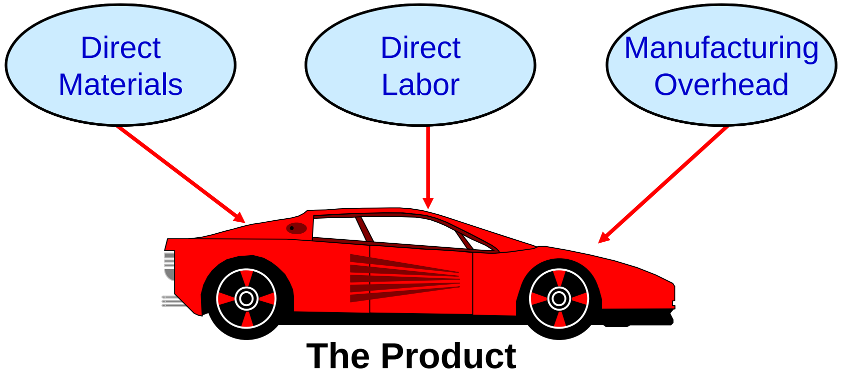
Cost Concepts

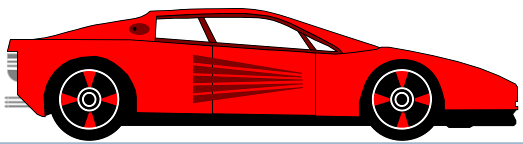
Chapter 2

Manufacturing Costs



Direct Materials

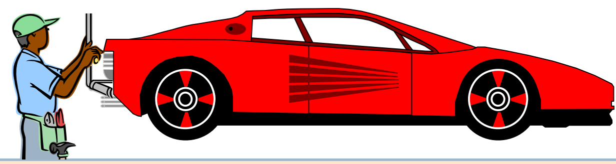
Raw materials that become an integral part of the product and that can be conveniently traced directly to it.



Example: A radio installed in an automobile

Direct Labor

Those labor costs that can be easily traced to individual units of product.



Example: Wages paid to automobile assembly workers

Manufacturing Overhead

Manufacturing costs that cannot be traced directly to specific units produced.

Examples: Indirect materials and indirect labor

Materials used to support the production process.

Examples: lubricants and cleaning supplies used in the automobile assembly plant.

Wages paid to employees who are not directly involved in production work.

Examples: maintenance workers, janitors and security guards.

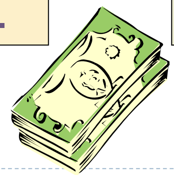
Nonmanufacturing Costs

Selling Costs

Costs necessary to secure the order and deliver the product.

Administrative Costs

All executive, organizational, and clerical costs.



Product Costs Versus Period Costs

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

Inventory → Sale → Cost of Good Sold

Balance Sheet

Income Statement

Period costs include all selling costs and administrative costs.

Expense

Income Statement

Classifications of Costs

Manufacturing costs are often classified as follows:

Direct Material

Direct Labor

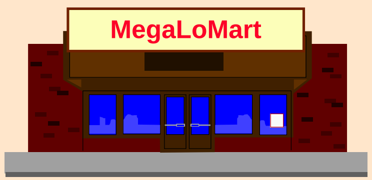
Manufacturing Overhead

Prime Cost

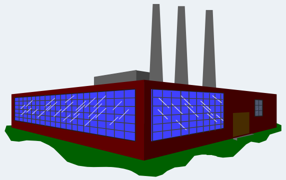
Conversion Cost

Comparing Merchandising and Manufacturing Companies

Merchandisers . . .
- Buy finished goods.
- Sell finished goods.



Manufacturers . . .
- Buy raw materials.
- Produce and sell finished goods.



Balance Sheet

Merchandiser

Current assets
- Cash
- Receivables
- Merchandise Inventory

Manufacturer

Current Assets
- Cash
- Receivables
- Inventories
  - Raw Materials
  - Work in Process
  - Finished Goods

The Income Statement

Cost of goods sold for manufacturers differs only slightly from cost of goods sold for merchandisers.

Merchandising Company

Cost of goods sold:	
Beg. merchandise inventory	$ 14,200
+ Purchases	234,150
Goods available for sale	$248,350
- Ending merchandise inventory	(12,100)
= Cost of goods sold	$236,250

Manufacturing Company

Cost of goods sold:	
Beg. finished goods inv.	$ 14,200
+ Cost of goods manufactured	234,150
Goods available for sale	$248,350
- Ending finished goods inventory	(12,100)
= Cost of goods sold	$236,250

Basic Equation for Inventory Accounts

Beginning balance + Additions to inventory = Ending balance + Withdrawals from inventory

Schedule of Cost of Goods Manufactured

Calculates the cost of raw material, direct labor, and manufacturing overhead used in production.

Calculates the manufacturing costs associated with goods that were finished during the period.

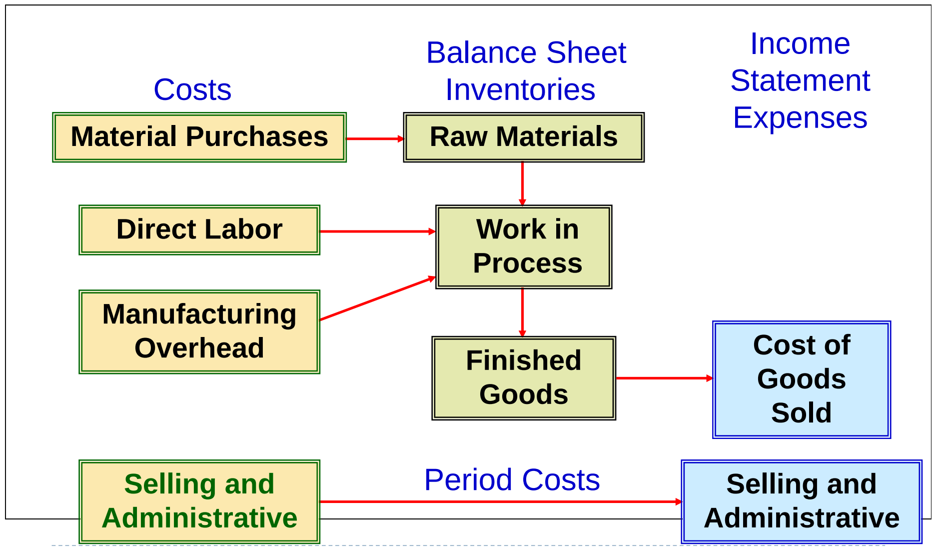
Product Cost Flows

Raw Materials	Manufacturing Costs	Work In Process
Beginning raw materials inventory	Direct materials	Beginning work in process inventory
+ Raw materials purchased	+ Direct labor	+ Total manufacturing costs
= Raw materials available for use in production	+ Mfg. overhead	= Total work in process for the period
– Ending raw materials inventory	= Total manufacturing costs	– Ending work in process inventory
= Raw materials used in production		= Cost of goods manufactured

Product Cost Flows

Work In Process	Finished Goods
Beginning work in process inventory	Beginning finished goods inventory
+ Manufacturing costs for the period	+ Cost of goods manufactured
= Total work in process for the period	= Cost of goods available for sale
– Ending work in process inventory	- Ending finished goods inventory
= Cost of goods manufactured	Cost of goods sold

Manufacturing Cost Flows



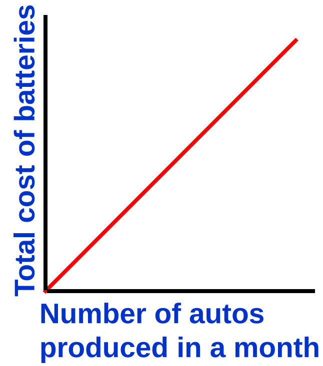
Cost Classifications for Predicting Cost Behavior

How a cost will react to changes in the level of activity within the relevant range.

- Total **variable costs** change when activity changes.
- Total **fixed costs** remain unchanged when activity changes.

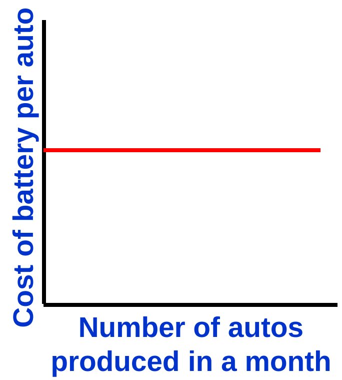
Total Variable Cost

The **total cost of batteries** is based on the number of autos produced in a month



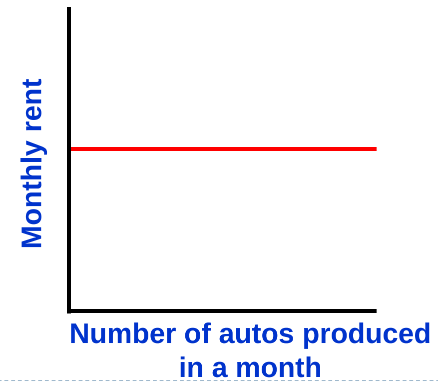
Variable Cost Per Unit

The **cost of battery** is constant per each auto produced



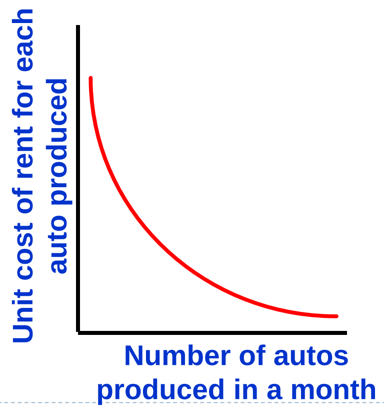
Total Fixed Cost

The **monthly rent** for an auto factory is fixed regardless of the number of autos produced



Fixed Cost Per Unit

The **average monthly rent per auto** decreases as more autos are produced



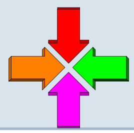
Cost Classifications for Predicting Cost Behavior

Behavior of Cost (within the relevant range)		
Cost	**In Total**	**Per Unit**
Variable	Total variable cost changes as activity level changes.	Variable cost per unit remains the same over wide ranges of activity.
Fixed	Total fixed cost remains the same even when the activity level changes.	Average fixed cost per unit goes down as activity level goes up.

Assigning Costs to Cost Objects

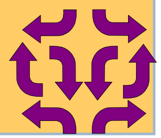
Direct costs

- **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**



Cost Classifications for Decision Making

- Every decision involves a choice between at least two alternatives.
- Only those costs and benefits that differ between alternatives are relevant in a decision. All other costs and benefits can and should be ignored.

Differential Cost and Revenue

Costs and revenues that differ among alternatives.

Example: You have a job paying $1,500 per month in your hometown. You have a job offer in a neighboring city that pays $2,000 per month. The commuting cost to the city is $300 per month.

Opportunity Cost

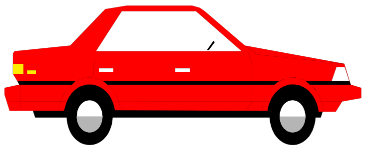
The potential benefit that is given up when one alternative is selected over another.

Example: If you were not attending college, you could be earning $15,000 per year. Your opportunity cost of attending college for one year is $15,000.

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.

Example: You bought an automobile that cost $10,000 two years ago. The $10,000 cost is sunk because whether you drive it, park it, trade it, or sell it, you cannot change the $10,000 cost.



Summary of the Types of Cost Classifications

- **Financial Reporting**
- **Predicting Cost Behavior**
- **Assigning Costs to Cost Objects**
- **Making Business Decisions**