



# Concepts of The Revenue

Ghazala Shaheen

Guest Faculty

Vaniya Mahavidyalaya

# Revenue

- ▶ The Revenue of the firm is its sale receipts or money receipts from the sale of a product. It is also called sale proceeds.
- ▶ **Example:** You are running a factory producing Ice Cream. You produce 1,000 Ice Cream slabs daily. By selling these Ice Cream slabs you get Rs.1,000. In economics, this amount of Rs. 1,000 is called revenue. Thus by selling a commodity whatever money a firm receives is called its Revenue.

# Concepts of Revenue

1) Total Revenue, 2) Marginal Revenue, 3) Average Revenue





- ◆ **Total Revenue:** The revenue that the firm gets by selling a given quantity of product is called Total Revenue. If 100 Ice- Cream slabs are sold at the rate of Rs. 50 per slab, total revenue (TR) of the firm will be

$$100 \times \text{Rs.}50 = 5,000$$

$$\text{Quantity} \times \text{Price} = \text{Total Revenue}$$

- ◆ **Marginal Revenue:** Marginal revenue is the change in total revenue which results from the sale of one more or less unit of a commodity.

$$\text{MR} = \frac{\text{Change in Total Revenue}}{\text{Change in Quantity Sold}} = \frac{\Delta \text{TR}}{\Delta \text{Q}}$$

Or

$$\text{MR} = \text{TR}_n - \text{TR}_{n-1}$$

- ✿ **Average Revenue:** Average revenue refers to revenue per unit of output sold. If,  $TR = \text{Rs.}1,000$ , and  $Q = 100$ , then

$$AR = \frac{TR}{Q} = \frac{1,000}{100} = \text{Rs.}10$$

Thus, AR refers to the rate at which output is sold. Accordingly AR is nothing but price of the product.

► Example:

Output Q	Price (P = AR) (Rs.)	Total Revenue TR = AR X Q	Marginal Revenue MR = TR(n) - TR(n-1)
1	10	10	10 - 0 = 10
2	10	20	20 - 10 = 10
3	10	30	30 - 20 = 10
4	10	40	40 - 30 = 10
5	10	50	50 - 40 = 10

1).  $TR = AR \times Q = \text{Rs.}10 \times 5 = \text{Rs.}50$

2).  $AR = TR / Q = \text{Rs.}50 / 5 = \text{Rs.}10$  Price

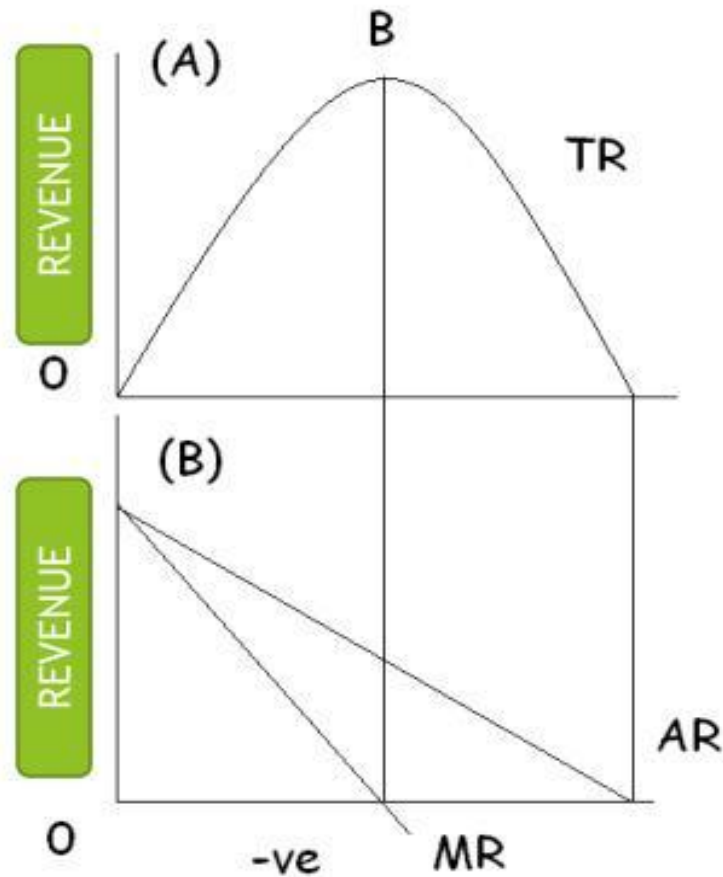
3).  $MR = TR(n) - TR(n-1) = \text{Rs.}50 - \text{Rs.}40 = \text{Rs.}10$

That if AR is constant  $MR = AR$

## ► Relationship between Total Revenue, Marginal Revenue and Average Revenue

1.  $TR = AR \times Q$  or  $\sum MR$
2.  $AR = TR / Q$
3.  $MR = \Delta TR / \Delta Q$  or  $TR(n) - TR(n-1)$
4. When TR is increasing at increasing rate MR should be increasing.
5. When TR is increasing at constant rate MR should be constant.
6. When TR is increasing at diminishing rate MR should be diminishing.
7. When TR is maximum MR is Zero.
8. When TR is diminishing MR is negative.
9. When AR curve is sloping downward, MR curve should be below the AR curve as in monopoly or monopolistic competition.

- Relationship between Total, Average and Marginal Revenue, A Diagrammatic Illustration





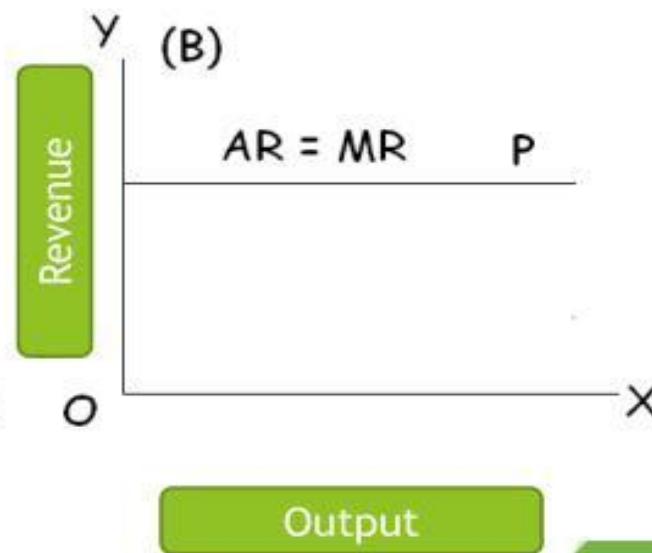
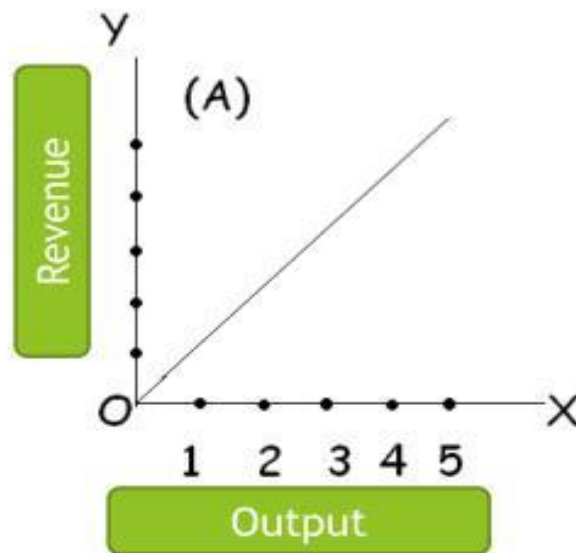
## ► Relation between Total, Average and Marginal Revenue

- (1) **Both AR and MR are calculated from Total Revenue:** Both average and marginal revenues are obtained from total revenue. It is evident from the following table:

Units of Commodity	Total Revenue (Rs.)	Average Revenue (Rs.)	Marginal Revenue (Rs.)
1	10	10	10
2	18	9	8
3	24	8	6
4	28	7	4
5	30	6	2

- (2) **If Average Revenue and Marginal revenue Curves are parallel to OX-axis :** In case average revenue and marginal revenue curves are parallel to OX-axis, it means both are equal, i.e.,  $AR=MR$ . In case of Perfect Competition.

Units of Commodity	Total Revenue (Rs.)	Average Revenue (Rs.)	Marginal Revenue (Rs.)
1	5	5	5
2	10	5	5
3	15	5	5
4	20	5	5
5	25	5	5



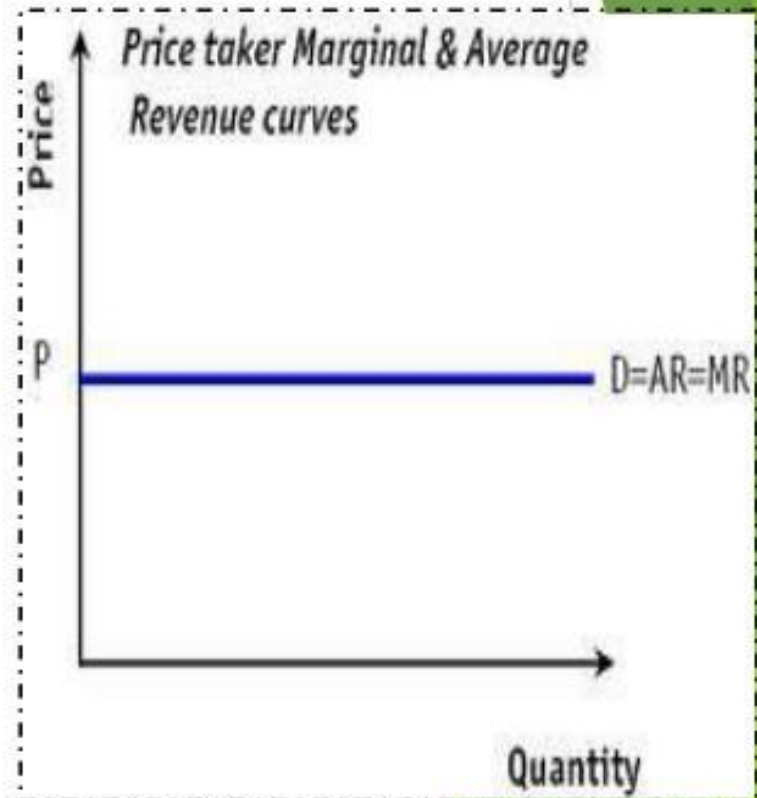
(3) If both **Average Revenue and Marginal Revenue curves are straight lines**: In this situation MR curve will be mid-way between AR curve and OY-axis. It implies that  $AB=BC$ . This situation relates to Monopoly and Imperfect Competition.



# A Comparative Study of the Revenue Curves in Different Markets

- In order to study the problem of price discrimination, knowledge of revenue and cost curves is very essential. Cost curves remain the same in different kinds of markets but revenue curves are different in different markets.

- i. **Revenue Curves under Perfect Competition:** In fig., curves represents both average and marginal revenues ( $AR=MR$ ) under perfect competition. It is parallel to OX-axis. It means that under perfect competition a firm can sell any number of units of a good at a given price.





- ii. **Revenue Curves under Monopoly:** Fig. represents average and marginal revenue curves under monopoly. Both curves are sloping downwards. It implies that in order to sell more units, the monopolist will have to lower the price per unit (average revenue).



# Significance of the Concept of Revenue in Price Analysis

Different concepts of revenue have the following significance in price analysis:

- i. **Change in Price:** It is from the concept of total revenue that a firm learns whether it will gain more profit by raising or lowering the price per unit of the product or it will have no profit at all by effecting change in price. If total revenue increases by lowering the price, as in case of elastic demand, then it will be profitable to lower the same. If change in price has no effect on total revenue, then it will not be worth while for the firm either to raise or lower the same.
- ii. **Condition of Equilibrium:** Concept of marginal revenue helps the firm in knowing the condition of equilibrium, i.e., the condition of maximum profit. A firm is in equilibrium when it produces the goods up to a point where marginal revenue is equal to marginal cost.

- iii. **Estimate of Profit and Loss:** A firm makes use of the concept of average revenue to calculate profit and loss. Whether a firm will earn profit or incur loss by selling its products depends on the relation between its average revenue and average cost. If average revenue is greater than the average cost ( $AR > AC$ ), the firm will earn supernormal profit. If average revenue is less than average cost ( $AR < AC$ ), the firm will suffer loss. If average revenue is equal to average cost ( $AR = AC$ ), the firm will earn normal profit.