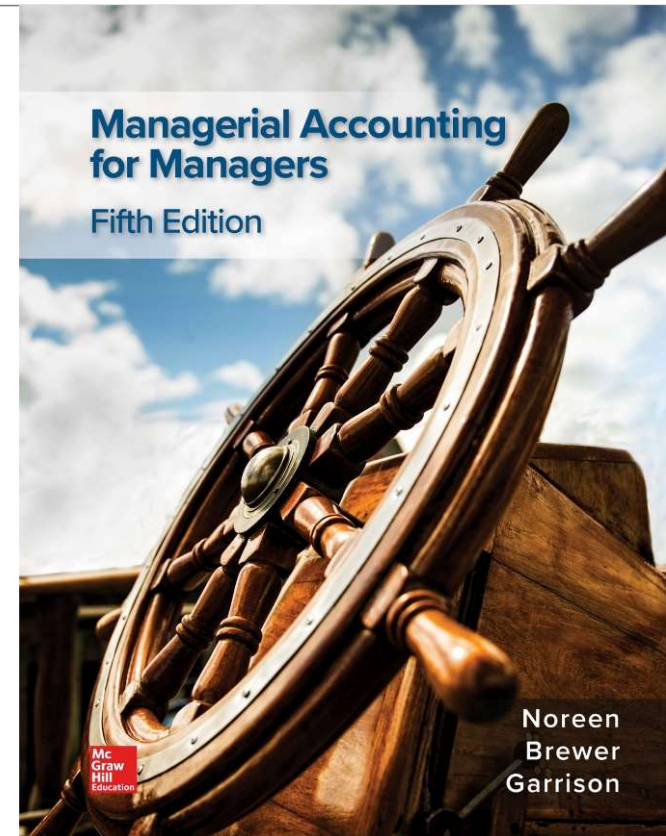


Managerial Accounting and Cost Concepts

CHAPTER 1

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Needs of Management

Financial accounting is concerned with reporting financial information to external parties, such as stockholders, creditors, and regulators.

Managerial accounting is concerned with providing information to managers within an organization so that they can formulate plans, control operations, and make decisions.

Purposes of Cost Classification

1. Assigning costs to cost objects
2. Accounting for costs in manufacturing companies
3. Preparing financial statements
4. Predicting cost behavior in response to changes in activity
5. Making decisions

Learning Objective 1

Understand cost classification used for assigning costs to cost objects: direct cost and indirect cost.

Assigning Costs to Cost Objects

Direct costs

- Costs that can be easily and conveniently traced to a unit of product or other cost object.
- Examples: direct material and direct labor

Indirect costs

- Costs that cannot be easily and conveniently traced to a unit of product or other cost object.
- Example: manufacturing overhead

Common costs

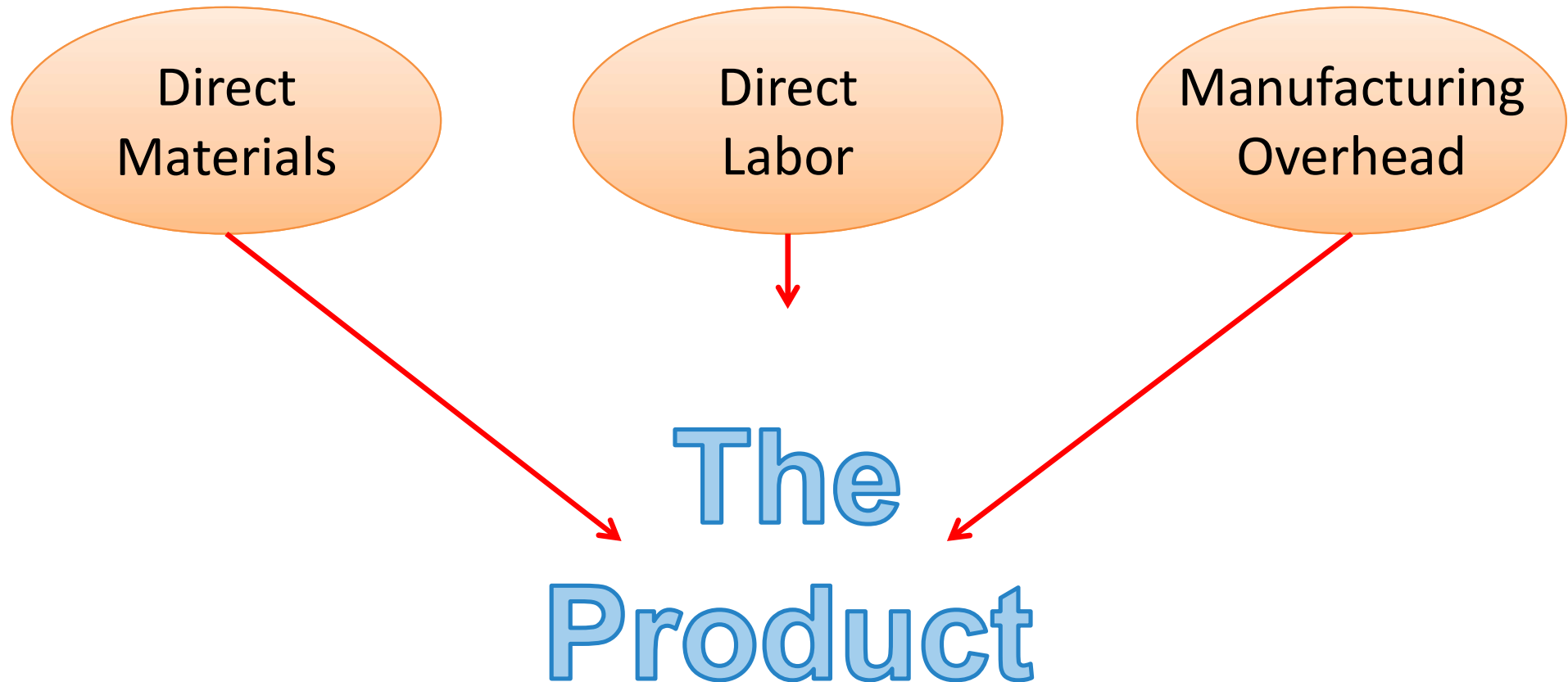
- Indirect costs incurred to support a number of cost objects. These costs cannot be traced to any individual cost object.



Learning Objective 2

**Identify and give examples
of each of the three basic
manufacturing cost
categories.**

Classifications of Manufacturing Costs



Direct Materials

Direct materials are raw materials that become an integral part of the product and that can be conveniently traced directly to it.

Example: A radio installed in an automobile

Direct Labor

Direct labor costs are those labor costs that can be easily traced to individual units of product.

Example: Wages paid to automobile assembly workers

Manufacturing Overhead

Manufacturing overhead includes all manufacturing costs **except** direct material and direct labor. These costs cannot be readily traced to finished products.

Includes indirect materials that cannot be easily or conveniently traced to specific units of product.

Includes indirect labor costs that cannot be easily or conveniently traced to specific units of product.

Manufacturing Overhead – Examples

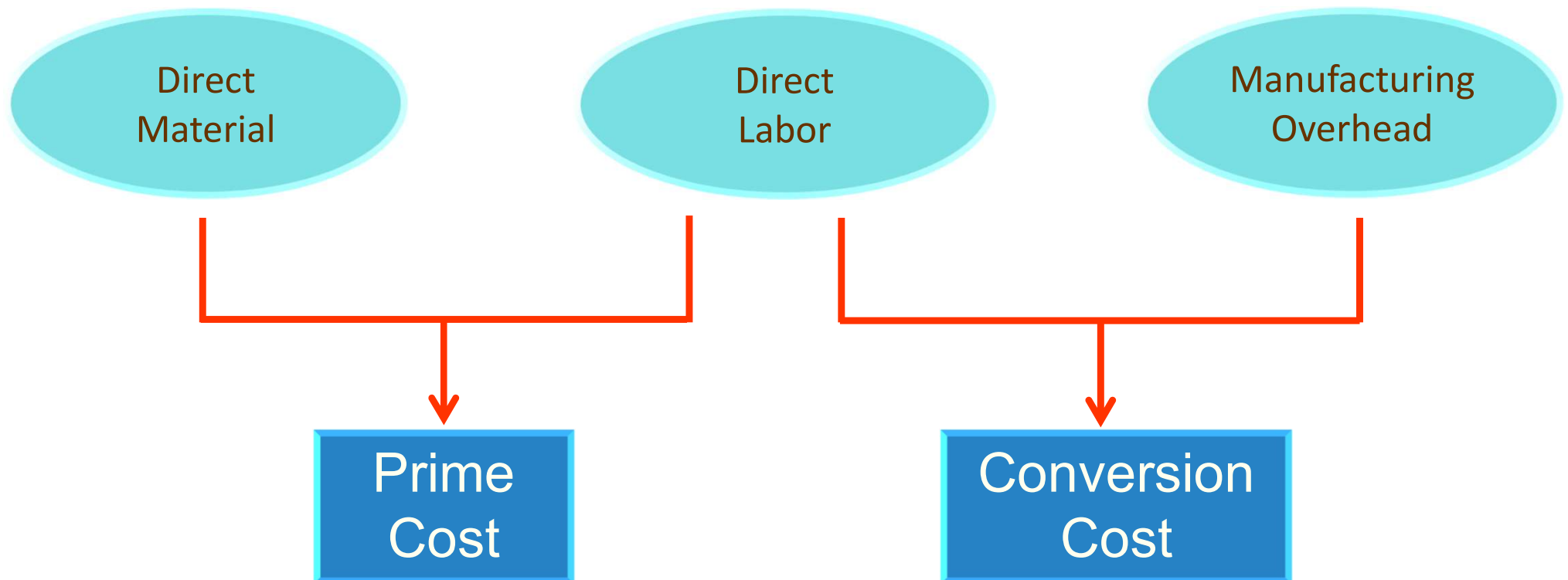
Examples of manufacturing overhead:

- Depreciation of manufacturing equipment
- Utility costs
- Property taxes
- Insurance premiums incurred to operate a manufacturing facility

Only those indirect costs associated with operating the factory are included in manufacturing overhead.

Prime Costs and Conversion Costs

Manufacturing costs are often classified as follows:



Nonmanufacturing Costs

Selling Costs

Costs necessary to secure the order and deliver the product. Selling costs can be either direct or indirect costs.

Administrative Costs

All executive, organizational, and clerical costs. Administrative costs can be either direct or indirect costs.

Learning Objective 3

Understand cost classifications used to prepare financial statements: product costs and period costs.

Product Costs

Product costs include all costs that are involved in acquiring or making a product.

Product costs “attach” to a unit of product as it is purchased or manufactured and they stay attached to each unit of product as long as it remains in inventory awaiting sale.

Manufacturing Product Costs

For manufacturing companies, product costs include:

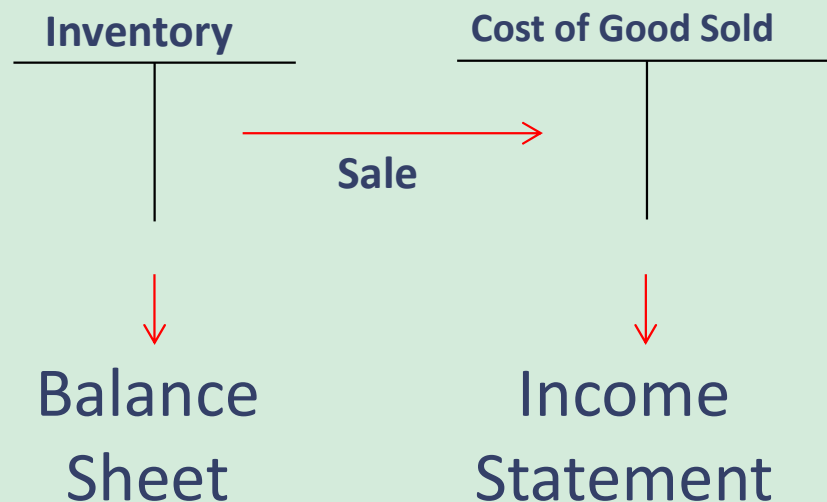
- **Raw materials:** includes any materials that go into the final product.
- **Work in process:** consists of units of product that are only partially complete and will require further work before they are ready for sale to the customer.
- **Finished goods costs:** consists of completed units of product that have not yet been sold to customers.

Transfer of Product Costs

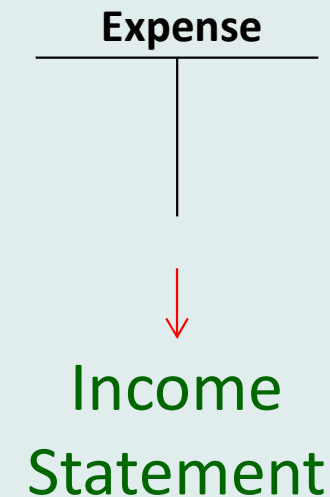
- When direct materials are used in production, their costs are transferred from Raw Materials to Work in Process.
- Direct labor and manufacturing overhead costs are added to Work in Process to convert direct materials into finished goods.
- Once units of product are completed, their costs are transferred from Work in Process to Finished Goods.
- When a manufacturer sells its finished goods to customers, the costs are transferred from Finished Goods to Cost of Goods Sold.

Product Costs Versus Period Costs

Product costs include direct materials, direct labor, and manufacturing overhead.



Period costs include all selling costs and administrative costs.



Quick Check 1

Which of the following costs would be considered a period rather than a product cost in a manufacturing company?

- A. Manufacturing equipment depreciation.
- B. Property taxes on corporate headquarters.
- C. Direct materials costs.
- D. Electrical costs to light the production facility.
- E. Sales commissions.

Quick Check 1a

Which of the following costs would be considered a period rather than a product cost in a manufacturing company?

A. Manufacturing equipment depreciation.

B. Property taxes on corporate headquarters.

C. Direct materials costs.

D. Electrical costs to light the production facility.

E. Sales commissions.

Learning Objective 4

Understand cost classifications used to predict cost behavior: variable costs, fixed costs, and mixed costs.

Cost Classifications for Predicting Cost Behavior

Cost behavior refers to how a cost will react to changes in the level of activity.

The most common classifications are:

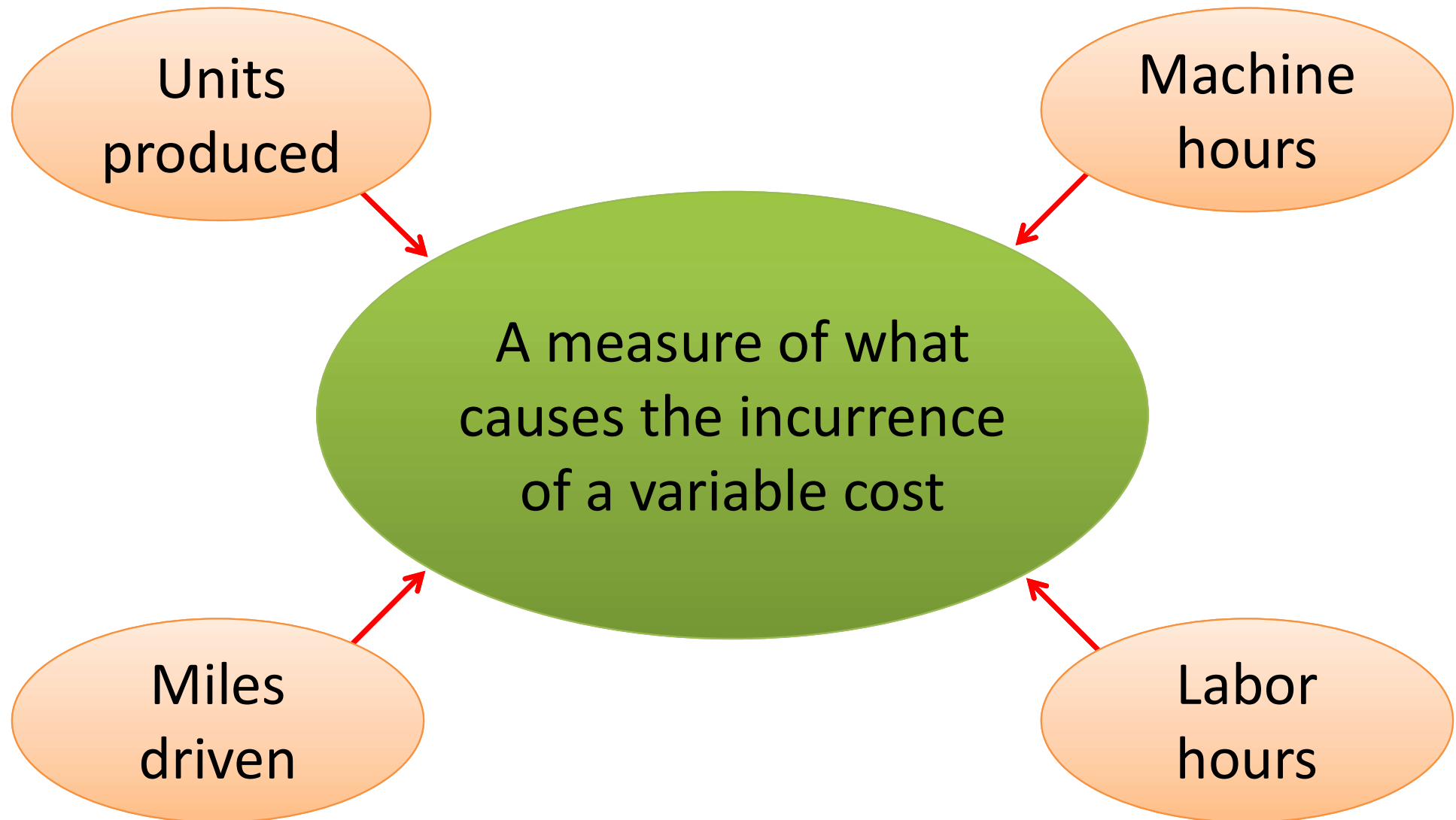
- Variable costs.**
- Fixed costs.**
- Mixed costs.**

Variable Cost

A cost that varies, in total, in direct proportion to changes in the level of activity.

A variable cost per unit is constant.

The Activity Base (Cost Driver)

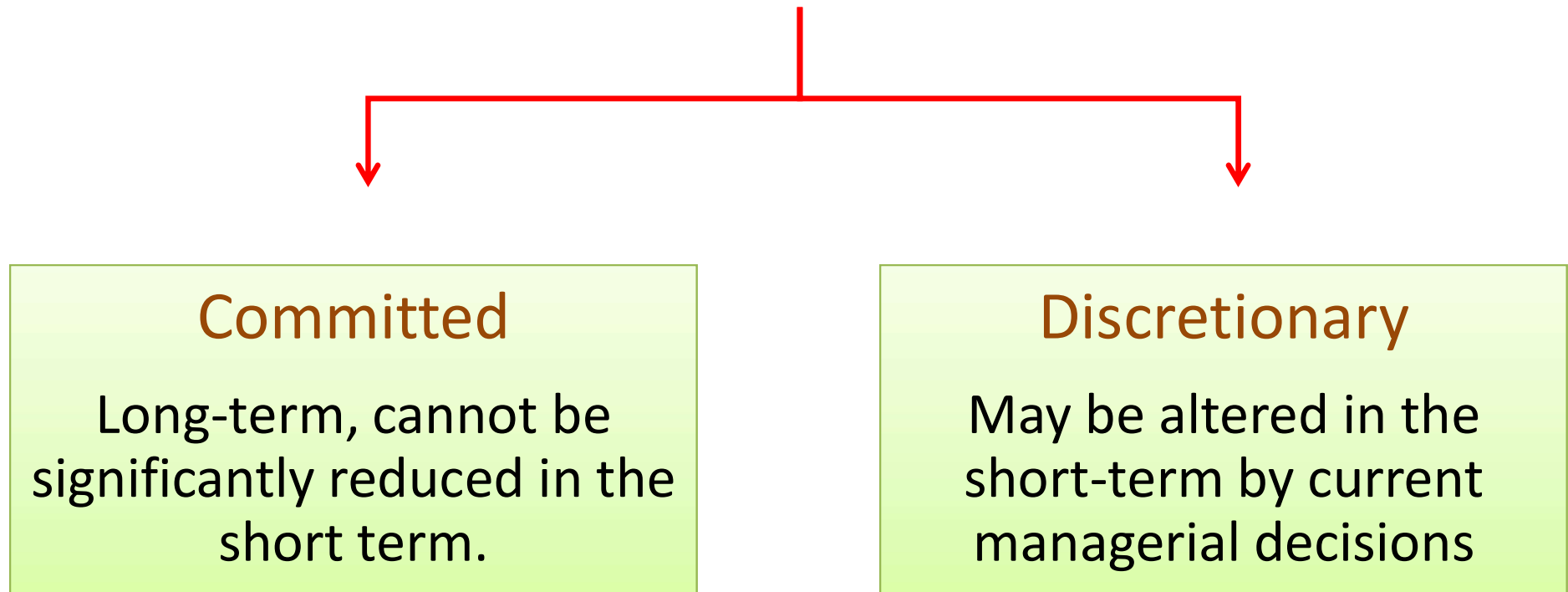


Fixed Cost

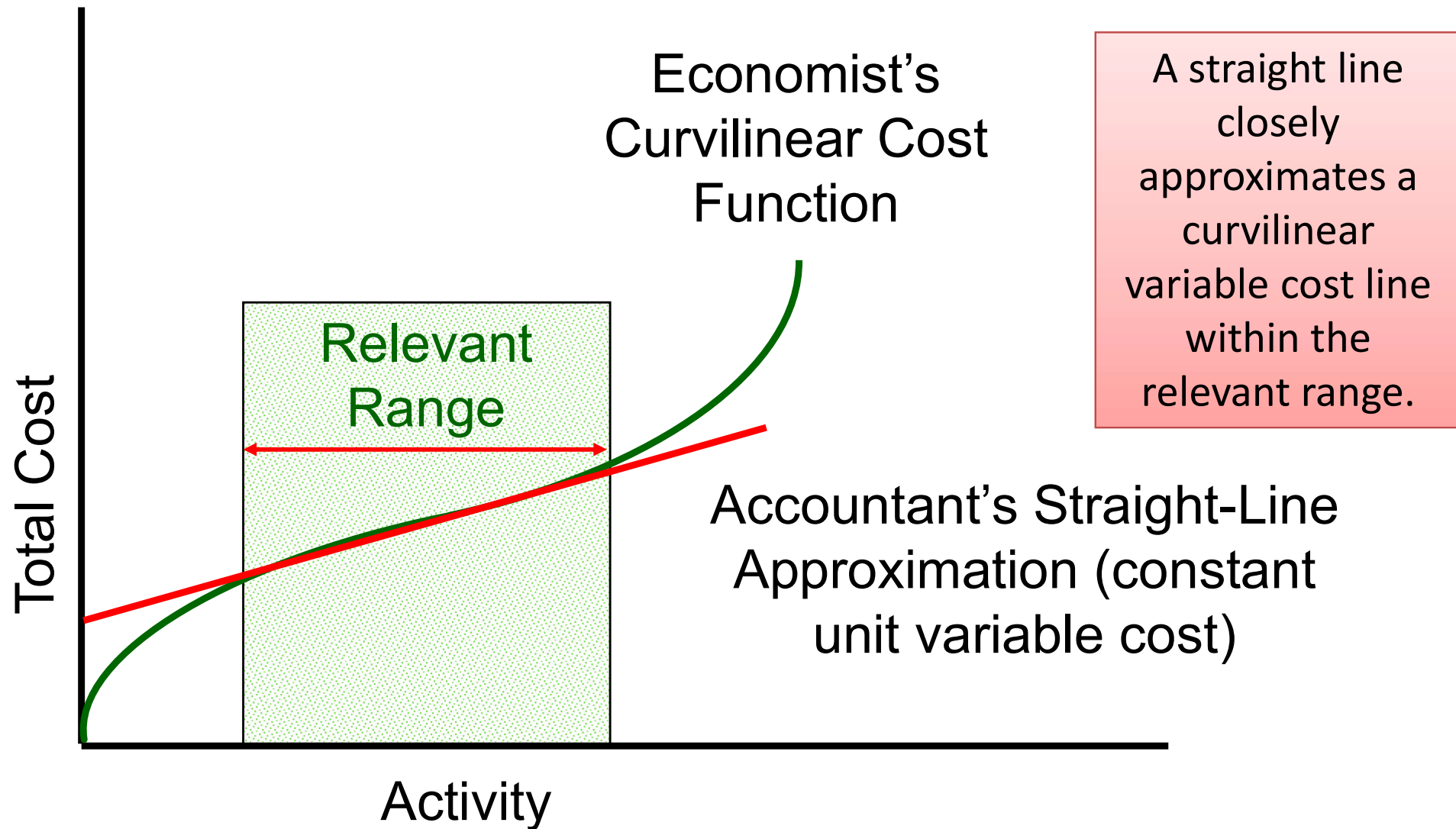
A cost that remains constant, in total, regardless of changes in the level of the activity.

If expressed on a per unit basis, the average fixed cost per unit varies inversely with change in activity.

Types of Fixed Costs



The Linearity Assumption and the Relevant Range

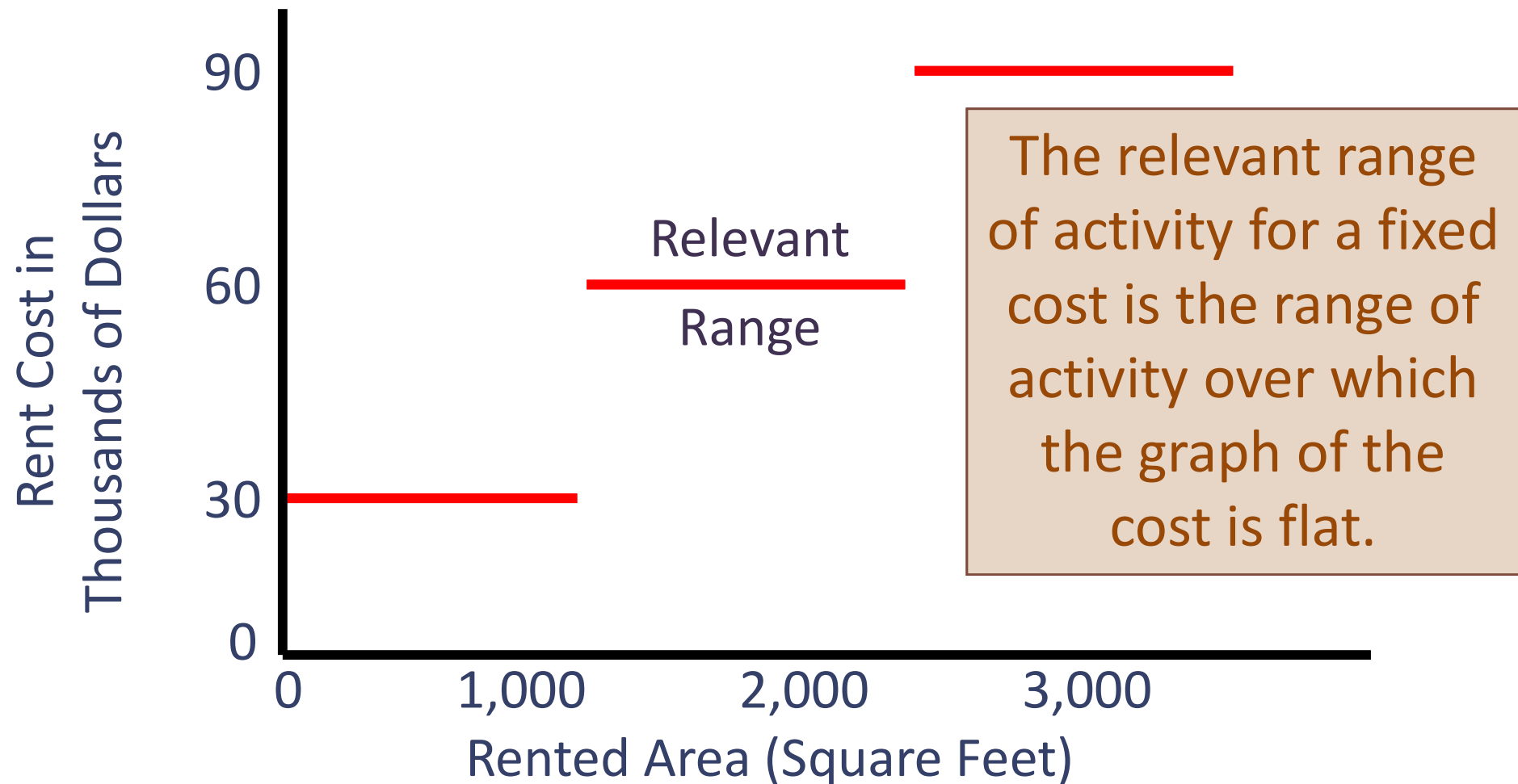


Fixed Costs and the Relevant Range

For example, assume office space is available at a rental rate of \$30,000 per year in increments of 1,000 square feet.

Fixed costs would increase in a step fashion at a rate of \$30,000 for each additional 1,000 square feet.

Relevant Range: Graphic



Comparison of Cost Classifications for Predicting Cost Behavior

Cost	Behavior of the Cost (within the relevant range)	
	In Total	Per Unit
Variable cost	Total variable cost increases and decreases in proportion to changes in the activity level.	Variable cost per unit remains constant.
Fixed cost	Total fixed cost is not affected by changes in the activity level within the relevant range.	Fixed cost per unit decreases as the activity level rises and increases as the activity level falls.

Quick Check 2

Which of the following costs would be variable with respect to the number of ice cream cones sold at a Baskins & Robbins shop? (There may be more than one correct answer.)

- A. The cost of lighting the store.
- B. The wages of the store manager.
- C. The cost of ice cream.
- D. The cost of napkins for customers.

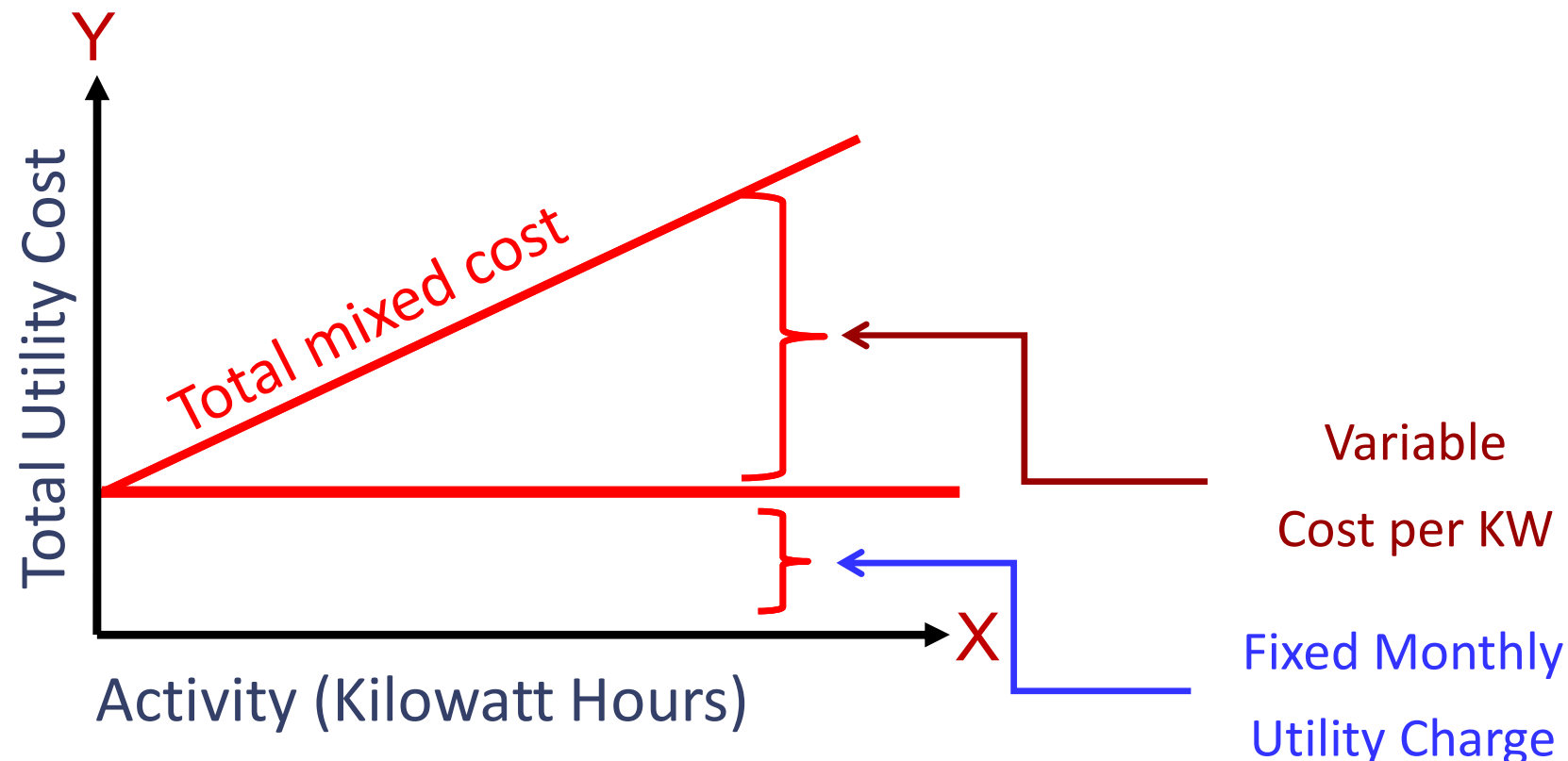
Quick Check 2a

Which of the following costs would be variable with respect to the number of ice cream cones sold at a Baskins & Robbins shop? (There may be more than one correct answer.)

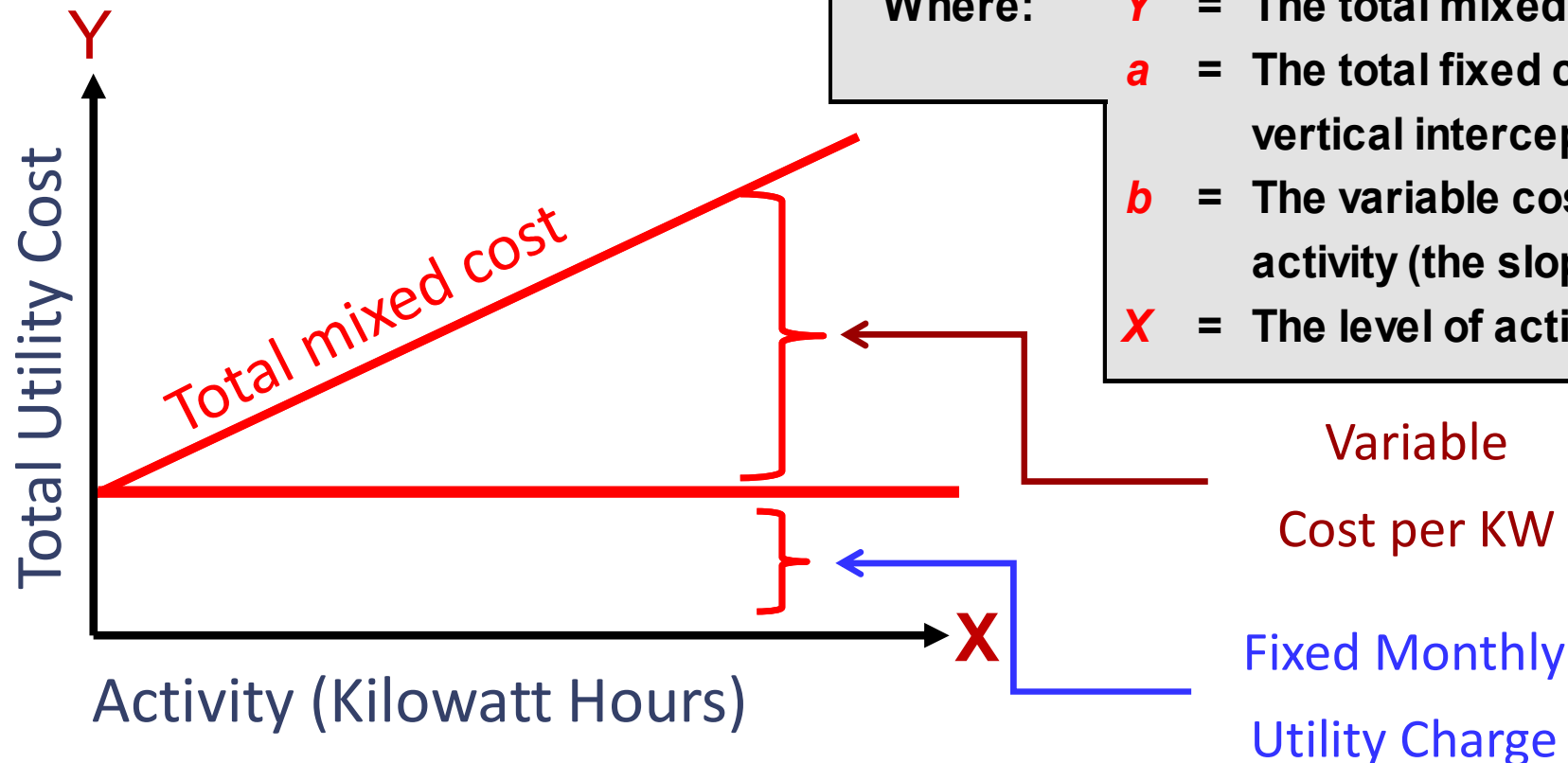
- ☒ A. The cost of lighting the store.
- ☒ B. The wages of the store manager.
- ☐ C. The cost of ice cream.
- ☐ D. The cost of napkins for customers.

Mixed Costs – Part 1

A mixed cost contains both variable and fixed elements.
Consider the example of utility cost.



Mixed Costs – Part 2



The total mixed cost line can be expressed as an equation: $Y = a + bX$

Where:

- Y = The total mixed cost.
- a = The total fixed cost (the vertical intercept of the line).
- b = The variable cost per unit of activity (the slope of the line).
- X = The level of activity.

Mixed Costs – An Example

If your fixed monthly utility charge is \$40, your variable cost is \$0.03 per kilowatt hour, and your monthly activity level is 2,000 kilowatt hours, what is the amount of your utility bill?

$$Y = a + bX$$

$$Y = \$40 + (\$0.03 \times 2,000)$$

$$Y = \textbf{\$100}$$

Learning Objective 5

Understand cost classifications used in making decisions: differential costs, sunk costs, and opportunity costs.

Cost Classifications for Decision Making

Decisions involve choosing between alternatives. The goal of making decisions is to identify those costs that are either **relevant** or **irrelevant** to the decision.

To make decisions, it is essential to have a grasp on three concepts: differential costs, sunk costs, and opportunity costs.

Differential Costs

Differential costs (or incremental costs) are the difference in cost between any two alternatives.

A difference in revenue between two alternatives is called differential revenue.

Both are always relevant to decisions.

Differential costs can be either fixed or variable.

Sunk Costs

Sunk costs have already been incurred and cannot be changed now or in the future. These costs should be ignored when making decisions.

Opportunity Cost

The potential benefit that is given up when one alternative is selected over another.

These costs are not usually found in accounting records but must be explicitly considered in every decision.

For students: What is the opportunity cost you incur by attending class?

Quick Check 3

Suppose you are trying to decide whether to drive or take the train to Portland to attend a concert. You have ample cash to do either, but you don't want to waste money needlessly. Is the cost of the train ticket relevant in this decision? In other words, should the cost of the train ticket affect the decision of whether you drive or take the train to Portland?

- A. Yes, the cost of the train ticket is relevant.
- B. No, the cost of the train ticket is not relevant.

Quick Check 3a

Suppose you are trying to decide whether to drive or take the train to Portland to attend a concert. You have ample cash to do either, but you don't want to waste money needlessly. Is the cost of the train ticket relevant in this decision? In other words, should the cost of the train ticket affect the decision of whether you drive or take the train to Portland?

- ☒ A. Yes, the cost of the train ticket is relevant.
- ☐ B. No, the cost of the train ticket is not relevant.

Quick Check 4

Suppose you are trying to decide whether to drive or take the train to Portland to attend a concert. You have ample cash to do either, but you don't want to waste money needlessly. Is the annual cost of licensing your car relevant in this decision?

- A. Yes, the licensing cost is relevant.
- B. No, the licensing cost is not relevant.

Quick Check 4a

Suppose you are trying to decide whether to drive or take the train to Portland to attend a concert. You have ample cash to do either, but you don't want to waste money needlessly. Is the annual cost of licensing your car relevant in this decision?

A. Yes, the licensing cost is relevant.

B No, the licensing cost is not relevant.

Quick Check 5

Suppose that your car could be sold now for \$5,000. Is this a sunk cost?

- A. Yes, it is a sunk cost.
- B. No, it is not a sunk cost.

Quick Check 5a

Suppose that your car could be sold now for \$5,000. Is this a sunk cost?

A. Yes, it is a sunk cost.

☒ B. No, it is not a sunk cost.

Learning Objective 6

**Prepare income statements
for a merchandising
company using the
traditional and contribution
formats.**

The Traditional and Contribution Formats

Comparison of the Contribution Income Statement with the Traditional Income Statement

Traditional Format		Contribution Format	
Sales	\$ 100,000	Sales	\$ 100,000
Cost of goods sold	70,000	Variable expenses	60,000
Gross margin	\$ 30,000	Contribution margin	\$ 40,000
Selling & admin. expenses	20,000	Fixed expenses	30,000
Net operating income	\$ 10,000	Net operating income	\$ 10,000

Used primarily for
external reporting.

Used primarily by
management.

Uses of the Contribution Format

The contribution income statement format is used as an internal planning and decision-making tool.

We will use this approach for:

1. Cost-volume-profit analysis (Chapter 2).
2. Segmented reporting of profit data (Chapter 4).
3. Budgeting (Chapter 8).
4. Special decisions such as pricing and make-or-buy analysis (Chapter 6).

End of Chapter 1

