

*Solutions Manual for Principles of
Accounting-The Managerial Chapters
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Chapter M:1

Introduction to Managerial Accounting

Chapter M:1: Overview

The chapter introduces students to managerial accounting as distinguished from financial accounting. Students learn about the information that managers—the decision makers inside the business—must know and use in order to effectively plan and control the business. The differences between financial and managerial accounting are delineated. The role of the manager as well as managerial accounting functions are emphasized. The chapter continues with a discussion of the professional ethical standards for management accountants: competence, confidentiality, integrity, and credibility.

Cost classification categories are explained, including direct/indirect costs, product/period costs, and types of manufacturing product costs (direct materials, direct labor, and manufacturing overhead), which can be alternatively categorized as prime costs (direct materials and direct labor) or conversion costs (direct labor and manufacturing overhead). Service companies, merchandising companies, and manufacturing companies are discussed, and a balance sheet and income statement examples are provided for each. The calculation of cost of goods manufactured is presented, and a schedule example is provided. Exhibits help students visualize the flow of costs through a manufacturing company's accounting system to the income statement. A discussion of today's business environment points out that recent trends include a shift toward a service-based economy, competing in the global marketplace, time-based competition, advanced information systems, e-commerce, just-in-time management, advances in technology, cloud-based services, total quality management, and integrated economic, social, and environmental reporting (the triple bottom line). The chapter concludes with a discussion on how to calculate cost per item sold for a merchandising business and cost per service for a service business.

An Ethics feature provides an ethical dilemma that can be used for discussion purposes. A Tying It All Together feature provides a look into the balance sheet and income statement of Winnebago Industries, Inc. The Review section includes Things You Should Know, which highlights the information students should have acquired from the chapter. A Check Your Understanding Problem reviews product/period cost categorization and calculation of cost of goods manufactured, cost of goods sold, and cost per unit. A list of Key Terms is provided. A Quick Check gives students a chance to assess their knowledge of the chapter learning objectives.

Chapter M:1: Learning Objectives

LO 1. Define managerial accounting and understand how it is used

LO 2. Classify costs used in managerial accounting

LO 3. Prepare financial statements for a manufacturer, including a balance sheet, income statement, and schedule of cost of goods manufactured

LO 4. Describe business trends affecting managerial accounting

LO 5. Describe how managerial accounting is used in service and merchandising companies

Chapter M:1: Teaching Outline with Lecture Notes

LO 1. Define managerial accounting and understand how it is used

- Exhibit M:1-1: Financial Accounting Versus Managerial Accounting
- a) Managers' role in the organization
 - Exhibit M:1-2: Organizational Chart for Smart Touch Learning (Partial)
- b) Managerial accounting
 - Exhibit M:1-3: Pathways Vision Model
 - Exhibit M:1-4: Technical Skills on CMA Exam
- c) Ethical standards of managerial accountants
 - Exhibit M:1-5: IMA Statement of Ethical Professional Practice (Excerpt)

Lecture Notes: Students are not as familiar with managerial accounting as they are financial accounting. Emphasize the key difference: Managerial accounting is focused on internal users of financial information for decision making, while financial accounting is focused on external users for financial reporting. Managers throughout the organization rely on managerial accounting to help plan, direct, control, and make decisions about the business. The Pathways Vision Model provides a visual way for students to more clearly understand the role of managerial accounting in making good decisions.

The CMA exam covers skills used internally in organizations to enhance decision making. The Institute of Management Accountants (IMA) has developed ethical standards requiring managerial accountants to maintain their professional competence, preserve the confidentiality of the information they handle, and act with integrity and credibility.

Suggested In-Class Exercise: E-M:1-13

LO 2. Classify costs used in managerial accounting

- a) Service companies
- b) Manufacturing companies
- c) Direct and indirect costs
- d) Manufacturing costs
 - Exhibit M:1-6: Manufacturing Costs
- e) Prime and conversion costs

- Exhibit M:1-7: Prime and Conversion Costs

f) Product and period costs

- Exhibit M:1-8: Period Versus Product Costs
- Exhibit M:1-9: Period and Product Costs for Smart Touch Learning

Lecture Notes: Point out the distinction between direct and indirect manufacturing costs. Direct costs are added to WIP, whereas indirect costs are usually collected in one or more Manufacturing Overhead accounts and then applied to WIP using a predetermined overhead rate. Therefore, when materials are used, you must know whether they are indirect or direct. When labor is incurred, you must know whether it is direct or indirect. The recording of labor in an asset account (WIP) may need additional explanation. Students might want to expense labor because it was expensed in previous chapters. Remind students that manufacturing companies add all product costs to inventory, and they are expensed (COGS) when inventory is sold.

Distinguish between product costs and period costs. GAAP requires that all manufacturing costs be treated as costs of making the product, which means these manufacturing costs (raw materials, manufacturing labor, and manufacturing overhead) are “attached” to the product. All nonmanufacturing costs go directly to the income statement in the period in which they occur. Consider an oversimplified company that has a factory in your local community and corporate offices in New York City (or some other major urban center). Everything that goes on at the factory in your local community is a manufacturing cost that becomes attached to the product by accumulating those costs in WIP. Everything that goes on in the corporate offices is a period cost that is charged directly to the income statement in the period in which it occurs. While this is an oversimplification (for example, sales offices or research labs can be located in a factory setting), it serves to fix the distinction in students’ minds.

Overhead includes all manufacturing costs other than direct materials and direct labor. Therefore, students must know whether a cost is manufacturing or nonmanufacturing. For example, “depreciation” will no longer suffice. Is it manufacturing or nonmanufacturing? As discussed for labor above, students may want to expense all indirect costs, such as depreciation, insurance, etc., because they were expensed in previous chapters. Remind students that manufacturing companies add all product costs to inventory—first to WIP, which is transferred to FG, and then as COGS when inventory is sold.

Suggested In-Class Exercise: E-M:1-15

LO 3. Prepare financial statements for a manufacturer, including a balance sheet, income statement, and schedule of cost of goods manufactured

a) Balance sheet

- Exhibit M:1-10: Balance Sheet Comparison

b) Income statement

- Exhibit M:1-11: Income Statement Comparison
- c) Flow of product costs in a manufacturing company
 - Exhibit M:1-12: Flow of Product Costs in a Manufacturing Company
- d) Calculating cost of goods manufactured
 - i. Step 1: Calculate direct materials used
 - ii. Step 2: Calculate total manufacturing costs incurred during the year
 - iii. Step 3: Calculate cost of goods manufactured
 - Exhibit M:1-13: Schedule of Costs of Goods Manufactured—Smart Touch Learning
- e) Calculating cost of goods sold
 - Exhibit M:1-14: Income Statement—Smart Touch Learning
- f) Flow of product costs through the inventory accounts
 - Exhibit M:1-15: Flow of Product Costs Through Smart Touch Learning's Inventory

Accounts

Lecture Notes: Emphasize that management accounting concepts apply to all types of companies, not just manufacturing companies. Much attention is focused on manufacturing businesses because they are more complex and less familiar. Nonetheless, the product costing concepts discussed in relation to manufacturing can be applied to service costing and activity costing in the other types of companies.

Students will probably be able to relate to service companies and merchandising companies (such as auto repair shops and grocery stores) more easily than they can relate to manufacturing companies. Service companies and merchandising companies have already been discussed in the textbook. It may be helpful to ask students to provide examples of each type of company, especially merchandising and manufacturing, to assess their knowledge of the differences. Ask if anyone has toured a factory when it is operating.

When introducing inventory accounts, remind students how the Merchandise Inventory account works. Merchandise is purchased (increase Merchandise Inventory with a debit). Then when the inventory is sold, take it out of Merchandise Inventory and off the balance sheet (decrease Merchandise Inventory with a credit) and charge it to the income statement as the expense Cost of Goods Sold (increase the expense with a debit). If more merchandise is purchased than sold, the difference remains in Merchandise Inventory as the ending balance and is reported as an asset on the balance sheet. It then becomes next period's beginning inventory. Emphasize the basic generic inventory relationship:

Beginning + Additions – Ending balance = Amount used, manufactured, or sold

Manufacturers have three inventory accounts: Raw Materials Inventory (RM), Work-in-Process Inventory (WIP), and Finished Goods Inventory (FG). All three are assets on the balance sheet. Inventory is removed from FG and from the balance sheet when sold and then charged to the income statement as the expense Cost of Goods Sold (COGS). The WIP account is an accumulation account that collects product costs as they are added in the production process—direct materials, direct labor, and manufacturing overhead. Explain that WIP represents the product as it is being assembled on the factory floor. After the product comes off the production line and is boxed up and moved to the finished product warehouse, the related dollars are taken out of the WIP account and moved to the FG account.

Demonstrate that inventory accounts all function in the same way as the generic inventory account previously discussed:

Beginning balance + Additions – Ending balance = Amount used, manufactured, or sold

Point out that the increases in WIP represent the accumulation of direct materials, direct labor, and manufacturing overhead costs that become attached to the product being assembled.

Suggested In-Class Exercises: E-M:1-16, E-M:1-17, and E-M:1-18

LO 4. Describe business trends affecting managerial accounting

- a) Shift toward a service-based economy
- b) Global competition
- c) Time-based competition
- d) Emerging technologies
- e) Cloud-based services
- f) Total quality management
 - Exhibit M:1-16: Value Chain for a Manufacturing Company
- g) The triple bottom line

Suggested In-Class Exercise: E-M:1-22

LO 5. Describe how managerial accounting is used in service and merchandising companies

- a) Calculating cost per service provided
- b) Calculating cost per item sold

Suggested In-Class Exercise: E-M:1-24, E-M:1-25

Chapter M:1: Handout for Student Notes

LO 1. Why is managerial accounting important?

- Managers' role in the organization
- Managerial accounting
- Ethical standards of managerial accountants

LO 2. How are costs classified?

- Service companies
- Manufacturing companies
- Direct and indirect costs
- Manufacturing costs
- Prime and conversion costs
- Product and period costs

LO 3. How do manufacturing companies prepare financial statements?

- Balance sheet

- Income statement
- Flow of product costs in a manufacturing company
- Calculating cost of goods manufactured
- Calculating cost of goods sold
- Flow of product costs through the inventory accounts

LO 4. What business trends are affecting managerial accounting?

- Shift toward a service-based economy
- Global competition
- Time-based competition
- Emerging technologies
- Cloud-based services
- Total quality management
- The triple bottom line

LO 5. How is managerial accounting used in service and merchandising companies?

- Calculating cost per service provided
- Calculating cost per item sold

Chapter M:1: Student Chapter Summary

LO 1. Define managerial accounting and understand how it is used

Financial accounting prepares reports for external users, such as investors, creditors, and government agencies. Managerial accounting provides information for internal managers, such as department heads, division managers, chief executive officers, and vice presidents. This managerial accounting data helps managers plan, direct, control, and make decisions about the business. Managerial accountants may obtain professional certifications, such as Certified Management Accountant (CMA) or Chartered Global Management Accountant (CGMA). The IMA Standards of Ethical Professional Practice include competence, confidentiality, integrity, and credibility.

LO 2. Classify costs used in managerial accounting

Direct costs can be easily traced directly to a cost object, whereas indirect costs cannot. Manufacturing costs, also known as product costs, are all costs incurred in the manufacture of final products. The three categories of manufacturing costs are direct materials, direct labor, and manufacturing overhead. Prime costs are direct materials and direct labor. Conversion costs are direct labor and manufacturing overhead. Product costs are first recorded as inventory and are not expensed until the product is sold. Period costs are all costs not considered product costs. Period costs are expensed in the accounting period incurred.

LO 3. Prepare financial statements for a manufacturer, including a balance sheet, income statement, and schedule of cost of goods manufactured

Manufacturers have three inventory accounts: Raw Materials Inventory (RM), Work-in-Process Inventory (WIP), and Finished Goods Inventory (FG). All three are assets on the balance sheet. Inventory costs are removed from FG and from the balance sheet when the product is sold and then charged to the income statement as the expense Cost of Goods Sold (COGS). The WIP account is an accumulation account that collects product costs as they are added in the production process—direct materials, direct labor, and manufacturing overhead. WIP represents the cost of the product as it is being assembled on the factory floor. After the product comes off the production line and is boxed up and moved to the finished product warehouse, the related dollars are taken out of the WIP account and moved to the FG account.

Calculating cost of goods manufactured and cost of goods sold requires knowledge of how product costs flow through a manufacturing company. Cost of goods manufactured is calculated in three steps:

Step 1: Calculate direct materials used.

Step 2: Calculate total manufacturing costs incurred during the year.

Step 3: Calculate cost of goods manufactured.

Cost of goods sold represents the cost of the Finished Goods Inventory that has been sold. All inventory accounts function in the same way:

Beginning balance + Additions – Ending balance = Amount used, manufactured, or sold

LO 4. Describe business trends affecting managerial accounting

The shift toward a service-based economy, global competition, time-based competition, advances in technology, Total Quality Management (TQM), and the triple bottom line are business trends affecting managerial accounting today. Managers in the service industry need to understand the cost of providing services, supporting customers, and planning for future customer and service needs. Companies are moving operations to other countries to be closer to new markets or partnering with foreign companies to meet local needs. Companies have also developed the time-saving responses to keep up with the pace of business in the instant messaging age, such as advanced information systems, e-commerce, and just-in-time management. Recent advances in technology can provide businesses with a competitive advantage. Software tools allow accountants to work with information technology teams to analyze large quantities of data and use the analysis to make more-informed decisions, while robotic process automation (RPA) and artificial intelligence (AI) use technology to improve operational efficiency and decrease costs. TQM is a philosophy of continuous improvement of products and processes leading to fewer defects and higher customer satisfaction. Companies are also recognizing that they have multiple responsibilities—economic, social, and environmental—and that generating profits for owners and investors is only one aspect of being a socially responsible organization.

LO 5. Describe how managerial accounting is used in service and merchandising companies

Managerial accounting isn't just for manufacturing companies. Service companies and merchandising companies also use managerial accounting.

- Unit cost per service provided = Total operating costs / Total number of services provided
- Unit cost per item sold = Total cost of goods sold / Total number of items sold

Chapter M:1: Assignment Grid and Other Materials

	LO 1	LO 2	LO 3	LO 4	LO 5
S-M:1-1	X				
S-M:1-2	X				
S-M:1-3		X			
S-M:1-4		X			
S-M:1-5		X			
S-M:1-6			X		
S-M:1-7			X		
S-M:1-8			X		
S-M:1-9			X		
S-M:1-10			X		
S-M:1-11				X	
S-M:1-12					X
E-M:1-13	X				
E-M:1-14	X				
E-M:1-15		X			
E-M:1-16			X		
E-M:1-17			X		
E-M:1-18			X		
E-M:1-19			X		
E-M:1-20			X		
E-M:1-21			X		
E-M:1-22				X	
E-M:1-23				X	
E-M:1-24			X		X
E-M:1-25			X		X
P-M:1-26A, P-M:1-34B	X				
P-M:1-27A, P-M:1-35B		X			
P-M:1-28A, P-M:1-36B			X		
P-M:1-29A, P-M:1-37B			X		
P-M:1-30A, P-M:1-38B			X		
P-M:1-31A, P-M:1-39B			X		
P-M:1-32A, P-M:1-40B			X		X
P-M:1-33A, P-M:1-41B			X		X

S – Short Exercises (*Easy*)

E – Exercises (*Moderate*)

P – Problems (*Difficult*)