Market Structure

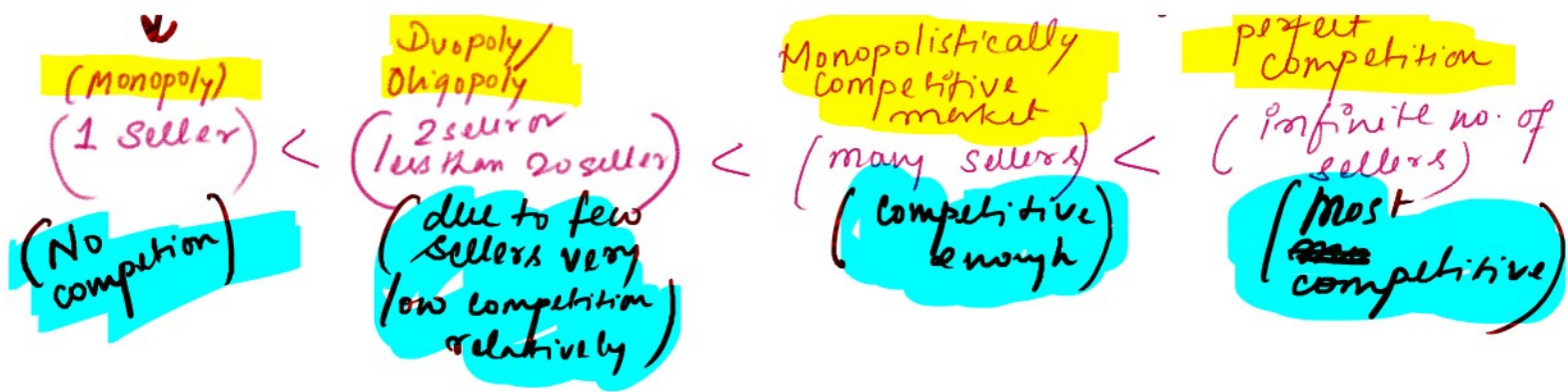① **Market** is a (place) ← geographical location where both buyers and sellers exist together or it is a place that bridges up the gap between buyer and seller.

There are **4 types** of market structure/model. (based on level/degree of competion or no. of sellers in a particular market.)

→ 1. **Pure or Perfectly competitive market** → infinitely many number of sellers.

→ 2. **Monopoly market** → characterised by a single seller

→ 3. **Monopolistically Competitive Market** → combination of perfect competitive market and monopoly → many number of sellers (but less than a perfectly competitive market)

4. **Oligopoly** → no. of sellers are few (not more than 20 sellers)

Depending on the number of sellers in market or degree of competition we can arrange these 4 types of market in ascending order (Lowest competion to highest competion)

↓
(Monopoly)   Duopoly/Oligopoly   Monopolistically Competitive   perfect competition

(Monopoly)
(1 seller) <

Duopoly / Oligopoly
(2 seller or less than 20 seller) <

Monopolistically Competitive market
(many sellers) <

perfect Competition
(infinite no. of sellers)

(No competion)

(due to few sellers very low competition relatively)

(Competitive enough)

(Most ~~plus~~ competitive)

Write down the sequence of market structure in ascending order as per their degree of competition:

monopoly < oligopoly < monopolistically competitive < perfectly competitive

Write down the sequence of market structure in descending order as per their degree of competition:

perfect Competition > monopolistically Competitive market > Oligopoly > Monopoly.

For any firm, the objective is to maximize profit.

What is profit?

profit is the margin (difference) between Total Revenue (TR) and Total Cost (TC)

What is Total Revenue (TR)?

Total Revenue is the income or total earning of a firm (ie) income earned after selling total output (Q) at price (P) per unit.

$$TR = P \times Q = \text{product of output (Q) and price (P)}$$

per unit! $TR = P \times Q = $ output (Q) and price (P)

For example: Suppose a **firms** is selling **50** **pens** at a price ₹10 each. What is the total Revenue or earning of the firm?

Total output (ie no. of pen) sold, $Q = 50$

Per unit price (P) of pen, $P = ₹10$

total revenue $TR = P \times Q = 50 \times 10 = ₹500$

\# Total cost (TC) is cost of producing 'Q' output that is cost of factors of production.

Like paying 'wages' to Labour (L)
paying 'rent' to capital (k)

What is total cost $(TC) = \text{wage} \times \text{Labour} + \text{rent} \times \text{capital}$
$$(TC) = \underset{(w)}{\text{wage}} \times \underset{(L)}{\text{Labour}} + \underset{(r)}{\text{rent}} \quad \underset{(K)}{\text{capital}}$$

profit is difference between Total Revenue (TR) and Total cost (TC)

ie, $\text{Profit}, (\Pi) = TR - TC$

Let us suppose a firm needs to employ **5 labour** at a wage rate of **₹2** and **1 capital** (machine) at a rent **₹5** to produce '50' pens.

$$\text{Total cost } TC = \text{price of Labour} \times \text{No. of Labours} + \text{price of capital} \times \text{No. of capital}$$

$$\boxed{TC = w \times L + r \times K}$$

$$TC = 2 \times 5 + 5 \times 1$$

$$TC = 10 + 5 = ₹15$$

To produce 50 pens a firm is spending ₹15.
ie Total cost of production $\boxed{TC = ₹15}$ ✓

and firm is selling 50 pens and earning ₹500

ie Total Revenue, $\boxed{TR = ₹500}$ ✓

what is the profit of a firm?

profit, Π = $TR - TC$ = $500 - 15$ = $₹485 50$
(500 > 15)

Three Possibilities: 1. TR > TC
(income of firm) > (cost of firm)

profit, Π > 0 $\Longrightarrow$ Supernormal profit of firm.

$TR = TC$

2. $TR = TC$

$\begin{pmatrix} income \\ earned \end{pmatrix} = \begin{pmatrix} cost\ of \\ production \end{pmatrix}$

profit, $\Pi = 0$ $\Rightarrow$ **NORMAL Profit** (Break-Even point)

3. $TR < TC$

$\begin{pmatrix} income \\ earned \end{pmatrix} < \begin{pmatrix} cost\ of \\ production \end{pmatrix}$ **LOSS**

profit, $\Pi < 0$ $\Rightarrow$ **LOSS**

Now : We know

Total Revenue, $TR = P \times Q$

Average Revenue, $AR = $ Total Revenue per unit of output produced

AR curve is also the demand curve.

$\longrightarrow$ $AR = \dfrac{TR}{Q} = \dfrac{P \cdot Q}{Q} = P$ $\Rightarrow$ also called demand curve of a market because it shows the relation between Price & Quantity.

Marginal Revenue $MR = \dfrac{\Delta TR}{\Delta Q}$

i.e, $MR = $ change in total Revenue due to change in Output by 'one' unit.

We know total cost,

if $TC = C(Q)$

Average cost, $AC = \dfrac{TC}{Q}$

= cost per unit of output produced.

Marginal Cost, $MC = \dfrac{\Delta TC}{\Delta Q}$ ie change in total cost due to change in Output by 'one' unit.

Profit, Π = Total Revenue − Total Cost

$$\Pi = TR - TC$$

change in profit due to change output = change in TR due to change in Output − change in TC due to change in Output

$$\frac{\Delta\Pi}{\Delta Q} = \frac{\Delta TR}{\Delta Q} - \frac{\Delta TC}{\Delta Q}$$

Change in profit

$$\frac{\Delta\Pi}{\Delta Q} = MR - MC$$

Next class

on friday (evening)

① Max Profit Condition
② It's diagramatic Presentation.
③ Properties of Perfect competitive market.

And only.

Saturday 7:30am

No class on Sunday