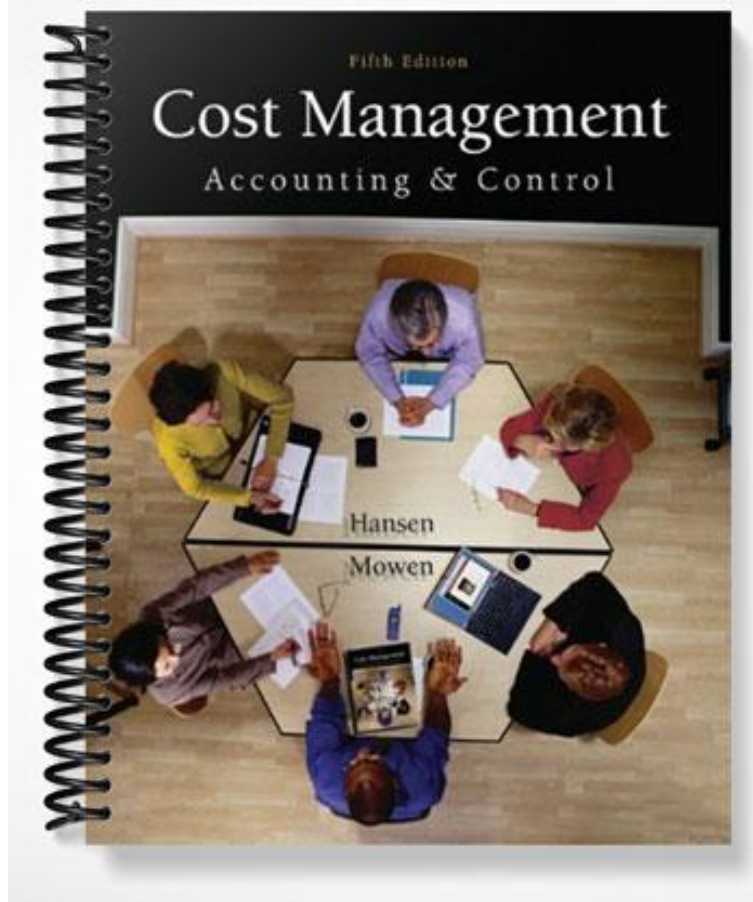


# SOLUTIONS MANUAL



# CHAPTER 2

## BASIC COST MANAGEMENT CONCEPTS

### QUESTIONS FOR WRITING AND DISCUSSION

1. An accounting information system is a system consisting of interrelated manual and computer parts, using processes such as collecting, recording, summarizing, analyzing, and managing data to provide output information to users.
2. The financial accounting information system is primarily concerned with producing outputs for external users using well-specified economic events as inputs and processes that meet certain rules. The cost management system, on the other hand, produces outputs for internal users, and the criteria that govern inputs and processes are directly related to management objectives. The cost management system, therefore, has more flexibility than the financial system.
3. The three broad objectives of a cost management information system are (1) to cost out products, services, and other cost objects; (2) to provide information for planning and control; and (3) to provide information for decision making.
4. The cost accounting information system is a cost management subsystem designed to assign costs to products, services, and other objects as management needs specify. The operational control information system is a cost management information subsystem designed to provide accurate and timely feedback concerning the performance of managers and others relative to their planning and control of activities.
5. A cost object is any item for which costs are measured and assigned, including such things as products, plants, projects, departments, and activities.
6. An activity is a basic unit of work performed within an organization. Examples include materials handling, inspection, purchasing, billing, and maintenance.
7. Direct costs are costs that can be easily and accurately traced to a cost object. An indirect cost is a cost that cannot be easily traced to cost objects.
8. Traceability is the ability to assign a cost directly to a cost object in an economically feasible way using a causal relationship.
9. Allocation is the assignment of indirect costs to cost objects based on convenience or assumed linkages.
10. Driver tracing is the use of drivers to trace costs to cost objects. Often, this means that costs are first traced to activities using resource drivers and then to cost objects using activity drivers.
11. Tangible products are goods that are made by converting raw materials through the use of labor and capital inputs.
12. A service is a task or activity performed for a customer or an activity performed by a customer using an organization's products or facilities. Services differ from tangible products on three important dimensions: intangibility, perishability, and inseparability. Intangibility means that buyers of services cannot see, feel, taste, or hear a service before it is bought. Perishability means that services cannot be stored. Inseparability means that producers of services and buyers of services must be in direct contact (not true for tangible products).
13. Three examples of product cost definitions are value-chain, operating, and traditional definitions. The value-chain definition includes cost assignments for research and development, production, marketing, and customer service (all value-chain activities). Operational product costs include all costs except for research and development. Traditional product costs include only production costs. Different costs are needed because they serve different managerial objectives.
14. The three cost elements are direct materials, direct labor, and overhead.

15. The income statement for a service firm does not need a supporting cost of goods manufactured schedule. Since services can-

not be stored, the cost of services produced equals the cost of services sold (not necessarily true for a manufacturing firm).

## EXERCISES

2-1

1. The objective of the dishwashing system is to provide clean, germ-free dishes, glasses, and silverware. Processes include scraping uneaten food off dishes into disposal, loading the racks, washing the dishes, and unloading the racks.
2. The items are classified as follows:
  - a. Automatic dishwasher—interrelated part
  - b. Racks to hold the dirty glasses, silverware and dishes—interrelated part
  - c. Electricity—input
  - d. Water—input
  - e. Waste disposal—interrelated part
  - f. Sinks and sprayers—interrelated parts
  - g. Dish detergent—input
  - h. Gas heater to heat water to 180 degrees Fahrenheit—interrelated part
  - i. Conveyor belt—interrelated part
  - j. Persons 1, 2, 3, and 4—interrelated parts
  - k. Clean, germ-free dishes—outputs
  - l. Dirty dishes—inputs
  - m. Half-eaten dinner—inputs
  - n. Aprons—interrelated parts
3. Operational model: dishwashing system

<u>Inputs</u>	<u>Processes</u>	<u>Objectives</u>
Detergent	Scraping off food	Clean dishes
Water	Loading racks	
Electricity	Washing	
Dirty dishes	Unloading	

4. The cost management information system is similar in that it has interrelated parts: processes, objectives, inputs, and outputs. The differences are that inputs are economic events and there are users of information. The output of the cost management system produces user actions. Output can act as the basis for action or can confirm that actions already taken had the intended effects.

## 2-2

1.
  - a. Interrelated parts: Cost accounting personnel, computer, printer
  - b. Processes: Cost assignment: direct materials, direct labor, and overhead
  - c. Objectives: Costing out of products
  - d. Inputs: Direct materials, direct labor, depreciation, power, and materials handling
  - e. Outputs: Product cost report
  - f. User actions: Submission of a bid, make-or-buy decision
2. Operational model: cost accounting system
  - a. Interrelated parts: Direct materials, direct labor, depreciation, power, materials handling
  - b. Processes: Cost assignment: materials, labor, and overhead
  - c. Objectives: Costing out of products
  - d. User actions: Submission of a bid, make-or-buy decision
3. The inputs consist of only production costs suggesting a functional-based product cost definition.

## 2-3

- a. Allocation
- b. Direct tracing
- c. Allocation
- d. Direct tracing
- e. Driver tracing; potential driver—machine hours
- f. Direct tracing
- g. Driver tracing; potential driver—number of square feet occupied
- h. Direct tracing
- i. Driver tracing; potential driver—number of orders
- j. Direct tracing
- k. Allocation
- l. Driver tracing; potential driver—number of employees
- m. Direct tracing
- n. Allocation

**2-4**

- a. Value-chain. The price needs to cover all product costs, including the costs of developing, selling, and servicing.
- b. Manufacturing. This approach is mandated for external reporting.
- c. Value-chain. Product mix decisions should consider all costs, and the mix that is the most profitable in the long run should be selected.
- d. Operating. The designs should be driven by the effect they have on production, marketing, and servicing costs. Thus, the operating cost definition is the most relevant.
- e. Manufacturing. This approach is mandated for external reporting.
- f. Operating. Research and design costs are not relevant for a price decision involving an existing product. Production, marketing, and servicing costs are relevant, however.
- g. Operating. Any special order should cover its costs, which potentially include production, marketing, and servicing costs.
- h. Value-chain. This is a strategic decision and involves activities and costs throughout the entire value chain.
- i. Operating. At this point, the costs of design and development are sunk costs; the decision to produce should consider the costs of production, marketing, and servicing the product.

**2-5**

1. Direct materials used =  $\$49,300 + \$150,000 - \$20,000 = \$179,300$

2. Direct materials .....	\$ 179,300
Direct labor .....	200,000
Overhead .....	<u>324,700</u>
Total manufacturing cost .....	\$ 704,000
Add: Beginning WIP .....	55,400
Less: Ending WIP .....	<u>(20,400)</u>
Cost of goods manufactured .....	<u>\$ 739,000</u>

Unit cost of goods manufactured =  $\$739,000/100,000 = \$7.39$

- 3. Direct labor =  $\$7.39 - \$1.70 - \$3.24 = \$2.45$
- Prime cost =  $\$1.70 + \$2.45 = \$4.15$
- Conversion cost =  $\$2.45 + \$3.24 = \$5.69$

2-6

1. **Beginning inventory + Purchases – Ending inventory = DM used**  
**\$16,000 + \$275,000 – Ending inventory = \$200,000**  
**Ending inventory = \$91,000**

2. **Units in beginning finished goods inventory = \$3,510/\$5.85 = 600**

Since 10,000 units were manufactured and 600 were in beginning finished goods inventory, 10,600 units were available for sale. But 8,900 units were sold, so ending finished goods inventory is 1,700.

3. **Cost of goods manufactured = \$93,000 + \$50,000 – \$18,750 = \$124,250**

4. **Prime cost = \$19.50 = Direct materials + Direct labor**  
**Direct materials = \$19.50 – Direct labor**

**Conversion cost = \$32 = Direct labor + Overhead**  
**Overhead = \$32 – Direct labor**

**(\$19.50 – Direct labor) + Direct labor + (\$32 – Direct labor) = \$39.50**  
**Direct labor = \$12**

**Direct materials + Direct labor = \$19.50**  
**Direct materials + \$12 = \$19.50**  
**Direct materials = \$7.50**

5. **Total manufacturing costs + BWIP – EWIP = COGM**  
**\$156,900 + \$60,000 – EWIP = \$125,000**  
**EWIP = \$91,900**

**Prime cost + Overhead = Total manufacturing costs**  
**\$90,000 + Overhead = \$156,900**  
**Overhead = \$66,900**

2-7

1. **Cimino Company**  
**Statement of Cost of Goods Manufactured**  
**For the Month of June**

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<b>Direct materials:</b>		
Beginning inventory .....	\$ 51,200	
Add: Purchases.....	<u>70,000</u>	
Materials available .....	\$121,200	
Less: Ending inventory .....	<u>18,600</u>	
Direct materials used in production.....		\$ 102,600
Direct labor .....		22,000
Manufacturing overhead .....		<u>216,850</u>
Total manufacturing costs added.....		\$ 341,450
Add: Beginning work in process .....		10,000
Less: Ending work in process .....		<u>(6,050)</u>
Cost of goods manufactured .....		<u>\$ 345,400</u>

2. **Cimino Company**  
**Statement of Cost of Goods Sold**  
**For the Month of June**

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Cost of goods manufactured .....	\$ 345,400
Add: Beginning finished goods inventory .....	<u>10,075</u>
Cost of goods available for sale .....	\$ 355,475
Less: Ending finished goods inventory .....	<u>8,475</u>
Cost of goods sold.....	<u>\$ 347,000</u>



2-8

1. Units ending finished goods =  $6,000 + 150,000 - 154,000$   
= 2,000

Finished goods ending inventory =  $2,000 \times \$5.10^* = \$10,200$

\*Since the unit cost of beginning finished goods and the unit cost of current production both equal \$5.10, the unit cost of ending finished goods must also equal \$5.10.

2. **Photo-Dive, Inc.**  
**Statement of Cost of Goods Sold**  
**For the Year Ended December 31**

Cost of goods manufactured ( $\$5.10 \times 150,000$ ) .....	\$ 765,000
Add: Beginning finished goods inventory .....	<u>30,600</u>
Goods available for sale .....	\$ 795,600
Less: Ending finished goods inventory .....	<u>10,200</u>
Cost of goods sold .....	<u>\$ 785,400</u>

3. **Photo-Dive, Inc.**  
**Income Statement: Absorption Costing**  
**For the Year Ended December 31**

Sales ( $154,000 \times \$8$ ) .....		\$1,232,000
Cost of goods sold .....		<u>785,400</u>
Gross margin .....		\$ 446,600
Less operating expenses:		
Commissions ( $154,000 \times \$0.25$ ) .....	\$ 38,500	
Administrative expenses .....	83,000	
Advertising copayments .....	<u>36,000</u>	<u>157,500</u>
Income before taxes .....		<u>\$ 289,100</u>

2-9

1.

**Araj Company**  
**Statement of Cost of Goods Manufactured**  
**For the Year Ended December 31**

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<b>Direct materials:</b>		
Beginning inventory .....	\$ 47,000	
Add: Purchases .....	160,400	
Freight-in on materials .....	<u>1,000</u>	
Materials available .....	\$208,400	
Less: Ending inventory .....	<u>17,000</u>	
Direct materials used .....		\$ 191,400
Direct labor .....		371,500
<b>Manufacturing overhead:</b>		
Material handling .....	\$ 26,750	
Supplies .....	37,800	
Utilities .....	46,000	
Supervision and indirect labor .....	<u>190,000</u>	
Total overhead costs .....		<u>300,550</u>
Total manufacturing costs added .....		\$ 863,450
Add: Beginning work in process .....		201,000
Less: Ending work in process .....		<u>(98,000)</u>
Cost of goods manufactured .....		<u>\$ 966,450</u>

2.

**Araj Company**  
**Statement of Cost of Goods Sold**  
**For the Year Ended December 31**

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Cost of goods manufactured .....	\$ 966,450
Add: Beginning finished goods inventory .....	<u>8,000</u>
Cost of goods available for sale .....	\$ 974,450
Less: Ending finished goods inventory .....	<u>62,700</u>
Cost of goods sold .....	<u>\$ 911,750</u>

**2-10**

1. Beginning inventory, materials.....	\$ 1,050
+ Purchases.....	9,350
- Ending inventory, materials.....	<u>(750)</u>
Materials used in production .....	<u>\$ 9,650</u>
2. Prime cost = \$9,650 + \$18,570 = \$28,220	
3. Conversion cost = \$18,570 + \$15,000 = \$33,570	
4. Direct materials .....	\$ 9,650
Direct labor .....	18,570
Overhead .....	<u>15,000</u>
Cost of services .....	<u>\$43,220</u>

5. **Compufix  
Income Statement  
For the Month Ended May 31**

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Sales revenues .....	\$ 60,400
Cost of services sold .....	<u>43,220</u>
Gross margin.....	\$ 17,180
Operating expenses:	
Advertising .....	(5,000)
Administrative costs.....	<u>(3,000)</u>
Income before taxes .....	<u>\$ 9,180</u>

**2-11**

1. Shelly is interested in the manufacturing costs of glaxane. In particular, the costs of direct materials, direct labor, and overhead will be calculated to budget for glaxane production.
2. Leslie will be concerned with all costs along the value chain. Clearly, the after-sale costs will be an important factor in pricing since the potential for fatal side effects will lead to both lawsuits and the withdrawal of glaxane from the market. However, Leslie must also be concerned with the costs of research, development, and production since pharmaceutical companies attempt to link all of these costs to a drug to justify their pricing strategies.
3. Dante will be primarily concerned with the overall research and development costs and the eventual revenue from the successful drugs. Any individual potential drug can turn out to have no value as long as some drug projects are successful and can justify the total efforts.

1. Given the description provided, we can conclude that Jazon uses a functional-based cost management system. First, evidence exists that product costs are only determined by production costs. Apparently, the financial accounting system is driving the type of product cost information being produced. Second, only direct labor hours, a unit-based driver, are used to assign overhead costs. Since many overhead costs are likely to be caused by non-unit-based drivers, this also suggests a strong reliance on allocation for cost assignment. Third, the company attempts to control costs by encouraging departmental managers to meet budgeted levels of expenditures. The focus is on departmental performance rather than systemwide performance. Further, departmental performance is measured only by financial instruments.
2. Product costing accuracy can be improved by placing more emphasis on tracing and less on allocation. Enough information is provided to reveal that the two products make quite different demands on certain activities. Setup, receiving, and purchasing resources are clearly consumed differently by the two products. Furthermore, it is doubtful that direct labor hours would have anything to do with the two products' patterns of resource consumption for these three activities. Thus, using activity drivers that better reflect the differential resource consumption would improve the cost assignments. Jazon would need to assign costs to the activities using direct tracing and resource drivers and then assign the cost of the activities to the two products using activity drivers. Jazon also should consider the possibility of computing different—more managerially relevant—product costs such as value-chain costs and operational costs.
3. Jazon would need to change its control focus from managing costs to managing activities. This also would entail a shift in emphasis from departmental performance maximization to systemwide performance maximization. To bring about this change, Jazon will need to provide detailed information concerning activities. Since activities cause costs, managing activities is a more logical approach to controlling costs.

**2-13**

1. Direct materials used = \$41,600 + \$270,000 – \$31,600 = \$280,000

2. Direct materials .....	\$ 280,000
Direct labor .....	320,000
Overhead .....	<u>490,000</u>
Total manufacturing cost .....	\$ 1,090,000
Add: Beginning WIP .....	26,000
Less: Ending WIP .....	<u>(51,000)</u>
Cost of goods manufactured .....	<u>\$ 1,065,000</u>

Unit cost of goods manufactured = \$1,065,000/25,000 = \$42.60

3. Overhead per unit = \$42.60 – \$11.00 – \$12.00 = \$19.60

Prime cost = \$11 + \$12 = \$23

Conversion cost = \$12.00 + \$19.60 = \$31.60

**2-14**

1. Cost of goods manufactured .....	\$ 1,065,000
Add: Beginning finished goods inventory .....	75,000
Less: Ending finished goods inventory .....	<u>140,000</u>
Cost of goods sold.....	<u>\$ 1,000,000</u>

2. **Shellenberger Company**  
**Income Statement**  
**For the Year Ended December 31**

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Sales.....	\$ 1,380,000
Cost of goods sold.....	<u>1,000,000</u>
Gross margin.....	\$ 380,000
Less: Selling and administrative expense .....	<u>216,300</u>
Income before taxes .....	<u>\$ 163,700</u>

## PROBLEMS

2-15

1. The decision was made assuming that the fixed cost pool would remain unchanged. What management failed to realize was that additional demands on activities would be made by the new product line. Their failure to recognize this was due to the fact that they did not understand that costs can be driven by factors that are unrelated to the number of units produced. For example, materials handling costs are apparently driven by the number of moves, inspection costs by the number of batches, purchasing costs by the number of orders, and accounting costs by the number of transactions. Demand for these activities increased and so supply of the activities had to be increased; each activity evidently did not have enough idle capacity to handle the increased demands.
2. An activity-based cost management system provides information about both unit-based and non-unit-based drivers and is concerned with tracing these costs to the individual product lines. Using this system, the need for additional resources would have been revealed, leading to a better decision. Whether or not the company should adopt the activity-based system depends on the costs of making bad decisions versus the cost of implementing the more accurate system. Based on the reference to competition and the experience with the new product lines, an ABC system may very well be appropriate. One difference between an ABC and a functional-based cost system has already been mentioned, i.e., the use of additional drivers in an ABC system. The ABC system emphasizes tracing and usually produces greater product costing accuracy. Broader and more flexible product cost definitions are also available in this system. An ABC system also focuses on managing activities and stresses systemwide performance maximization (as opposed to the traditional approaches of managing costs and maximizing individual unit performance). Finally, it should also be mentioned that an ABC system uses both financial and nonfinancial operational measures of performance.

## 2-16

### 1. Functional-based cost system:

**Interrelated parts:** Cost accounting staff, computer, printer

**Processes:** Cost assignment:

- Direct tracing: Materials, labor
- Driver tracing: None
- Allocation (using direct labor hours for assignment): Setup costs, purchasing costs, materials handling costs, and plant depreciation

**Objectives:** Costing out of products

**Inputs:** Direct materials cost, direct labor cost, setup cost, purchasing cost, materials handling cost, and plant depreciation

**Outputs:** Product cost report

**User actions:** Submission of a bid, make-or-buy decision

*Note:* A functional-based system would not use non-unit-drivers such as number of setups, moves, and orders to assign overhead costs to products. This leaves direct labor hours, a unit-based driver, as the only possibility. Since direct labor hours is not a good driver for the overhead activities listed, allocation is the principal means of cost assignment. Furthermore, a functional-based cost system would not assign sales or service costs to products so these two items cannot be inputs for the system.

### Activity-based cost system:

**Interrelated parts:** Cost accounting staff, computer, printer

**Processes:** Cost assignment:

- Direct tracing: Materials, labor
- Driver tracing: Setup costs (number of setups), purchasing costs (number of orders), materials handling costs (number of moves), commissions (units sold), service costs (number of complaints)
- Allocation: Plant depreciation (direct labor hours)

**Objectives:** Costing out of products

**Inputs:** Direct materials cost, direct labor cost, setup cost, purchasing cost, materials handling cost, commissions, customer service cost, plant depreciation

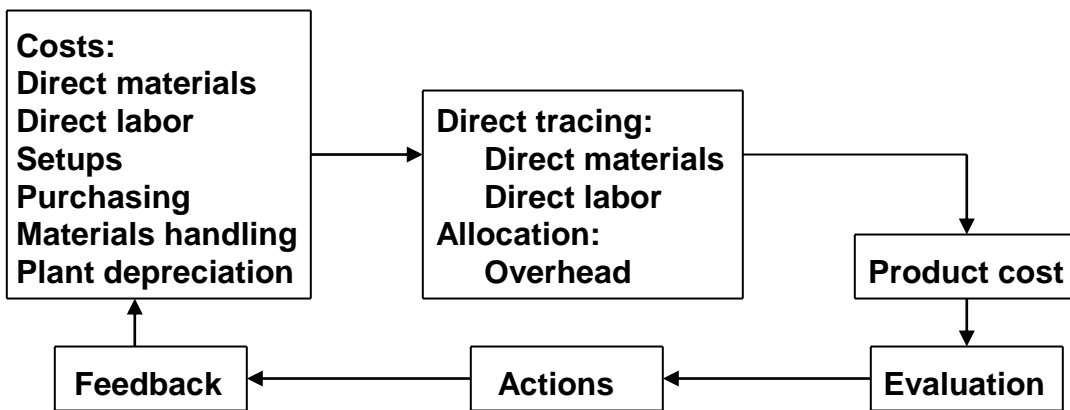
**Outputs:** Product cost report

**User actions:** Submission of a bid, make-or-buy decision

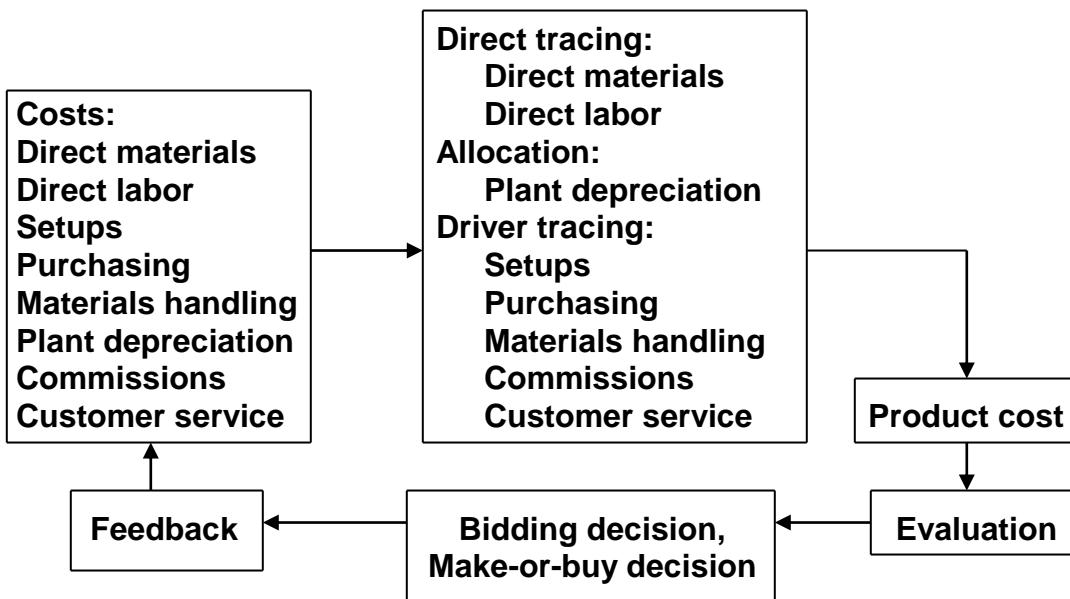
2-16 Continued

2. The differences between the two systems are found in the processes. The ABC system is driver-intensive; non-unit-based drivers are used to trace costs to products, whereas this is not part of the functional-based system (which is allocation-intensive). The ABC system also assigns marketing and customer service costs to products, giving a more comprehensive view of product costs. Thus, although both systems provide product cost reports, the content of the reports will differ. The increased accuracy of cost assignments because of driver tracing and the additional marketing and customer service cost information provided by the ABC system should increase the quality of the bidding and make-or-buy decisions (i.e., reduce the error in decisions of this type).

3. Operational model: functional-based cost accounting system



Operational model: ABC cost accounting system





## 2-16 Concluded

4. The operational models reveal that the ABC cost system is more complex, requires more inputs, and uses more complicated processes to transform the inputs. Thus, we would expect this system to be more costly to operate. On the other hand, the increased complexity provides increased accuracy and a richer set of possible product cost definitions. The ABC system can provide both traditional and operating product cost information. Both these factors should provide an advantage when it comes to managerial decision making. (The cost of making bad decisions is reduced.) Choosing the ABC system depends on whether the benefits of improved decision making outweigh the increased measurement costs.

## 2-17

Functional-based control system:

<u>Actions</u>	<u>Justification</u>
a	Performance, organizational subunit; managing costs
b	Rewards manager for subunit performance
d	Emphasizes performance of organizational subunit
g	Emphasis on controlling costs
j	Reward based on controlling costs (subunit performance)
l	Emphasis on controlling costs
o	Emphasis on subunit performance; controlling costs

Activity-based control system:

<u>Actions</u>	<u>Justification</u>
c	Activity-based cost used as input for activity control
e	Emphasis on activity analysis
f	Emphasis on managing activities (activity analysis)
h	Managing activities
i	Driver analysis
k	Driver analysis; activity management
m	Nonfinancial measure of performance
n	Driver analysis, activity performance

2-18

1. **Dalal Company**  
**Statement of Costs of Goods Manufactured**  
**For the Year Ended December 31**

<b>Direct materials:</b>		
Beginning inventory .....	\$ 290,000	
Add: Purchases.....	<u>1,550,000</u>	
Materials available .....	\$ 1,840,000	
Less: Ending inventory .....	<u>112,000</u>	
Direct materials used .....		\$ 1,728,000
Direct labor .....		2,000,000
<b>Manufacturing overhead:</b>		
Insurance on factory.....	\$ 200,000	
Indirect labor .....	790,000	
Depreciation, factory building .....	1,100,000	
Depreciation, factory equipment .....	630,000	
Property taxes on factory.....	65,000	
Utilities, factory .....	<u>150,000</u>	<u>2,935,000</u>
Total manufacturing costs added.....		\$ 6,663,000
Add: Beginning work in process .....		450,000
Less: Ending work in process .....		<u>(750,000)</u>
Cost of goods manufactured .....		<u>\$ 6,363,000</u>

2. Unit cost = \$6,363,000/150,000 = \$42.42

3. **Dalal Company**  
**Income Statement: Absorption Costing**  
**For the Year Ended December 31**

Sales (141,000* × \$50).....		\$ 7,050,000
<b>Cost of goods sold:</b>		
Cost of goods manufactured .....	\$ 6,363,000	
Add: Beginning finished goods inventory...	<u>107,500</u>	
Goods available for sale.....	\$ 6,470,500	
Less: Ending finished goods inventory .....	<u>488,750</u>	<u>5,981,750</u>
Gross margin.....		\$ 1,068,250
Less: Salary, sales supervisor.....	\$ 85,000	
Commissions, salespersons .....	490,000	
Administrative expenses.....	<u>390,000</u>	<u>965,000</u>
Income before taxes .....		<u>\$ 103,250</u>

\*2,500 + 150,000 – 11,500 = 141,000 units sold.

2-19

1. Direct materials .....	\$ 75,000
Direct labor .....	60,000 <sup>a</sup>
Manufacturing overhead .....	<u>300,000<sup>a</sup></u>
Total current manufacturing costs .....	\$ 435,000
Add: Beginning work in process.....	20,000 <sup>b</sup>
Less: Ending work in process.....	<u>(40,000)<sup>b</sup></u>
Cost of goods manufactured.....	<u>\$ 415,000</u>

<sup>a</sup>Conversion cost = 4 × Prime cost  
\$360,000 = 4(Direct materials + Direct labor)  
\$360,000 = 4(\$75,000 + Direct labor)  
Direct labor = \$60,000

Overhead = Conversion cost – Direct labor  
Overhead = \$360,000 – \$60,000  
Overhead = \$300,000

<sup>b</sup>Ending WIP = 2 × Beginning WIP  
\$435,000 + Beg. WIP – (2 × Beg. WIP) = \$415,000  
Beginning WIP = \$20,000; Ending WIP = 2 × \$20,000 = \$40,000

2. Cost of goods manufactured .....	\$ 415,000
Add: Beginning finished goods .....	<u>14,400</u>
Cost of goods available for sale .....	\$ 429,400
Less: Ending finished goods .....	<u>55,900*</u>
Cost of goods sold.....	<u>\$ 373,500**</u>

\*Ending finished goods = \$429,400 – \$373,500 = \$97,800.

\*\*COGS = 0.80 × \$415,000 = \$373,500.

1. **Young, Andersen, and Touche  
Statement of Cost of Services Sold  
For the Year Ended July 31**

Direct materials used.....	\$ 46,000*
Direct labor .....	800,000
Overhead .....	<u>100,000</u>
Total service costs added .....	\$ 946,000
Add: Beginning work in process .....	78,000
Less: Ending work in process .....	<u>(134,000)</u>
Cost of services sold .....	<u>\$ 890,000</u>

\*Because all other data for the statement are given, you can work backward from the cost of services sold to get the direct materials used.

2. The dominant cost is direct labor (for the 10 professionals). Although labor is the major cost of providing many services, it is not always the case. For example, the dominant cost for some medical services may be overhead (e.g., CAT scans). In some services, the dominant cost may be materials (e.g., funeral services).

3. **Young, Andersen, and Touche  
Income Statement  
For the Year Ended July 31**

Sales (2,000 × \$700) .....		\$1,400,000
Cost of services sold .....		<u>890,000</u>
Gross margin.....		\$ 510,000
Less operating expenses:		
Selling expenses.....	\$65,000	
Administrative expenses.....	<u>57,000</u>	<u>122,000</u>
Income before taxes .....		<u>\$ 388,000</u>

2-20 Concluded

4. Services have three attributes that are not possessed by tangible products: (1) intangibility, (2) perishability, and (3) inseparability. Intangibility means that the buyers of services cannot see, feel, hear, or taste a service before it is bought. Perishability means that services cannot be stored. Therefore, there will never be any finished goods inventories, making the cost of services produced equal to the cost of services sold. Inseparability means that providers and buyers of services must be in direct contact for an exchange to take place.

The average cost of preparing one tax return last year was \$445 (\$890,000/2,000 returns). However, it will be difficult for YAT to use this figure in budgeting. Some of its accountants are no doubt more experienced than others, capable of completing a return in less time and with less research. The returns themselves differ in complexity. In addition, the seemingly continual changes in the tax law may affect certain of their clients more than others, making those clients' returns more difficult to prepare.

2-21

1. **Jordan Company**  
**Statement of Cost of Goods Manufactured**  
**For the Year Ended December 31, 2007**

<b>Direct materials:</b>		
Beginning inventory .....	\$ 15,600	
Add: Purchases.....	118,400*	
Less: Ending inventory .....	<u>(14,000)</u>	
Direct materials used .....		\$ 120,000
Direct labor .....		72,000
<b>Manufacturing overhead:</b>		
Plant depreciation.....	\$ 9,500	
Salary, production supervisor .....	45,000	
Indirect labor .....	36,000	
Utilities, factory .....	5,700	
Depreciation, factory equipment .....	25,000	
Supplies (0.5 × \$4,000) .....	<u>2,000</u>	<u>123,200</u>
Total manufacturing costs added.....		\$ 315,200
Add: Beginning work in process .....		13,250
Less: Ending work in process .....		<u>(13,250)</u>
Cost of goods manufactured .....		<u>\$ 315,200</u>

\*\$15,600 + Purchases – \$14,000 = \$120,000; Purchases = \$118,400.

2-21 Concluded

2.

**Jordan Company**  
**Income Statement: Absorption Costing**  
**For the Year Ended December 31, 2007**

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Sales (127,000 × \$6) .....		<b>\$ 762,000</b>
Cost of goods sold:		
Beginning finished goods inventory .....	<b>\$170,000</b>	
Add: Cost of goods manufactured .....	<b><u>315,200</u></b>	
Goods available for sale.....	<b>\$485,200</b>	
Less: Ending finished goods inventory..	<b><u>85,000</u></b>	<b><u>400,200</u></b>
Gross margin.....		<b>\$ 361,800</b>
Less operating expenses:		
Administrative costs.....	<b>\$ 52,000</b>	
Selling expenses* .....	<b><u>108,000</u></b>	<b><u>160,000</u></b>
Income before taxes .....		<b><u>\$ 201,800</u></b>

\*\$66,000 + (0.5 × \$4,000) + \$40,000 = \$108,000.

2-22

Answers will vary.

2-23

Answers will vary.