

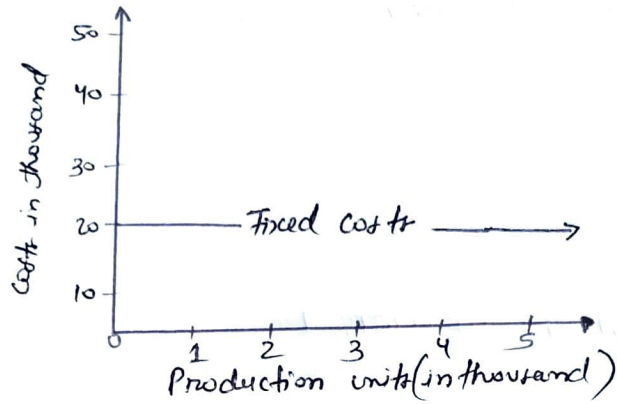
PRODUCTION - NATURE OF COSTS - 1

* MEANING OF COST- Cost may be defined as the monetary value of all sacrifices made to achieve an objective i.e. to produce goods and services. Cost are very important in business decision-making. Cost of production provides the floor to pricing. It helps manager to take correct decision, such as what price to quote, whether to place particular order for inputs or not whether to abandon or add a product to the existing product line and so on.

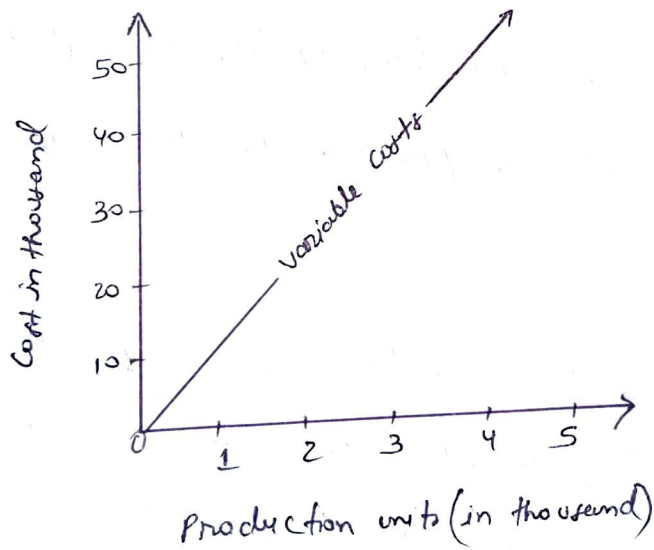
Ordinarily cost refer to the money expenses incurred by a firm in the production process. Cost also included imputed value of the entrepreneur's own resources and services, as well as salary of the owner-manager.

* FIXED COST- Fixed cost are the amount spent by the firm on fixed inputs in the short-run. Fixed cost are thus, those costs which remain constant, irrespective of the level of output. These costs remain unchanged even if the output of the firm is nil. Fixed costs therefore, are known as Supplementary or

overhead costs.



* Variable Costs - Variable costs are those cost that change directly at the volume of output changes. As the production increases variable cost also increases, and as the production decreases variable costs also decrease, and when the production stops variable cost is zero.



* TOTAL COST - Total cost is the total expenditure incurred in the production of goods and services.

$$TC = TFC + TVC$$

* AVERAGE COST - Average cost is not actual cost, it is obtained by dividing the total cost by the total output.

$$AC = \text{Total Cost} / \text{units produced}$$

* MARGINAL COST- The cost incurred on producing one additional unit of commodity is known as marginal cost. Thus it shows a change in total cost when one more or less unit is produced.

$$MC = TC_n - TC_{(n-1)}$$

* Cost function -

The cost output relationship plays an important role in determining the optimum level of production.

$$TC = F(Q)$$

where,

TC = Total cost

Q = Quantity produced

F = Function

The cost function can be classified as:

* Short-run cost- Short-run is a period where the time is too short to expand the size of industry and the increased demand has to be met within the existing size of industry because there are certain factors which cannot be changed in short-run. So short-run costs are those which vary with output when fixed plant & capital equipments remain unchanged.

* Long-run cost - In the long-run the size of an industry can be expanded to meet the increased demand for products such as in long-run all the factors of production can be increased as per need. Hence there are those which vary with output when all input factors

including plants equipment vary.

* Cost output relationship in short-run -

In the short-run a change in output is possible only by making changes in the variable inputs like raw materials, labour etc.

Inputs like land & buildings, plant and machinery etc. are fixed in the short-run. It means that short-run is a period not sufficient enough to expand the quantity of fixed inputs. Thus total cost (TC) in the short-run is composed of two elements - Total fixed cost (TFC) and Total variable cost (TVC).

TFC remains the same throughout the period and is not influenced by the level of activity. The firm will continue to incur these costs even if the firm is temporarily shut-down. Even though TFC remains the same fixed cost per unit varies with changes in the level of output.

On the other hand TVC increases with increase in the level of activity, and decreases with decrease in the level of activity. If the firm is shut-down, there are no variable costs. Even though TVC is variable, variable cost per unit is constant.

So in the short-run an increase in TC implies an increase

in TVC only. Thus:

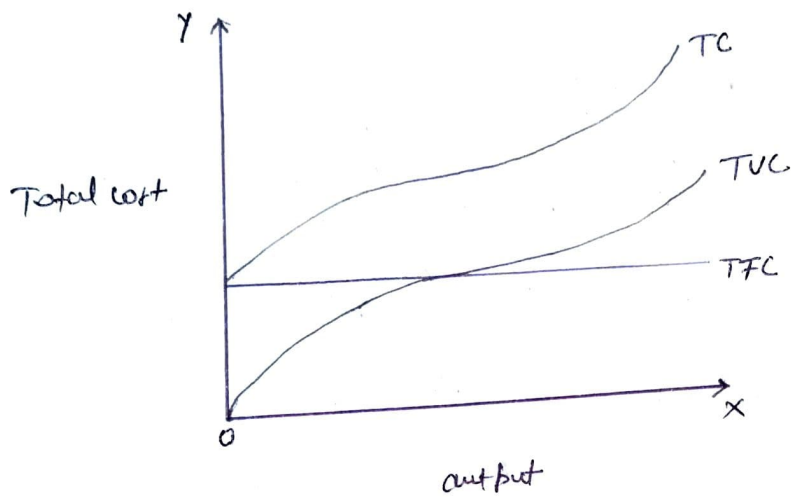
$$TC = TFC + TVC$$

$$TFC = TC - TVC$$

$$TVC = TC - TFC$$

$$TC = TFC \text{ when the output is zero.}$$

The graph below shows short-run cost output relationship.



In the graph X-axis measures output and Y-axis measures cost. TFC is a straight line parallel to X-axis, because TFC does not change with increase in output.

TVC curve is upward rising from the origin because TVC is zero when there is no production and increases as production increases. The shape of TVC curve depends upon the productivity of the variable factors. The TVC curve above assumes the law of variable proportions, which operates in the short-run.

TC curve is also upward rising not from the origin but from the TFC line. This is because even if there is no production the TC is equal to TFC.

It should be noted that the vertical distance b/w the TVC curve and TC curve is constant throughout because the distance represents the amount of fixed cost which remains constant. Hence TC curve has the same pattern of behaviour as TVC curve.