

Key Terms

- Marginal
- Fixed Cost
- Variable Cost
- Total Cost
- Marginal Cost
- Average Cost
- Ratio
- Rate of Change

Costs

- When producing a good or a service firms face two types of costs.
- Fixed Costs are costs that the business incurs whether or not production occurs (e.g., a lease on a building).
- Variable Costs change with the amount of output of the good or service (e.g., hiring additional workers)

Total Cost & Average Cost

- Total cost (TC) is the sum of fixed (FC) and variable costs (VC).
- $TC=FC+VC$
- Total cost provides business owners an overview of their full costs of production.
- Average cost (AC) is the firm's TC divided by its Quantity of output(Q).
- $AC=TC/Q$

Marginal

- Marginal in economics refers to rate of change. If the focus is on revenue, marginal refers to the extra revenue generated from the sale of an extra unit of output. Similarly, if the focus is on cost, then marginal cost refers to the extra cost associated with producing an extra unit of output.
- Revenue is the income that a firm gets from selling its production.

Marginal Cost

- Marginal Cost (MC) is the cost associated with producing an extra unit of output (Q).
- $MC = \Delta TC / \Delta Q$
- Marginal cost is a rate of change in total cost associated with producing an extra unit of output.
- Using marginal cost allows a firm to know the amount of additional cost incurred by producing an additional unit of output.

What is Rate of Change

- Rate of change is the ratio between the change in one variable relative to the corresponding change in another variable.
- Given two points (X_1, Y_1) and (X_2, Y_2) , rate of change is given by the equation $(Y_2 - Y_1) / (X_2 - X_1)$. This equation is also the slope of the line through these two points.
- The concept of slope is equivalent to rate of change, which is also called marginal in economics.