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COST CONCEPT :-

It is used for analyzing the cost of a project in short and long run.

In other word, cost is the sum total of explicit cost & implicit cost.

- Explicit cost is actual money expenditure or input or payment made to outsiders for hiring their factor services.
- Implicit cost is the estimate value of inputs supplied by the owners including normal profit.

COST FUNCTION

- It refers to the functional relationship between cot and output.

$$C = f(q)$$

where

C = cost of production,

q = quantity of output,

f = functional relationship

Type of Cost :

- Total fixed cost (TFC)
- Total variable cost (TVC)
- Total cost (TC)
- Average fixed cost (AFC)
- Average variable cost (AVC)
- Average cost (AC)
- Marginal cost (MC)

Total fixed cost (TFC)

It refers to those cost which do not vary directly with the level of output.

For example :- rent, interest, salary, insurance premium etc.

- TFC = TC - TVC
- TFC = AFC * OUTPUT
- TFC = TC AT 0 OUTPUT.

Total variable cost (TVC)

It refers to those cost which vary directly with the level of output.

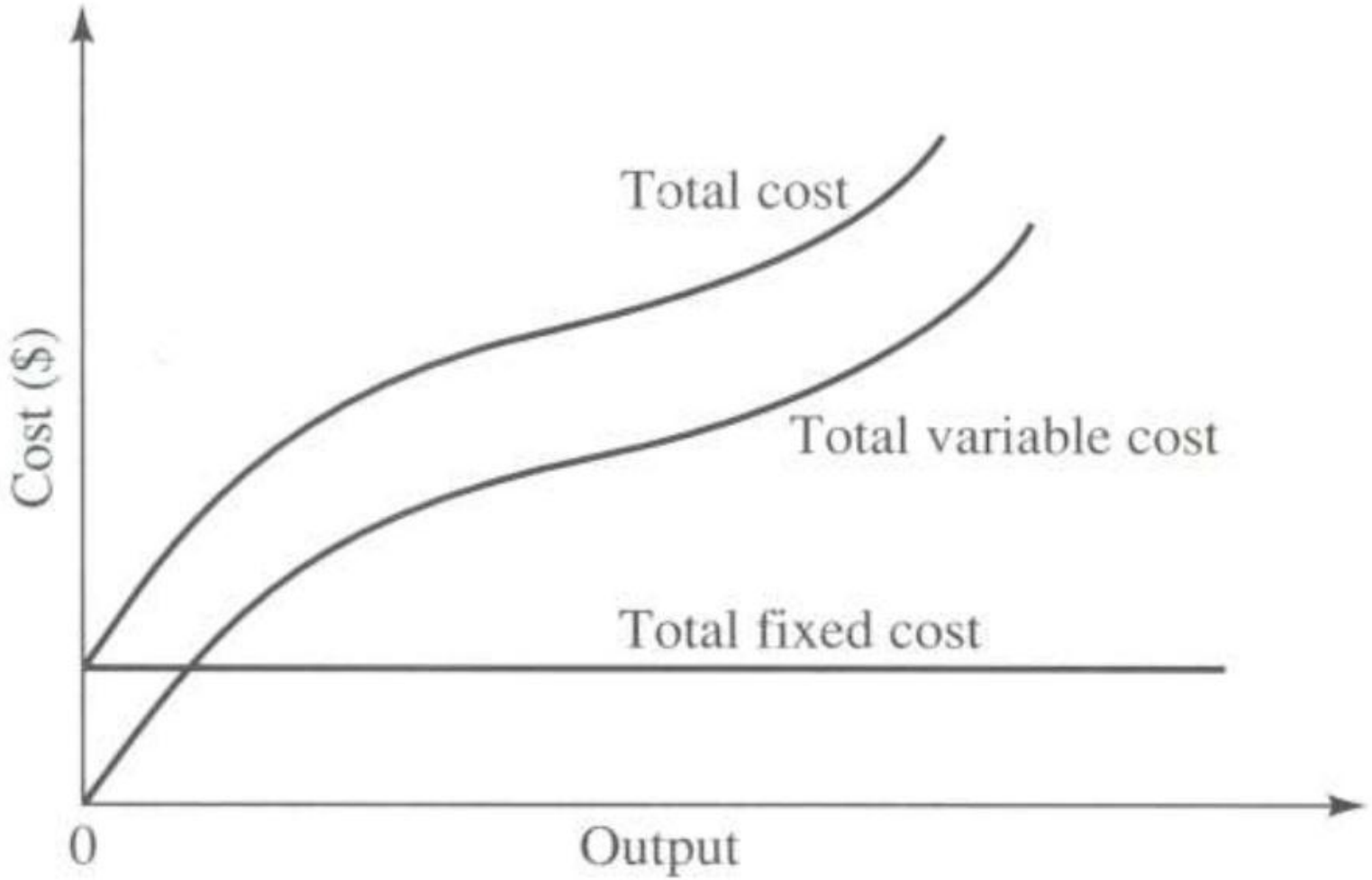
For example :- payments of raw material ,power ,fuel ,wages etc.

- TVC = TC - TFC
- TVC = AVC * OUTPUT
- TVC = $\sum MC$

Total cost (TC)

It is the total expenditure incurred by a firm on the factor of production required for the production of a commodity

- TC = TVC + TFC
- TC = AC * OUTPUT
- TC = $\sum MC + TFC$



Typical total cost curves.

Average fixed cost (AFC)

It refers to per unit of total fixed cost.

- AFC = TFC / OUTPUT
- AFC = AC - AVC

Average variable cost (AVC)

It refers to per unit of total variable cost.

- AVC = TVC / OUTPUT
- AVC = AC - AFC

Average total cost (ATC) or Average cost (AC)

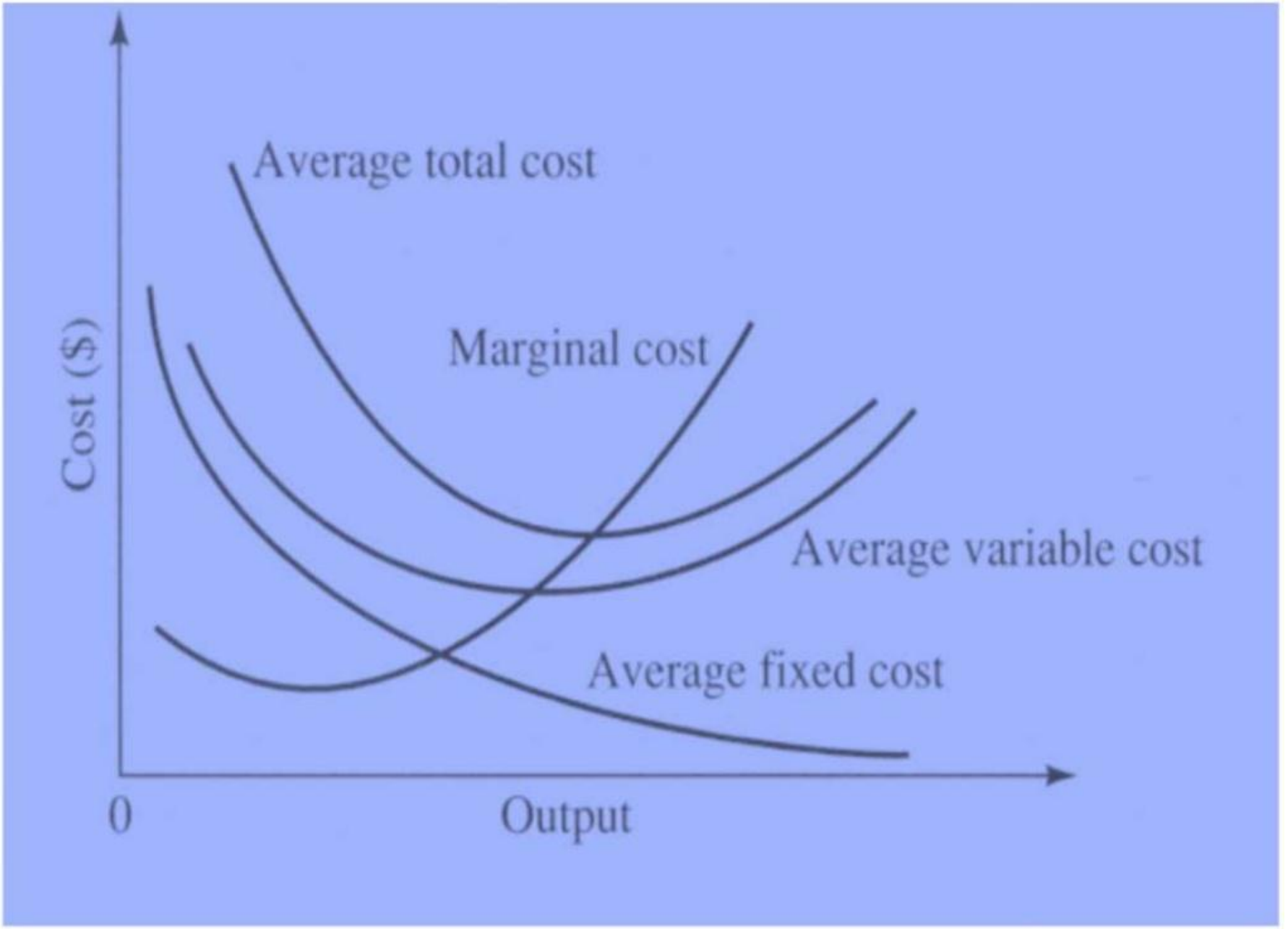
It refers to the per unit total cost of production.

- AC = TC / OUTPUT
- AC = AVC+AFC.

Marginal cost (MC)

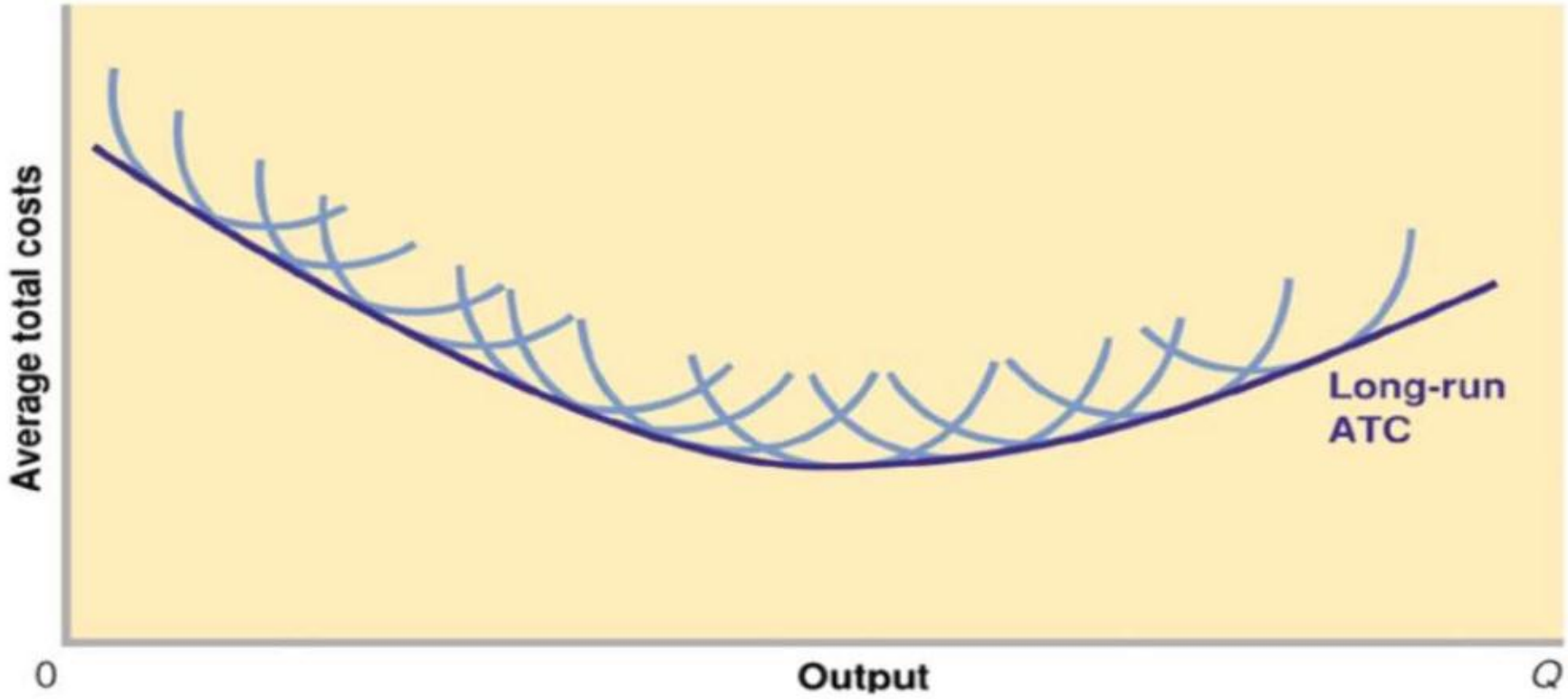
It refers to addition to total cost when one more unit of output is produced.

- $MC=\frac{\Delta TC}{\Delta Q}$
- $MC_n = TC_n - TC_{n-1}$
- $MC_n = TVC_n - TVC_{n-1}$


Average total cost
Marginal cost
Average variable cost
Average fixed cost
Cost ($)
0
Output

Long Run Cost Curve

All costs are variable in the long run. There is only AVC in LR, since all factors are variable.



Economies of Scale:

Economies of scale are the cost advantages that a firm obtains due to expansion. Diseconomies is the opposite.

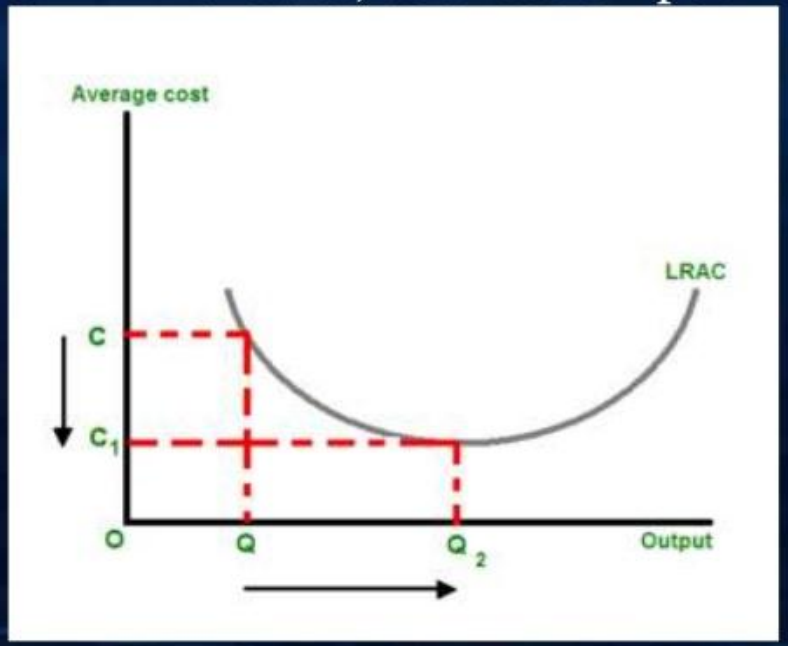
Two types:

1. Pecuniary Economies of Scale:

Paying low prices because of buying in large Quantity.

2.Real Economies of Scale:

Refers to reduction in physical quantities of input , per unit of output when the size of the firm increases, as a result input cost minimized.



Diseconomies:

1. Internal Economies:

   It is a condition which brings about a decrease in LRAC of the firm because of changes happening within the firm.

2. External Economies:

   It is a condition which brings about a decrease in LRAC of the firm because of changes happening outside the firm.

E.g. Taxation policies of government