(UNIT-4)

MANAGERIAL ECONOMICS AND FINANCIAL ACCOUNTING

Presented by:

DR. LOKESH AGARWAL (Asst. Professor)

Arya Group Of Colleges, Kukas, Jaipur

ME AND FA

MANAGERIAL ECONOMICS

(UNIT-4)

Market Structure and Pricing Theory-

- Perfect competition.
- Monopoly.
- Monopolistic competition.
- Oligopoly.

MARKET

- **Market is a place.**
- **Market is a medium.**
- **No. of buyers and sellers at one place.**
- **Interaction between buyers and sellers for the price to buy product.**
- **There are many markets for one product but there will not be one market for many products.**

MARKET

A market is a:

1. Physical locations or place where transactions are made to ***satisfy human*** wants.
2. Two parties can gather (usually buyers and sellers)
3. To facilitate the exchange of goods and services at a price.
4. There are many markets for one product but there will not be one market for many products.
5. The market may be physical like a retail outlet, where people meet face-to-face, or virtual like an online market, where there is no direct physical contact between buyers and sellers.

MARKET

A **market** is a place where two parties can gather to facilitate the exchange of goods and services at a particular price. The parties involved are usually buyers and sellers.

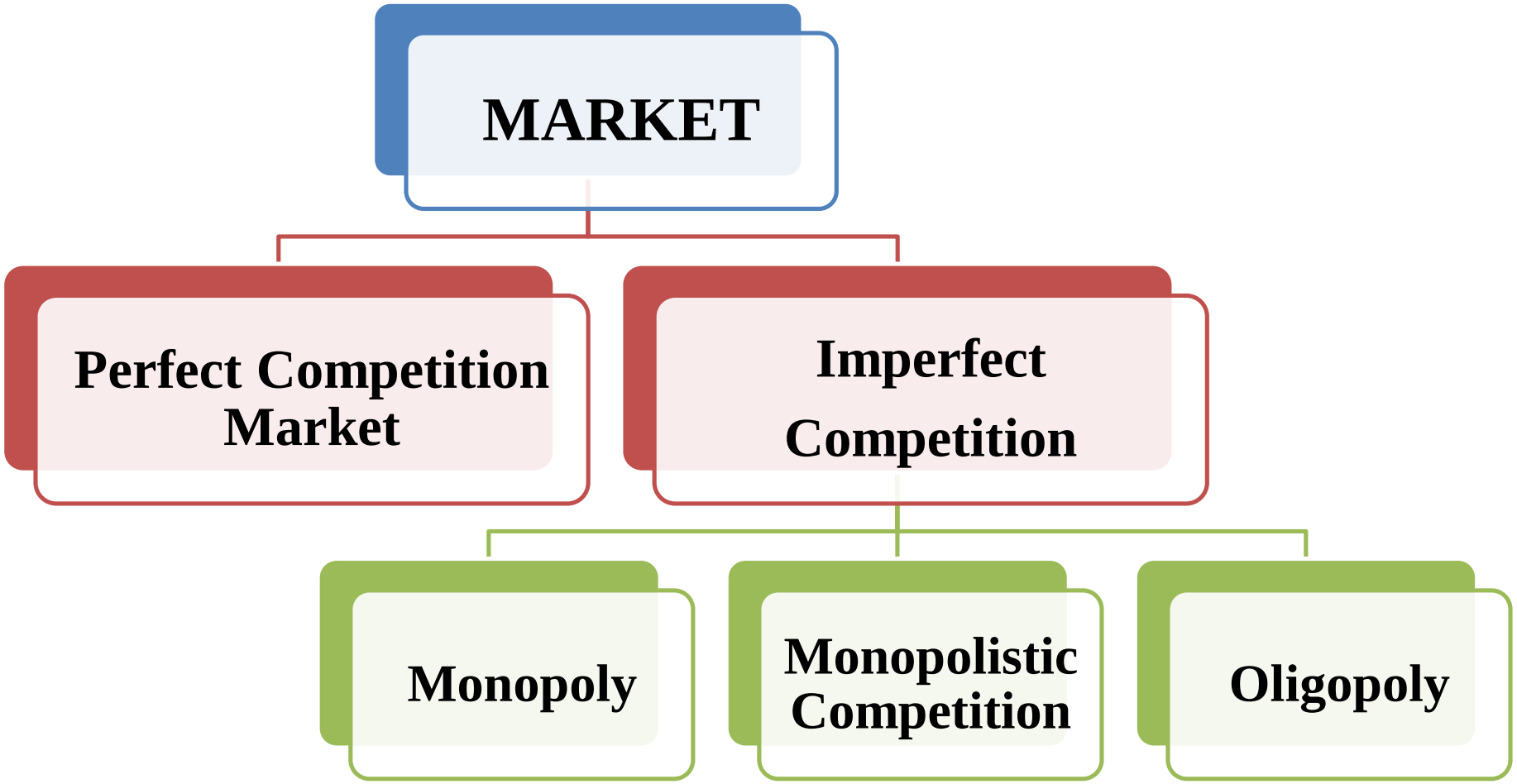
A **market** is any place where two or more parties can meet to engage in an economic transaction even they don't involve legal tender. A market transaction may involve goods, services, information, currency, or any combination of these that pass from one party to another.

According to **J.C. Edwards, “** A market is that mechanism by which buyers and sellers are bought together. It is not necessarily a fixed place.**”**

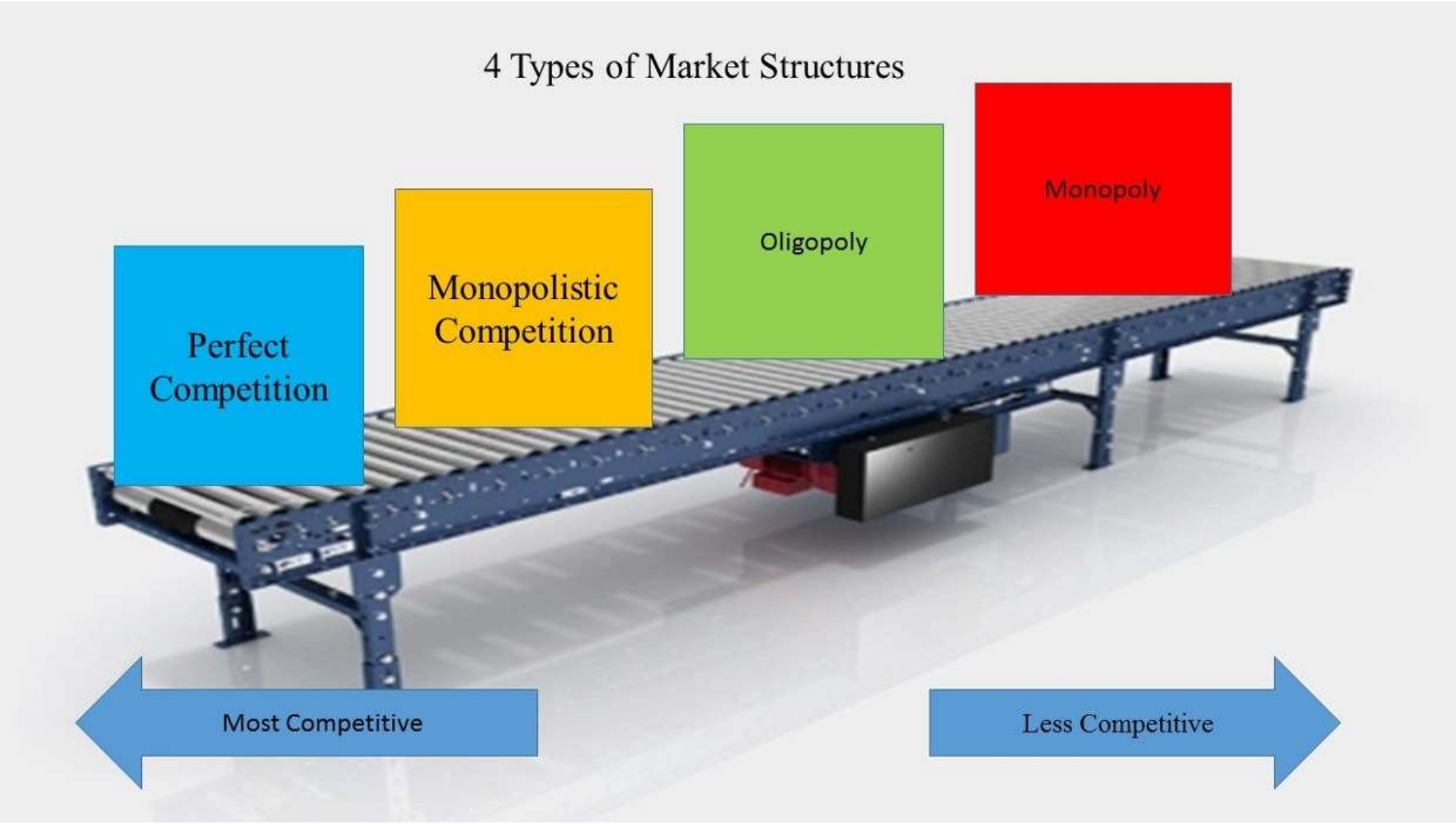
NEED OF MARKET

- For exchange of goods and services.
- For adjustment of demand and supply by price mechanism.
- For improvement of the quality of life of the society.
- For the introduction of new modes of life.
- For higher production.

TYPES OF MARKET



TYPES OF MARKET



PERFECT COMPETITIVE MARKET

A market is said to be perfectly competitive market when there are many sellers (& buyers) transacting a homogenous product.

- There are many sellers.
- Homogenous products are sold.
- Sellers do not have control over the price of the Commodity.
- Farm commodities

PERFECT COMPETITIVE MARKET

CHARACTERSTICS:

- Large number of buyers and sellers
- Homogenous products
- Free entry and exit of firm
- Prices should be uniform through out the market.
- No government regulations
- Buyers and sellers have a perfect knowledge of market.
- Goods can be moved from one place to another place without any restriction.

IMPERFECT COMPETITIVE MARKET

A market is said to be imperfect when:

1. Products are similar but not identical.
2. Prices are not uniform through out the market.
3. There is lack of communication
4. There is restriction on movement of goods from one place to another place.

IMPERFECT COMPETITIVE MARKET

MONOPOLY MARKET:

A pure monopoly exists if one and only one firm produces and sells a particular commodity in the market. The single firm producing the product is itself both the firm and the industry. E.g.: Railways, Electricity.

Features of Monopoly Market:

1. Only one firm sells the commodity having no rivals or direct competition.
2. Price Maker
3. Indirect rivalry may exist in the form of Existence of substitute products
4. No other seller can enter the market, else monopoly would cease to exist.
5. The product is distinct i.e., inelastic demand

IMPERFECT COMPETITIVE MARKET

CAUSES OF MONOPOLY

- Patent Rights give legal monopoly.
- Govt. policies such as granting licenses.
- Ownership and control of some strategic raw materials.
- Exclusive knowledge of technology by the firm.
- Size of the market may accommodate only a single firm
- Limit pricing policy adopted to prevent new entrants.

IMPERFECT COMPETITIVE MARKET

MONOPOLISTIC COMPETITION

Monopolistic Competition refers to a situation where ***there are many sellers of a differentiated product.***

There is ***competition which is not perfect,*** between many firms making very similar products ***which are close but not perfect substitutes.***

Monopolistic market ***exhibits characteristic of both perfect competition and monopoly***

IMPERFECT COMPETITIVE MARKET

FEATURES OF MONOPOLISTIC COMPETITION

1. Large number of sellers/producers
2. Large number of buyers
3. Product Differentiation (Tooth paste)
4. Higher selling cost (Promotion cost)
5. Imperfect knowledge (Buyers)
6. Freedom of entry and exist
7. Higher elasticity of demand. (Price sensitivity market)

IMPERFECT COMPETITIVE MARKET

OLIGOPOLY

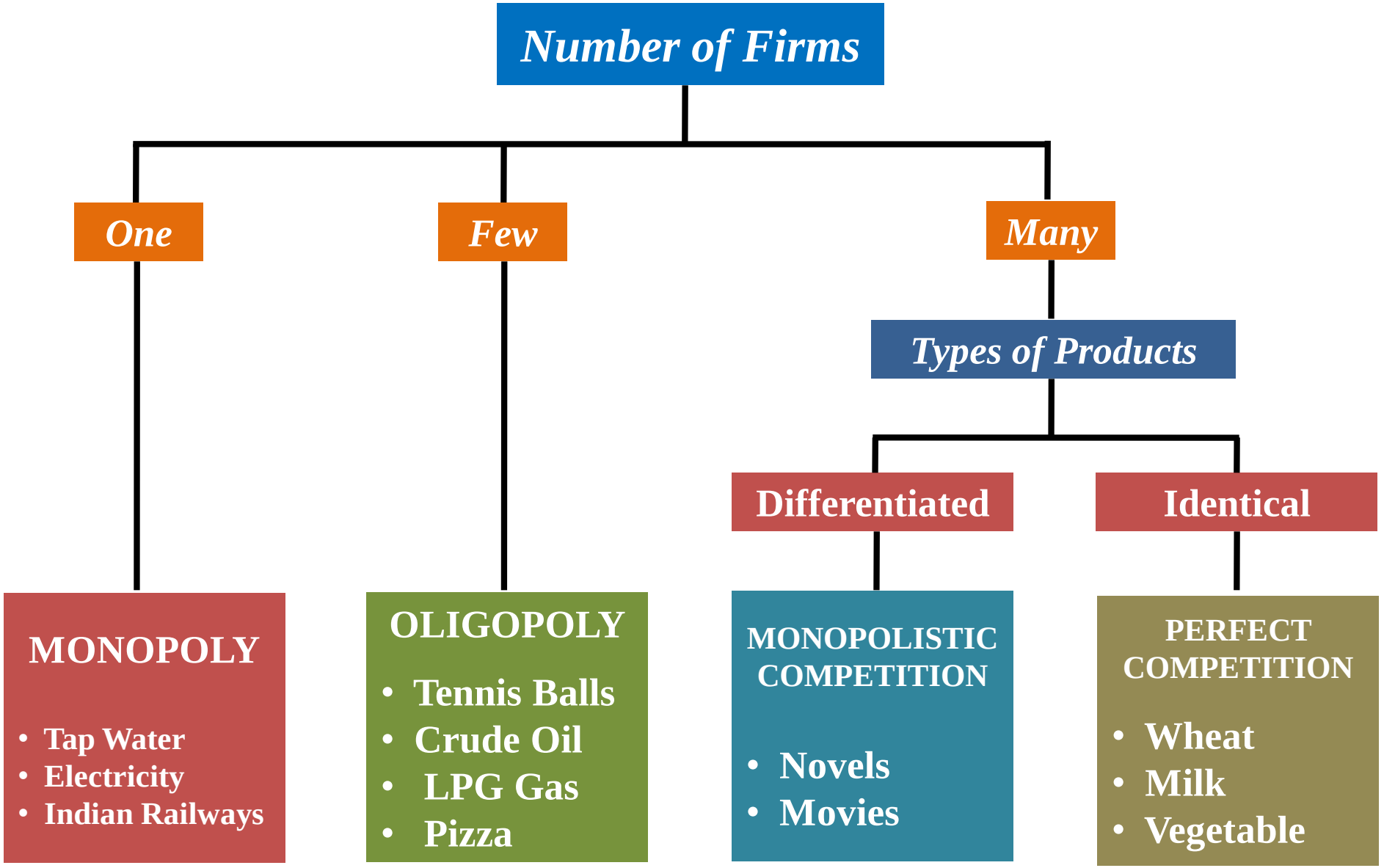
If there is a competition among a few sellers, oligopoly is said to exist.

Features of Oligopoly Markets:

- Few firms
- Barriers to Entry
- Non-Price Competition (due to the fear of price wars)
- Interdependence
- Nature of the Product

  (products are either homogeneous or differentiated)
- Selling Costs (interdependence selling cost)

ALL MARKET COMAPRISION



ALL MARKET COMAPRISION

POINTS	Perfect Competition	Monopoly	Monopolistic Competition	Oligopoly
Number of Sellers	Many	One	Many	Few
Product	Homogeneous	Unique having no substitutes	Differentiated	Homogeneous or Differentiated
Selling Cost	No	Negligible	High	High
Degree of Control over Price	No. Control. Price Taker	Full control. Price Maker	Limited due to product differentiated	Limited
Demand (AR) Curve	Horizontal straight line parallel to x-axis	Downward sloping	Downward sloping	Indeterminate
Price elasticity of demand	Infinte P = MC	Small P < MC	Large P > MC	Small

REVENUE ANALYSIS

Revenue, in simple words, is the amount that a firm receives from the sale of the output.

According to Prof. Dooley, *"The Revenue of a firm is its sales receipts or income."*

In a firm, revenue is of three types:

- Total Revenue
- Average Revenue
- Marginal Revenue

REVENUE ANALYSIS

Total Revenue

The Total Revenue of a firm is the amount received from the sale of the output. Therefore, the total revenue depends on the price per unit of output and the number of units sold.

$$TR = Q \times P$$

Where,

TR – Total Revenue

Q – Quantity of sale (units sold)

P – Price per unit of output

REVENUE ANALYSIS

Average Revenue

Average Revenue, as the name suggests, is the revenue that a firm earns per unit of output sold. Therefore, you can get the average revenue when you divide the total revenue with the total units sold.

$$\mathbf{AR = TR / Q}$$

Or

$$\mathbf{AR = P}$$

Where,

AR – Average Revenue

TR – Total Revenue

Q – Total units sold

REVENUE ANALYSIS

Marginal Revenue

Marginal Revenue is the amount of money that a firm receives from the sale of an additional unit. In other words, it is the additional revenue that a firm receives when an additional unit is sold.

$$\mathbf{MR = TR_n - TR_{n-1}}$$

Or

$$\mathbf{MR = \Delta TR / \Delta Q}$$

Where,

MR – Marginal Revenue

ΔTR – Change in the Total revenue

ΔQ – Change in the units sold

TR_n – Total Revenue of n units

TR_{n-1} – Total Revenue of n-1 units

REVENUE ANALYSIS

The relationship between TR, AR, and MR

- When the first unit is sold, TR, AR, and MR are equal.
- Therefore, all three curves start from the same point. Further, as long as MR is positive, the TR curve slopes upwards.
- However, if MR is falling with the increase in the quantity of sale, then the TR curve will gain height at a decreasing rate. When the MR curve touches the X-axis, the TR curve reaches its maximum height.
- Further, if the MR curve goes below the X-axis, the TR curve starts sloping downwards.
- Any change in AR causes a much bigger change in MR. Therefore, if the AR curve has a negative slope, then the MR curve has a greater slope and lies below it.
- Similarly, if the AR curve has a positive slope, then the MR curve again has a greater slope and lies above it. If the AR curve is parallel to the X-axis, then the MR curve coincides with it.

REVENUE ANALYSIS

TR, AR and MR under perfect Competition.

Quantity Sold	Price	TR (P x Q)	AR (TR / Q)	MR=(ΔTR / ΔQ)
1	10	10	10	10
2	10	20	10	10
3	10	30	10	10
4	10	40	10	10
5	10	50	10	10
6	10	60	10	10

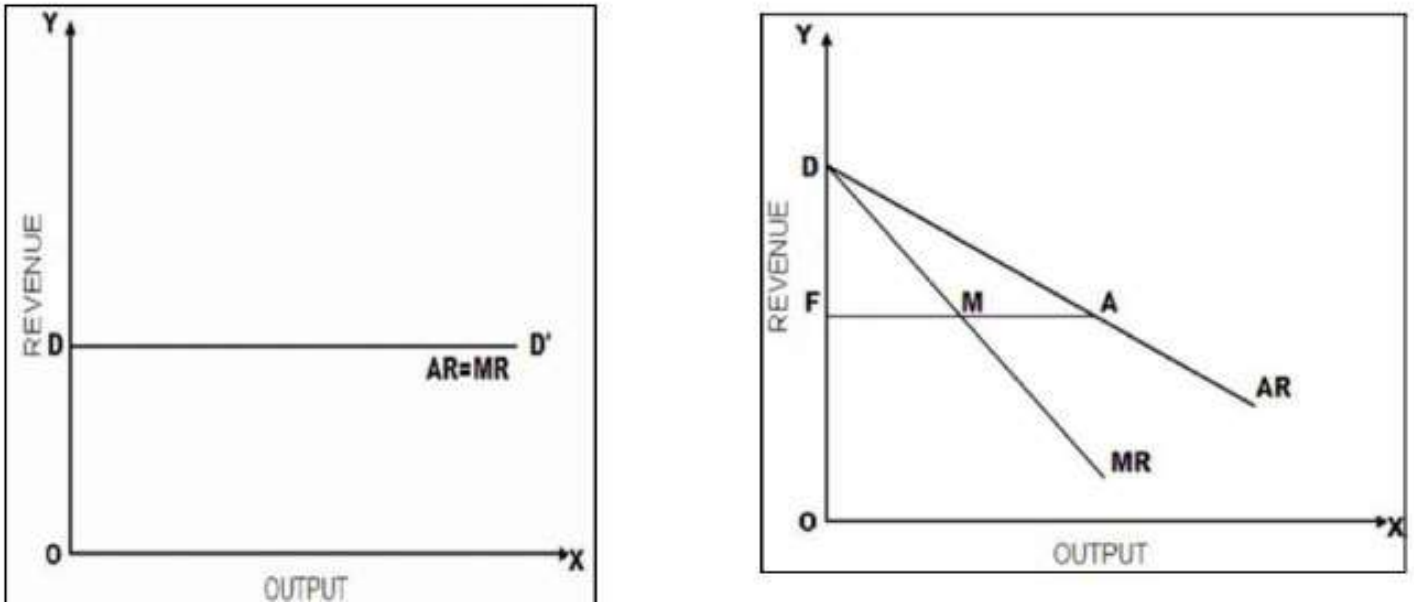
REVENUE ANALYSIS

TR, AR and MR under imperfect Competition.

Quantity Sold	Price	TR (P x Q)	AR (TR / Q)	MR=(ΔTR / ΔQ)
1	16	16	16	16
2	14	28	14	12
3	12	36	12	8
4	10	40	10	4
5	08	40	08	0
6	06	36	06	-4

REVENUE ANALYSIS

Relationship between AR and MR



In the left half, you can see that AR has a constant value (DD'). Therefore, the AR curve starts from point D and runs parallel to the X-axis. Also, since AR is constant, MR is equal to AR and the two curves coincide with each other.

In the right half, you can see that the AR curve starts from point D on the Y-axis and is a straight line with a negative slope. This basically means that as the number of goods sold increases, the price per unit falls at a steady rate.

Similarly, the MR curve also starts from point D and is a straight line as well. However, it is a locus of all the points which bisect the perpendicular distance between the AR curve and the Y-axis. In the figure above, FM=MA.

PRICE SUPPLY EQUILIBRIUM

- Very Short Period Equilibrium
- Short run Equilibrium
- Long run Equilibrium

EQUILIBRIUM POINT

Equilibrium point refers to the position where the firm enjoys maximum profits and it has no incentive either to reduce or increase its output level.

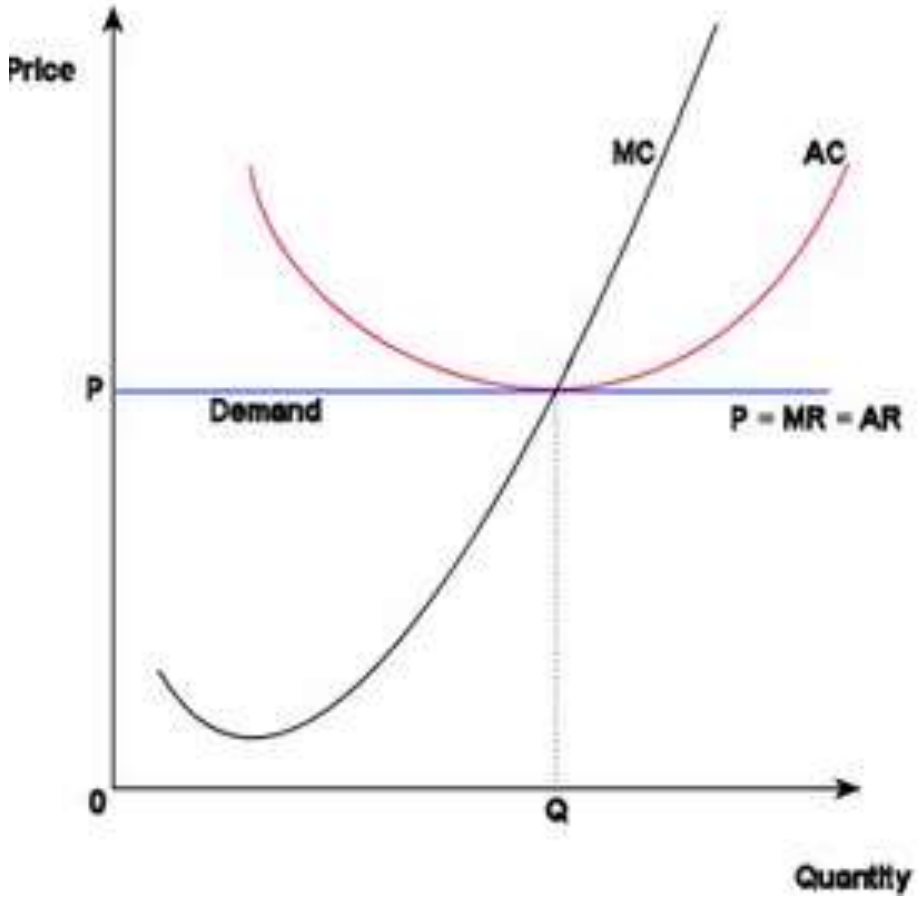
Equilibrium Point – Perfect Competition

EQUILIBRIUM POINT – PERFECT COMPETITION

MR = MC

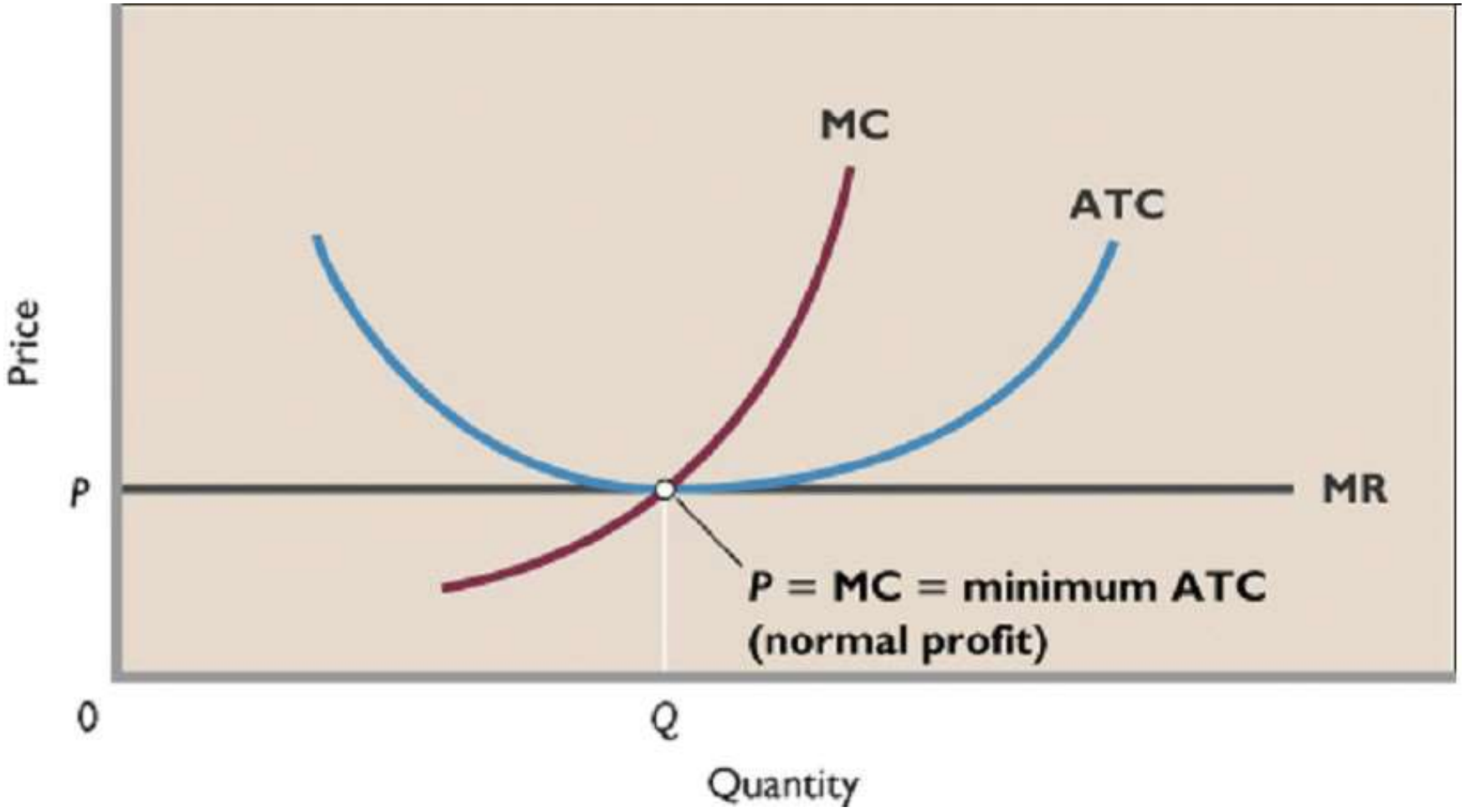
(MC curve should cut the MR curve from below)

EQUILIBRIUM POINT – PERFECT COMPETITION (IN SHORT RUN)

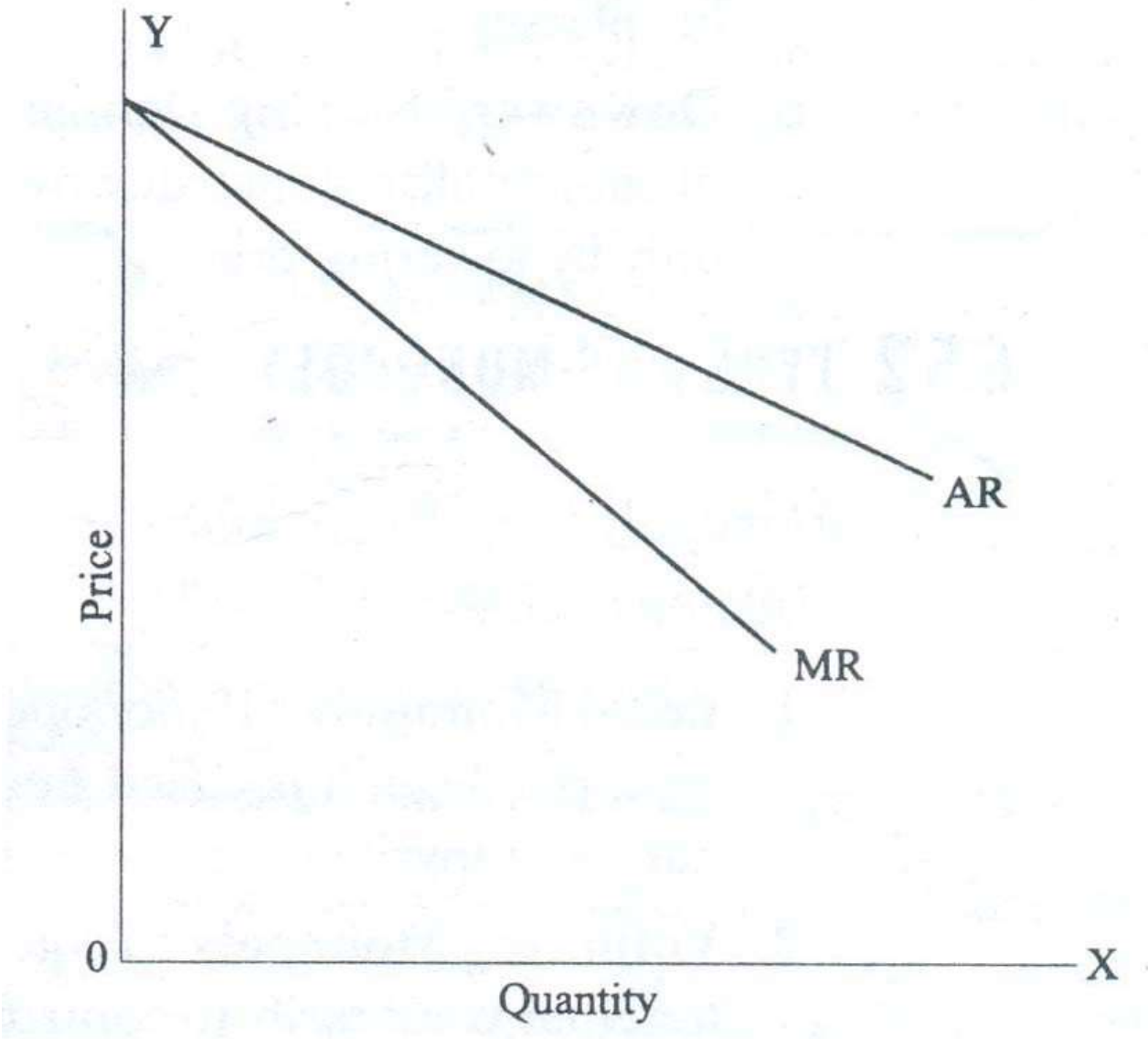


PRICE OUTPUR DETERMINATION

PRICE OUTPUT DETERMINATION IN CASE OF LONG RUN UNDER PERFECT COMPETITION



MR AND AR MONOPOLY



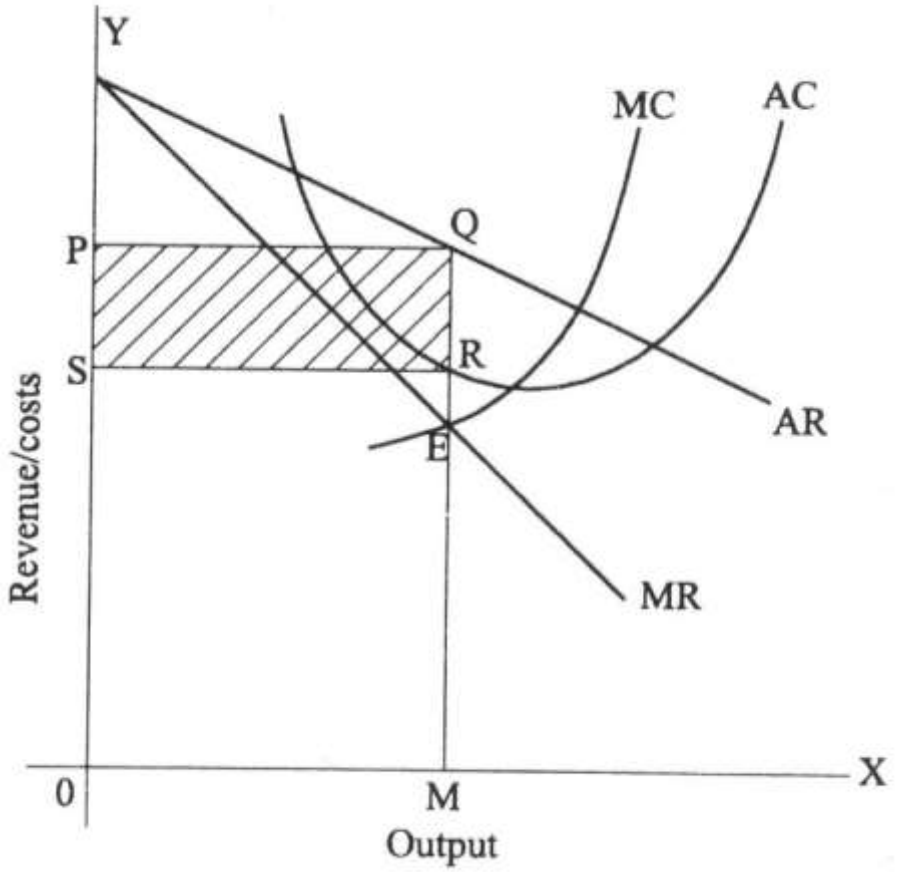
EQUILIBRIUM POINT - MONOPOLY

EQUILIBRIUM POINT – MONOPOLY

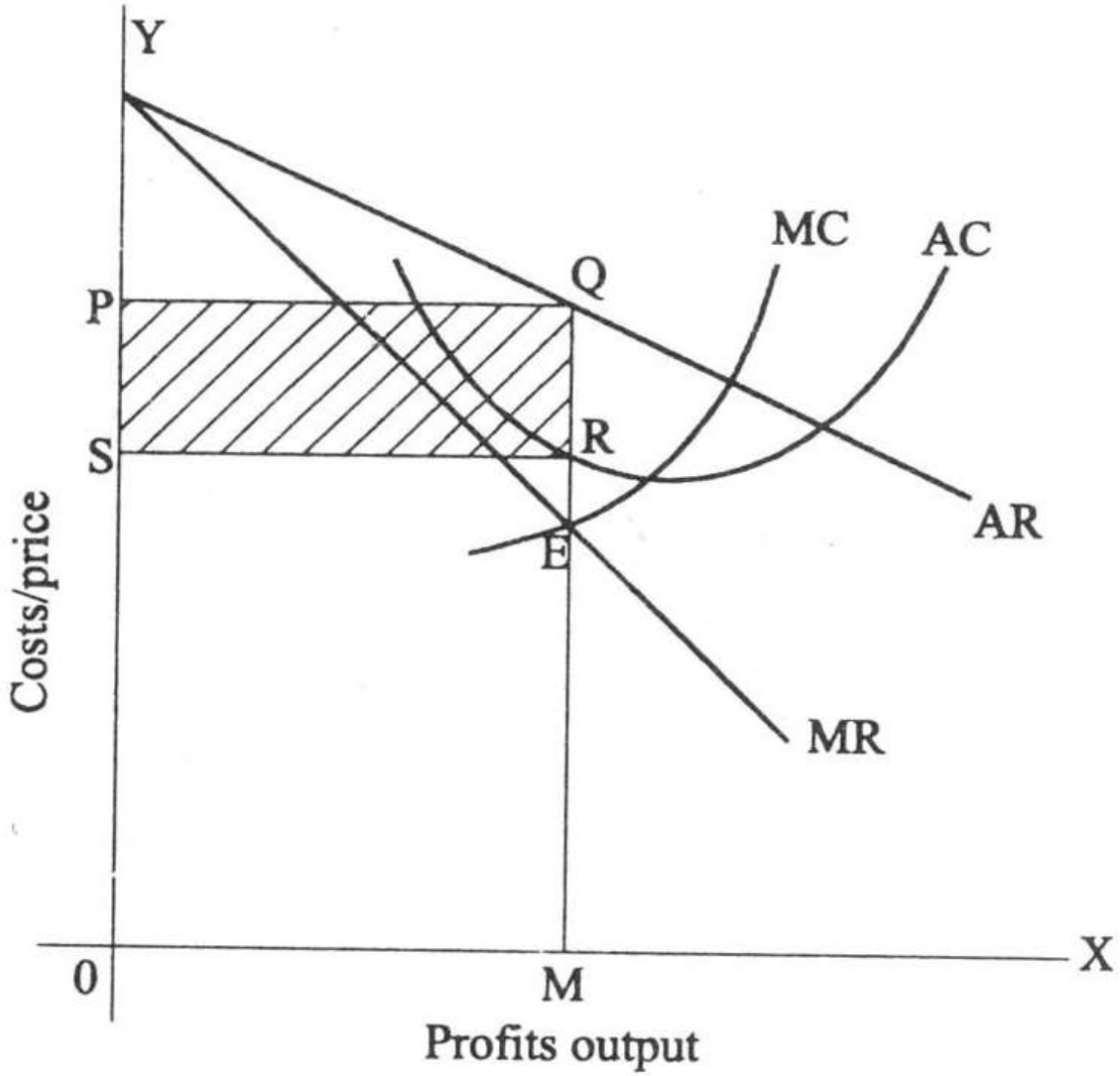
MR = MC

MC curve should cut the MR curve from below

PRICE OUTPUT DETERMINATION UNDER MONOPOLY



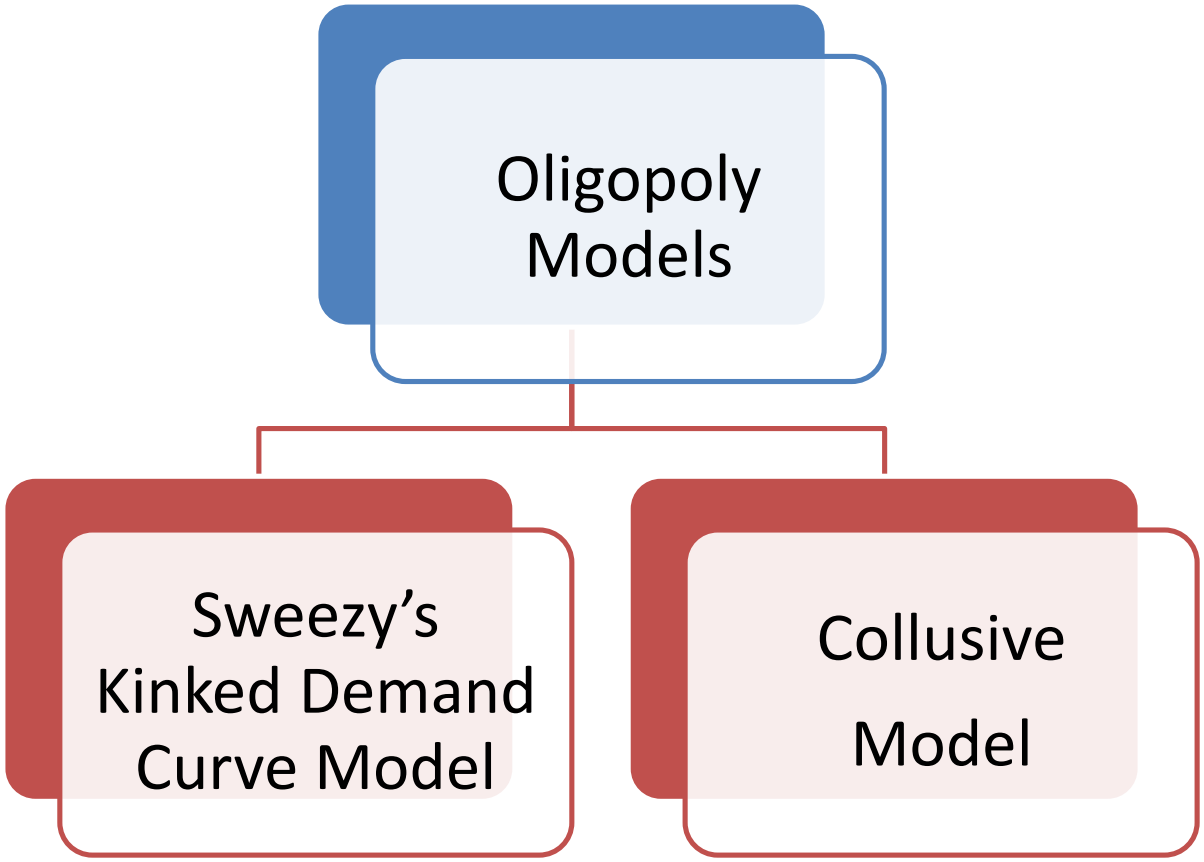
PRICE OUTPUT DETERMINATION - MONOPOLISTIC



PRICE OUTPUT DETERMINATION UNDER MONOPOLISTIC

PRICE OUTPUT DETERMINATION - OLIGOPOLY

Price determination under oligopoly can be understand from the oligopoly model:



PRICE OUTPUT DETERMINATION - OLIGOPOLY

A. Sweezy's Kinked Demand Curve Model: The kinked demand curve of oligopoly was developed by **Paul M. Sweezy in 1939.**

In many oligopolist markets, it has been observed that prices tend to remain inflexible for a very long time. Even in the face of declining costs, they tend to change infrequently. American economist Sweezy came up with the kinked demand curve hypothesis to explain the reason behind this price rigidity under oligopoly.

According to the kinked demand curve hypothesis, the demand curve facing an oligopolist has a kink at the level of the prevailing price. **This kink exists because of two reasons:**

- The segment above the prevailing price level is highly elastic.
- The segment below the prevailing price level is inelastic.

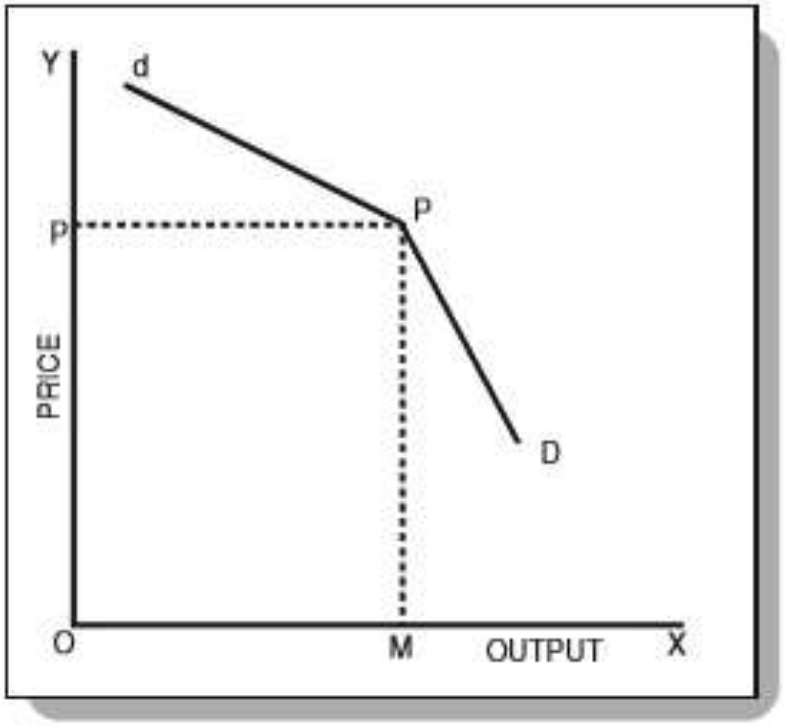
PRICE OUTPUT DETERMINATION - OLIGOPOLY

From the figure, we know that

- The prevailing price level = P
- The firm produces and sells output = OM
- Also, the upper segment (dP) of the demand curve (dD) is elastic.
- The lower segment (PD) of the demand curve (dD) is relatively inelastic.

This difference in elasticities is due to an assumption of the kinked demand curve hypothesis.

The following figure shows a kinked demand curve dD with a kink at point P.



PRICE OUTPUT DETERMINATION - OLIGOPOLY

Collusion Model – The Cartel

In a model of collusive oligopoly, we discuss the economics of agreement between the firms in an undifferentiated oligopolistic industry. When these firms get together and agree to set prices and outputs so as to maximise total industry profits, they are known as a cartel.

In other words, when a few large firms dominate a market there is always the potential for businesses to **seek to reduce uncertainty** and engage in some form of collusive behaviour. When this happens the existing firms engage in **price fixing cartels**.

PRICE OUTPUT DETERMINATION - OLIGOPOLY

Assumptions of the Cartel Model: For the sake of simplicity, we shall make here the following assumptions:

(i) There are only few firms in the oligopolistic industry.

(ii) Each firm produces and sells a product that is a perfect substitute for that of the other.

(iii) The product is perishable.

(iv) There are many knowledgeable buyers of the product.

(v) Each firm knows the market demand for the product.

(vi) The two firms have different cost curves.

PRICE OUTPUT DETERMINATION - OLIGOPOLY

(vii) Both the firms have the same expectations about the prices and productivities of the inputs which they use.

(viii)The price of the product is the sole parameter of action of each firm.

(ix) All few firms are contemplating whether or not to form a cartel and agree upon a price that will promise the maximum maximorum of profits per period jointly.

Price/Output determination for a cartel