

Managerial Accounting

Business Department
spring 2024

Cost Terms, Concepts and **Classifications**

- Managerial Cost Concepts
- Definition of Cost
- Classifications of Costs
 1. Costs in manufacturing companies
 2. **Cost behaviour**
 3. **Assigning Costs to Cost Objects**
 4. **Cost Classifications for Decision Making**



Cost Classification for predicting cost behaviour

How a cost will react to changes in the level of business activity.

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

Variable Costs

Are costs that vary, in total, in direct proportion to changes in the level of activity.

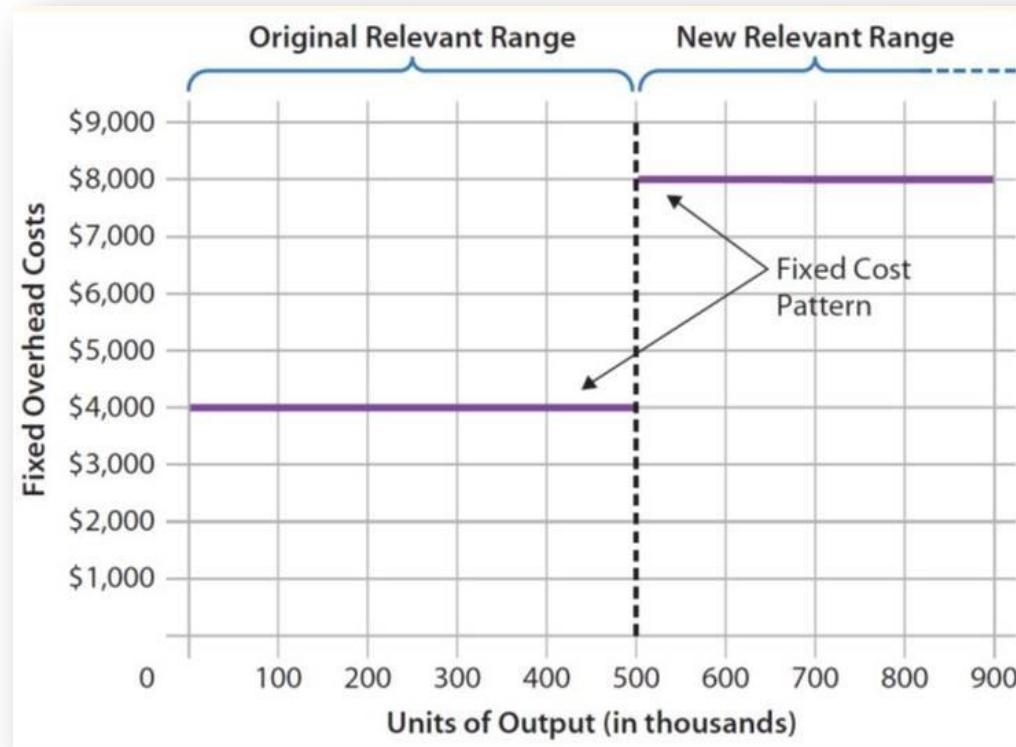
This includes costs such as **direct materials and direct labour**.



Fixed Costs

Are costs that remain constant, in total, regardless of changes in the level of activity.

This includes costs such as **depreciation, administration and other overhead costs.**

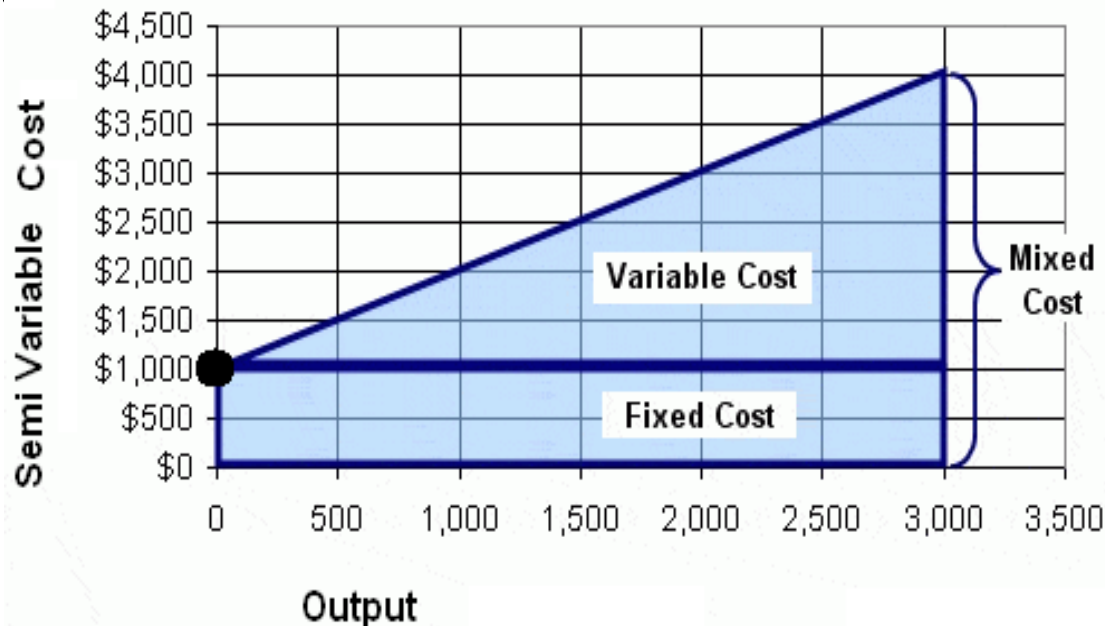


Semi-variable (Mixed) costs

It include both fixed and variable rates. An easy way to understand these costs is to consider a cell phone bill: consumers pay a fixed rate for their plan each month, but that bill may increase with additional text messages or long distance calls. This bill, then, would shape a semi-variable expense.

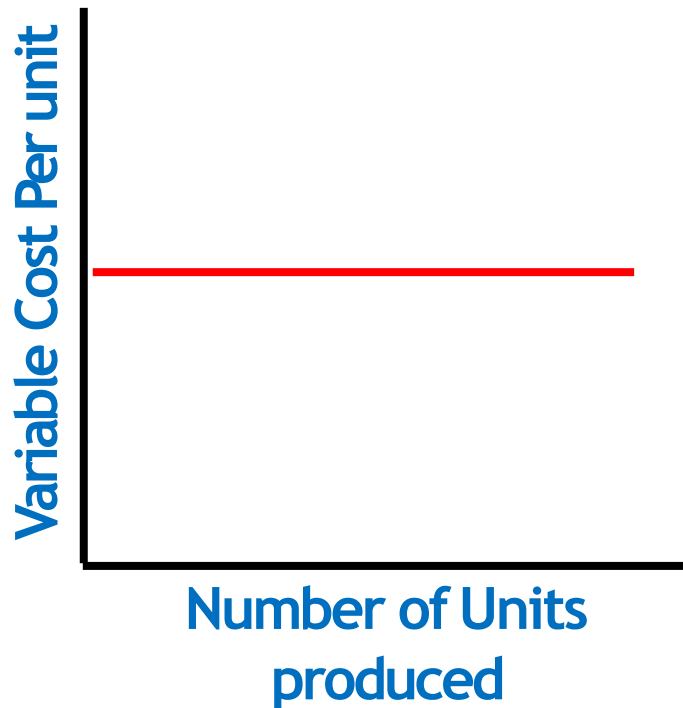
Another example

of mixed cost is delivery cost which has a fixed component of depreciation cost of trucks :

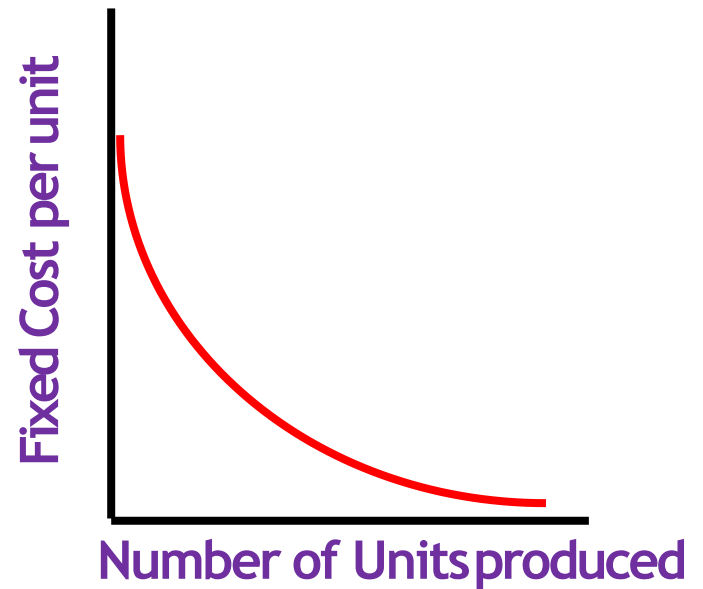


Variable and Fixed Cost Per Unit

Variable cost of unit is constant.



Average fixed cost per unit decreases as more units are produced.

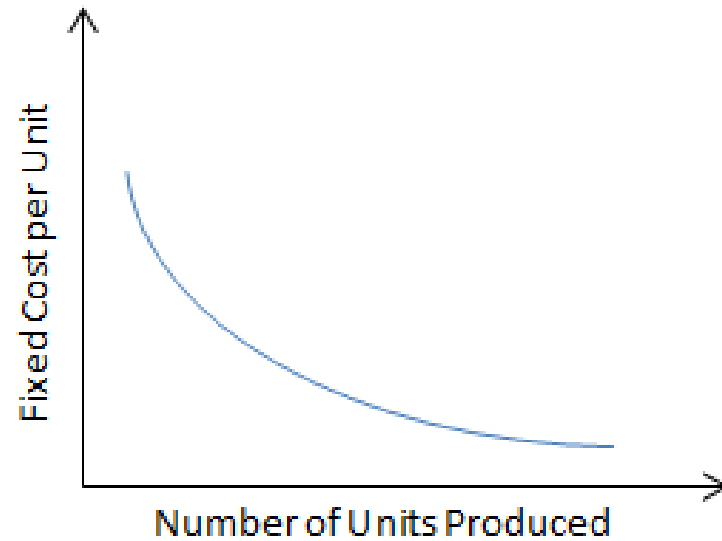
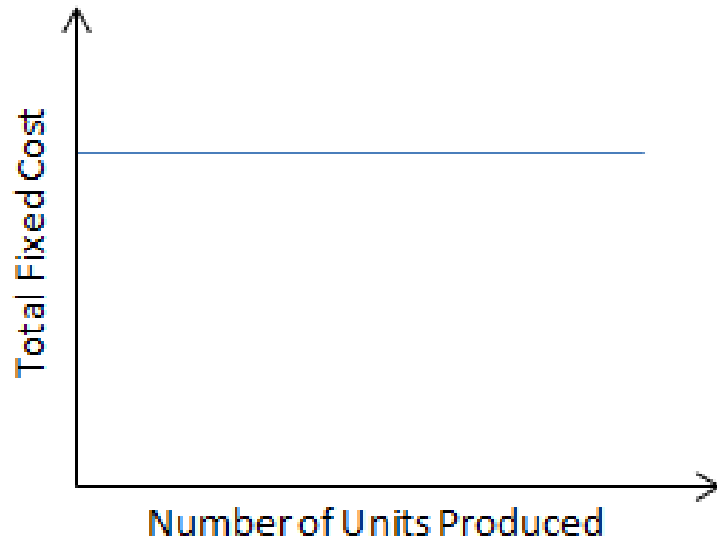


Cost Classifications for Predicting Cost Behavior

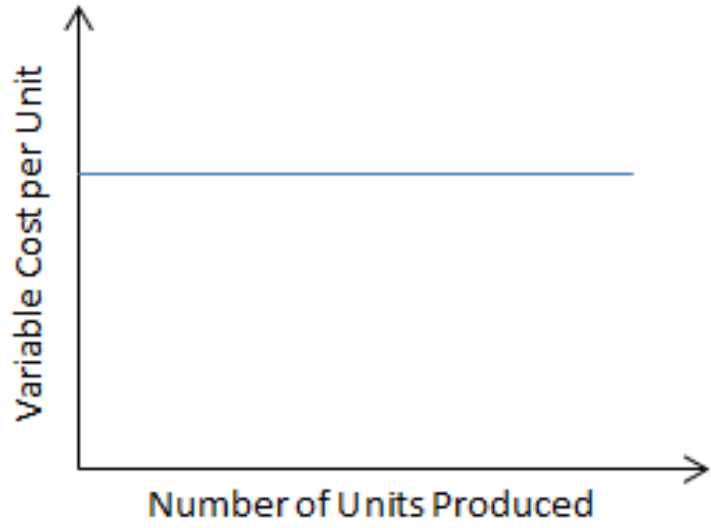
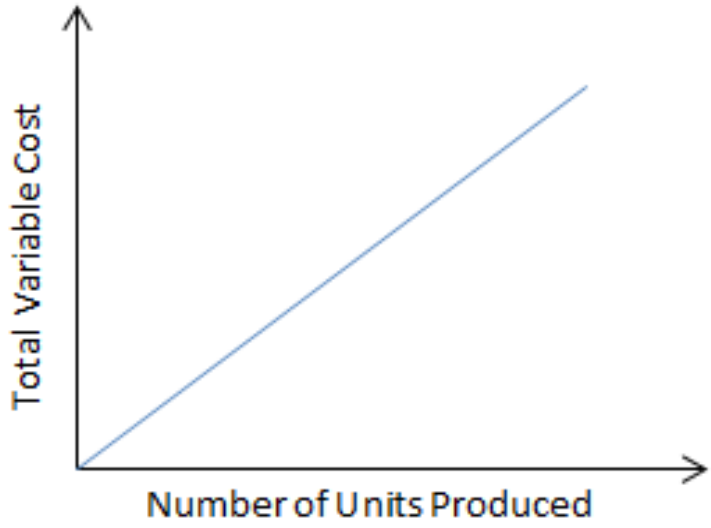
Behaviour of Cost (within the relevant range)		
Cost	In Total	Per Unit
Variable	Total variable cost changes as activity level changes.	Variable cost per unit remains the same over wide ranges of activity.
Fixed	Total fixed cost remains the same even when the activity level changes.	Fixed cost per unit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

Fixed cost per unit decreases with increase in production. Following example explains this fact:

Total Fixed Cost	\$30,000	\$30,000	\$30,000
÷ Units Produced	5,000	10,000	15,000
Fixed Cost per Unit	\$6.00	\$3.00	\$2.00



Total Variable Cost	\$10,000	\$20,000	\$30,000
÷ Units Produced	5,000	10,000	15,000
Variable Cost per Unit	\$2.00	\$2.00	\$2.00



Quick Check

Which of the following costs would be variable with respect to the number of ice creams sold at a Aland 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.

Exercise Question 3

Reports of Idol Corporation provided the following information:

- Number of smart phones produced in a month:
1, 20, 500, 2,000 units
- Each smart phone needs one battery which costs \$18
- Rent cost is \$8,000 per month.

Required:

1. Compute **total variable** cost for every volume of production.
2. Calculate **average fixed** cost per smart phone.
3. Represent the cost information on graphs indicating the cost behaviour.

Solution

1. **Total variable cost** for every volume of production:

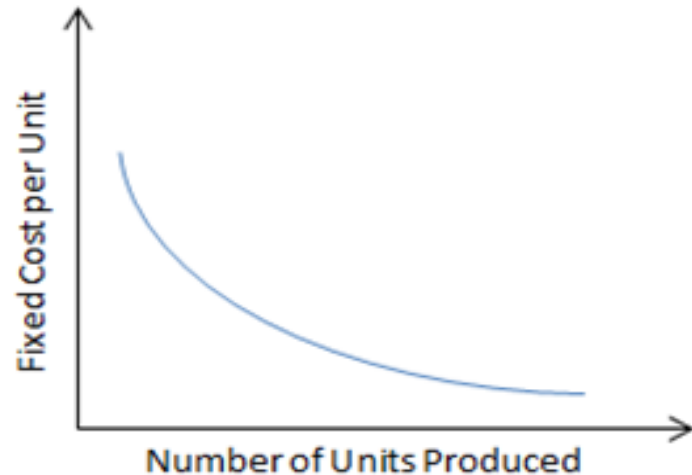
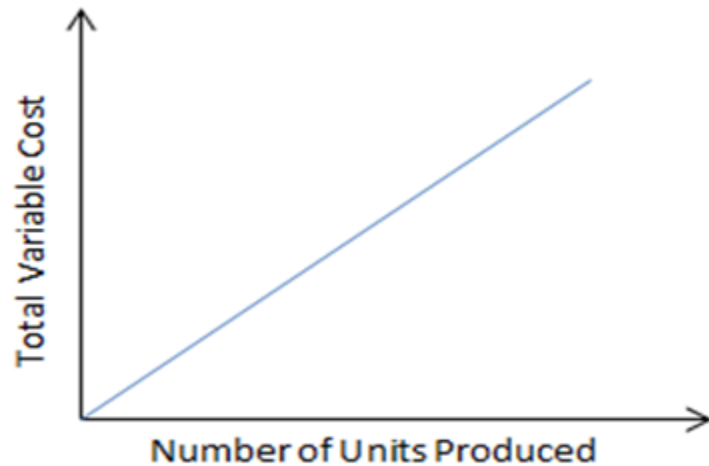
<u>Volume of production</u>	<u>Variable cost per unit</u>	<u>Total variable cost</u>
1	x \$18	= 18
20	x \$18	= 360
500	x \$18	= 9,000
2000	x \$18	= 36,000

2. **Average fixed cost** per smart phone (unit)

Total Fixed cost	8000	8000	8000	8000
Units produced (volume)	<u>1</u>	<u>20</u>	<u>500</u>	<u>2000</u>
Average fixed cost per unit	8000	400	16	4

Solution

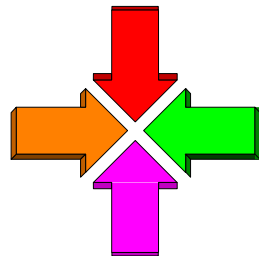
3. **Cost information graphs** indicating the cost behavior.



Assigning Costs to Cost Objects

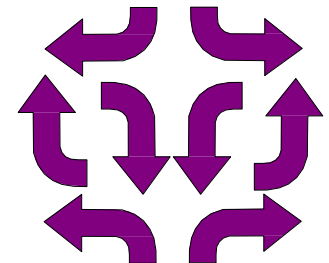
Direct costs

- 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 to the decision. All other costs and benefits can and should be ignored.



Differential Costs and Revenues

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.

Differential revenue is:
2000

Differential cost is:
300

Net Differential Benefit is:
 $1700 - 1500 = 200$

Practical Illustration

	Retailer Distribution (Present)	Direct Sale Distribution (Proposed)	Differential Costs and Revenues
Revenue (Variable)	\$700,000	\$800,000	100,000
Cost of goods Sold (Variable)	350,000	400,000	50,000
Advertising (Fixed)	80,000	45,000	(35000)
Commission (Variable)	0.00	40,000	40000
Warehouse depreciation (Fixed)	50,000	80,000	30000
Other expenses (Fixed)	60,000	60,000	0
Total costs and expenses	<u>540,000</u>	<u>625,000</u>	<u>85000</u>
Net Operating income	\$160,000	\$175,000	15,000

Opportunity Costs

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 cost

Once the company's money is spent, that money is considered a **sunk cost**. Regardless of what money is spent on, **sunk costs** are dollars already spent and permanently lost.

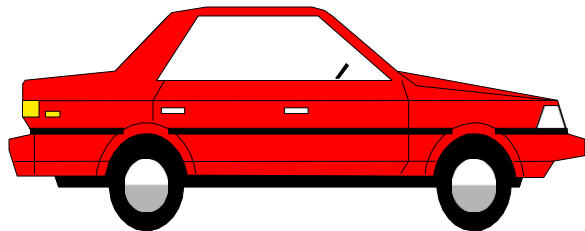
Sunk cost is a cost that has already been incurred and cannot be refunded or recovered.

For **example**, once rent is paid, depreciation has recognized, dollar amount is no longer recoverable - it is '**sunk**.'

Sunk Costs

Cannot be changed by any decision. They are not differential costs and should be ignored when making decisions. Sunk Costs cannot be refunded or recovered.

Example: You bought a car 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.



Example: once rent is paid, that dollar amount is no longer recoverable - it is 'sunk.'



Quick Check

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

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

Quick Check

Suppose you are trying to decide whether to drive or take the buss Erbil to attend a concert. You have sufficient 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.

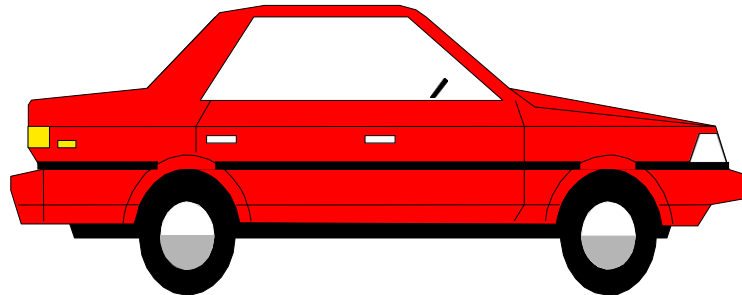
B. No, the licensing cost is not relevant.

Quick Check

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.



Exercise Question 5

Dilan Co. manufactures furniture, including tables. Selected costs are given below:

1. The tables are made of wood that costs \$100 per table.
2. The tables are assembled by workers, at a wage cost of \$40 per table.
3. Workers are supervised by a factory supervisor who is paid \$38,000 per year.
4. Electrical costs are \$2 per machine-hour. Four machine-hours are required to produce a table.
5. The depreciation on the machines used to make the tables totals \$10,000 per year. The machines have no resale value and do not wear out through use.
6. The salary of the president of the company is \$100,000 per year.
7. The company spends \$250,000 per year to advertise its products.
8. Salespersons are paid a commission of \$30 for each table sold.
9. Instead of producing the tables, the company could rent its factory space for \$50,000 per year.

Required: Classify these costs according to the various cost terms classifications.

Quick Check

Factory Insurance \$6,000 / office rent \$15,000 /
Indirect labour \$24,000 / machine rental \$10,000 /
factory utilities \$15,000 / office utilities \$16,000 /
factory supplies \$7,000 / factory depreciation \$9,000 /
office depreciation \$13,000 / factory property taxes
\$8,000.

Total manufacturing overhead costs equals to:

- A. \$79,000 B. \$97,000 C. \$92,000
D. \$95,000 E. \$72,000

Quick Check

Direct Materials Cost \$90,000 / Direct Labour Cost 135,000/ manufacturing Overhead Cost \$45,000. Conversion Cost equals to:

- A. \$270,000
- B. B. \$125,000
- C. C. \$45,000
- D. D. \$135,000
- E. E. \$180,000