

# **COST ACCOUNTING** and **PRODUCT COSTS**

## **Primary reasons for interest in traditional Cost Accounting:**

- *Most frequently encountered system*
- *Other forms are simplified versions*
- *Idiosyncracies permeate most systems*

## **Primary reasons for interest in Product Costs:**

- *Valuation of Inventory and Cost of Goods Sold (for financial accounting system)*
- *Information for product/service pricing, make-or-buy decisions, operations planning and evaluation (for management)*

*Financial system needs are usually met - to the detriment of Management needs*

# COST ACCOUNTING STRUCTURES

## THREE KEY PARAMETERS:

- *Overhead inclusiveness*
- *Type of task*
- *Cost definition method*

*NOTE : There is a wide variety of cost accounting systems. The specific nature of a system - usually peculiar to a particular organization - depends on how the three parameters above are specified.*

## **- FIRST PARAMETER - OVERHEAD INCLUSIVENESS**

### **Prime Costing:**

*Direct material and direct labor  
(no indirect production costs or  
nonproduction overhead)*

### **Direct (Variable) Costing:**

*Direct material, direct labor, and  
variable indirect production costs  
(no fixed indirect production costs  
or nonproduction overhead)*

### **Full-absorption Costing:**

*Direct material, direct labor,  
variable indirect production costs,  
and fixed indirect production  
costs (no nonproduction  
overhead)*

## **- SECOND PARAMETER - TYPE OF TASK**

### **Job Order Costing:**

- *Task best described as producing a number of units*
- *Cost per unit determined by dividing the costs incurred on the job by the number of units realized*

### **Process Costing:**

- *Task best described as operating a process for a specified period of time*
- *Cost per unit determined by dividing the costs incurred in operating the process for the prescribed time period by the output obtained during that period*

# - THIRD PARAMETER - COST DEFINITION METHOD

## Actual Costs:

*Based on what everything actually cost*

## Standard Costs:

*Based on what everything should have cost*

# **SUBSIDIARY COSTING ISSUES**

## **Joint Products:**

*When two or more different end products of roughly equivalent value result from a single process or job order*

## **By-Products:**

*Unsought joint products of substantially less value that result from a single process or job order*

**Assignment of costs to joint products is inevitably somewhat arbitrary**

**page 355, #15.8: Refer to the five different activities listed in Question #15.7. For each, identify the major indirect production costs that you will want to include in a full-absorption product cost, and indicate what difficulties, if any, you think you will have in determining these indirect costs. Which of these indirect costs are fixed in nature, and thus would be excluded from product costs in a direct (variable) costing system?**

- a) a factory that manufactures kitchen cabinets
- b) a shop that customizes automobiles
- c) a software development department that designs and writes code for new software programs to be marketed to auto repair shops
- d) a major motion picture production firm
- e) a construction firm specializing in public works projects

**Recall . . .**

***In full-absorption costing, overhead includes both fixed and variable indirect production costs (but excludes nonmanufacturing overhead)***

**a) a factory that manufactures kitchen cabinets**

**(1) *major indirect production costs would probably include supervision, quality control, material handling, inventory control, production control, equipment maintenance, equipment depreciation, miscellaneous supplies, occupancy costs***

**(2) *of the preceding, fixed indirect production costs would include quality control, equipment maintenance, equipment depreciation, occupancy costs***

**b) a shop that customizes automobiles**

- (1) major indirect production costs would probably include supplies, equipment maintenance, equipment depreciation, occupancy costs, inventory control, supervision*
- (2) of the preceding, fixed indirect production costs would include equipment maintenance, equipment depreciation, occupancy costs, inventory control*

**c) a software development department that designs and writes code for new software programs to be marketed to auto repair shops**

- (1) major indirect production costs would probably include supplies, supervision, equipment maintenance, depreciation, occupancy*
- (2) of the preceding, fixed indirect production costs would probably include all but supplies*

**d) a major motion picture production firm**

*(1) major indirect production costs would probably include all "home-office" studio expenses such as scheduling, script review, technical assistance*

*(2) of the preceding, most would probably be treated as period costs*

**e) a construction firm specializing in public works projects**

*(1) major indirect production costs would probably include supervision, supplies, equipment maintenance, equipment depreciation*

*(2) of the preceding, fixed indirect production costs would probably include equipment maintenance, equipment depreciation*

**page 357, #15.1:** The Cowell Specialty Chemical Company produces custom-blended chemicals in large quantities to order for a few customers. One large order consumed all of the production capacity at Cowell for the month of May 1995. Cowell uses a process costing system. Assume that Cowell issued from inventory materials during the month of May valued at \$43,000 and labor time cards revealed that a total of 2200 hours was charged to the process during the month; the standard labor wage rate is \$12 per hour (including fringe benefits). Output on this one large order totaled 100,000 kg. Factory overhead for the month was \$53,000, \$15,500 of which was variable and the remainder was fixed. Selling, administrative, and other operating costs for the month totaled \$31,000. Calculate the product cost for 1 kg of the custom-blended chemical produced in May, assuming:

- a) Product costs are defined as prime costs only
- b) Product costs are defined as variable (direct) costs
- c) Product costs are defined as full-absorption costs

page 357, #15.1:

a) Assuming product costs are defined as prime costs only

*Prime Costs are direct labor and direct material only:*

<i>Material</i>	<i>\$ 43,000</i>
<i>Labor [2200 hrs * \$12/hr]</i>	<i>\$ 26,400</i>
<i>Total</i>	<i>\$ 69,400</i>

*Output = 100,000 kg*

*Cost / kg = \$69,400 / 100,000 = \$ 0.694* ←←

b) Assuming product costs are defined as variable (direct) costs

*Variable (direct) costs include direct labor, direct material, and variable indirect production costs:*

<i>Material</i>	<i>\$ 43,000</i>
<i>Labor [2200 hrs * \$12/hr]</i>	<i>\$ 26,400</i>
<i>Variable overhead</i>	<i>\$ 15,500</i>
<i>Total</i>	<i>\$ 84,900</i>

*Output = 100,000 kg*

*Cost / kg = \$84,900 / 100,000 = \$ 0.849* ←←

c) Assuming product costs are defined as full-absorption costs

*Full-absorption costs include direct labor, direct material, variable indirect production costs, and fixed indirect production costs*

<i>Material</i>	<i>\$ 43,000</i>	<i>35.1%</i>
<i>Labor [2200 hrs * \$12/hr]</i>	<i>\$ 26,400</i>	<i>21.6%</i>
<i>Variable overhead</i>	<i>\$ 15,500</i>	<i>12.7%</i>
<i>Fixed overhead [\$53,000-15,500]</i>	<i>\$ 37,500</i>	<i>30.6%</i>
<i>Total</i>	<i>\$122,400</i>	

*Output = 100,000 kg*

*Cost per kg = \$122,400 / 100,000 = \$ 1.224* ←←