

CONCEPTS OF COST

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Determinants of Costs:

Although it is very difficult to determine in general the factors influencing the cost as they widely differ from firm to firm and even industry to industry, some factors considering them as general determinants of costs are:

- **1. Technology**

Technology has a big influence on cost of production. Modern technology leads to optimum utilization of resources, avoid all kinds of wastages, saving of time, reduction in production costs and resulting in higher output. On the other hand, primitive technology would lead to higher production costs. In fact, most technological innovation aim at reducing cost.

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- **2. The degree of utilisation of the plant and machinery**

Complete and effective utilisation of all kinds of plants and machinery would reduce production costs and under utilisation of existing plants and machinery would lead to higher production costs. Specially in this the per unit fixed cost makes a big difference ;with higher capacity utilisation fixed cost per unit of output is bound to be lower.

- **3. Size of Plant and scale of production**

Cost is also influenced by the size of the plant . With a bigger size ,although ,the initial fixed costs are high ,variable costs tend to be low compared with a small sized plant.

- **4. Prices of factor inputs**

Higher market prices of various factor inputs result in higher cost of production and vice-versa but the impact of price of a given factor would depend upon the contribution which that factor of production makes to the total product.

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- **5. Efficiency of factors of production and the management**

Higher productivity and efficiency of factors of production would lead to lower production costs and vice-versa.

- **6. Stability of output**

Stability in production would lead to optimum utilisation of the existing capacity of plants and machinery. It also brings savings of various kinds of hidden costs of interruption and learning leading to higher output and reduction in production costs.

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- **7. Law of returns**

An important determinant of cost is the law of returns operating. Increasing returns would reduce cost of production and diminishing returns increase cost.

- **8. Time period**

In the short run, cost will be relatively high and in the long run, it will be low as it is possible to make all kinds of adjustments and readjustments in production process.

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- **COST FUNCTION: SHORT RUN AND LONG RUN**
- Cost functions are derived functions. They are derived from the production function which describes the available efficient methods of production at any given period of time. Cost function expresses a functional relationship between total cost and factors that determine it. Usually, the factors that determine total cost of production (C) of a firm are the output (Q), level of technology (T), the prices of factors (P_f), and the fixed factors (K). Economic theory distinguishes between short-run costs and long-run costs.

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- SHORT -RUN COST FUNCTION:

- The short run is a period of time in which only the variable factors can be varied while fixed factors like plant, machinery etc remains constant. Short-run costs are the cost over a period during which some factors of production (usually capital equipment and management) are fixed. In short run only the proportion of the input can be changed..

Symbolically, we may write the short-run cost function as; $C = f(Q, \bar{T}, \bar{P}_f, \bar{K})$ Where C is total cost, Q is output, \bar{T} is technology, \bar{P}_f is prices of factor inputs, and \bar{K} is capital (fixed factors of production).

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- LONG- RUN COST FUNCTION

The long-run costs are the costs over a period long enough to permit the change of all factors of production. In the long run all factors become variable and scale of production can be varied. Both in long run as well as short run, the total cost becomes a multivariable function, that is it depends upon many variables. Symbolically, we may write the long-run cost function as: $C = f(Q, T, P_f)$, Where C is total cost, Q is output, T is technology, P_f is prices of factor inputs.

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- Graphically, Costs are shown on two dimensional diagrams. Such curve imply that cost is a function of output= $f(Q)$, other thing remaining constant. If there is any change in these factors which are held constant , then their effect on cost curve is shown graphically by shift in cost curve. This is the reason why determinants of Cost ,other than output, are called shift factors. Mathematically, there is no difference between the various determinants of costs. The distinction between movements along the cost curve (when output changes) and shifts of the curve (when the other determinants change) is convenient only pedagogically, because it allows the use of two dimensional diagrams.