation of :

Production Setup Costs:  $\$120,000 / (10+15) \text{ setups} = \$4,800/\text{setup}$

Material Handling Costs:  $\$30,000 / (18+36) \text{ part numbers} = \$555.56/\text{part no.}$

Packing/Shipping Costs:  $\$60,000 / (45,000+75,000) \text{ units} = \$0.50/\text{unit shipped}$

Resulting ABC-based Product Costs: Clocks Watches

Production Setup \$48,000 \$72,000

Material Handling 10,000 20,000

Packing/Shipping 22,500 37,500

Total \$80,500 \$129,500

Per Unit \$1.79 \$1.73



