MBA- I semester, paper- Managerial Economics, MB 102, TOPIC- Cost-Output Relationship in the Short-Run.

1. Cost-Output Relationship in the Short-Run

The cost concept made use of in the cost behaviour are total cost, average cost, and marginal cost.

Total cost is the actual money spent to produce a particular quantity of output. Total Cost is the summation of Fixed Costs and Variable Costs.

TC=TFC+TVC

Up to a certain level of production Total Fixed Cost i.e., the cost of plant, building, equipment etc, remains fixed. But the Total Variable Cost i.e., the cost of labour, raw materials etc., vary with the variation in output. Average cost is the total cost per unit. It can be found out as follows.

AC=TC/Q

The total of Average Fixed Cost (TFC/Q) keep coming down as the production is increased and Average Variable Cost (TVC/Q) will remain constant at any level of output.

Marginal Cost is the addition to the total cost due to the production of an additional unit of product. It can be arrived at by dividing the change in total cost by the change in total output.

In the short-run there will not be any change in Total Fixed C0st. Hence change in total cost implies change in Total Variable Cost only.

This can be also defined as-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 and 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 when the output is zero.