B A ECONOMICS THIRD SEMESTER
ECD1341 MICRO ECONOMICS-II
MODULE-I

MARKET STRUCTURES

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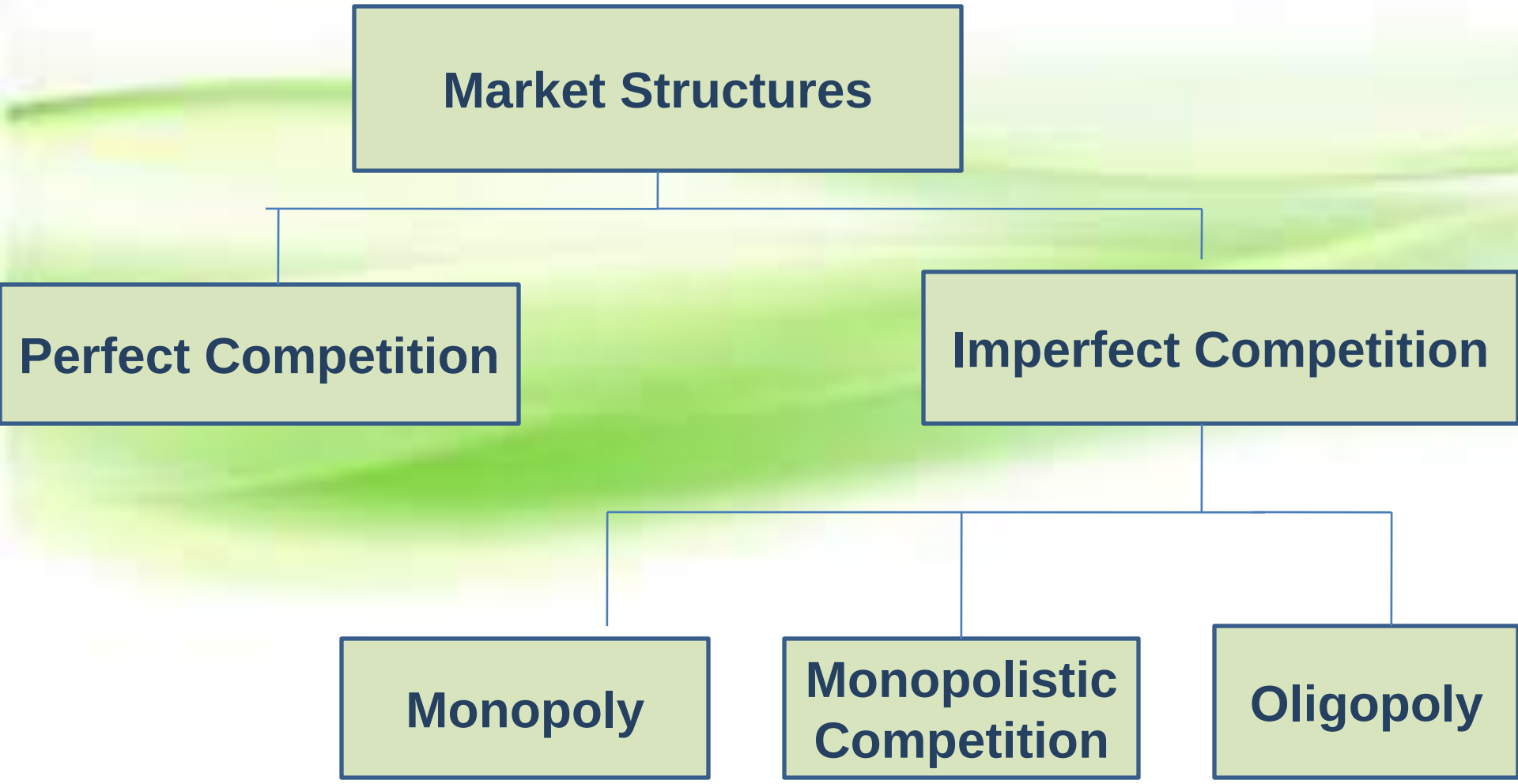
What is a Market?

- Place where there are many buyers and sellers.
- Actively engaged in buying and selling acts.
- Thus, it does not mean a particular place but the entire area where buyers and sellers of a commodity are in close contact and they have one price for the same commodity.

Market Structures Based on Competition



UNIT-I

PERFECT COMPETITION

Perfect Competition

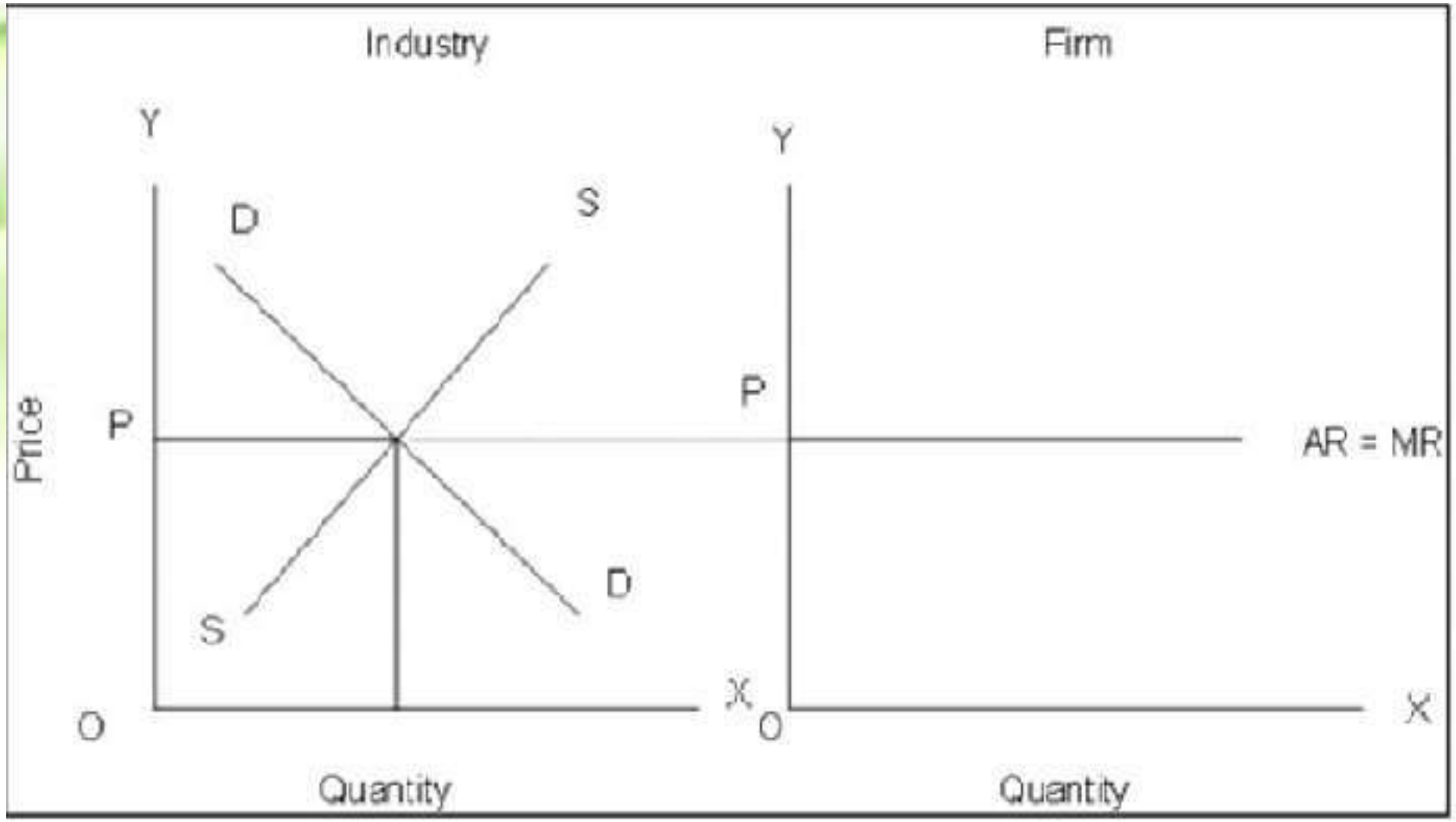
- It is a market structure where there are large number of sellers and buyers.
- Homogeneous Product
- The price of the product is determined by the industry.
- One price prevails in the market and all the firms sell the product at the prevailing price.
- It is also known as “Pure Competition”

Features of Perfect Competition

Demand Curve Facing a Perfectly Competitive Firm

- The **firms** demand curve is different from the **industry demand** curve.
- A Perfectly competitive firm's demand schedule is **perfectly elastic** even though the demand curve for the market is **downward sloping**.
- The result is that the individual firm perceives the demand curve for its product as being **perfectly horizontal**.

Market Demand Versus Individual Firm Demand Curve



Profit –Maximizing Level of Output

- The goal of the firm is to maximize profits
- Profit is the difference between Total revenue and Total cost.
- What happens to profit in response to a change in output is determined by Marginal Revenue (MR) and Marginal Cost (MC)
- A firm maximizes profit when MC=MR
- A perfect competitor accepts the market price as given,
- As a result, MR= P

Short-Run Equilibrium of the firm under Perfect Competition: Marginal Approach

- Firm is in equilibrium - when Maximize Profit
- To maximize profits, a firm should produce where

❖ MC=MR & TR=TC

❖ If MR does not equal to MC, a firm can increase profit by changing output. The supplier will continue to produce as long as MC is less than MR. He will cut back on production if MC is greater than MR

The firm is in equilibrium at the level of output at which :

- ✓ Marginal cost **equals** Marginal Revenue.
- ✓ Marginal cost curve **cuts** marginal revenue from below.

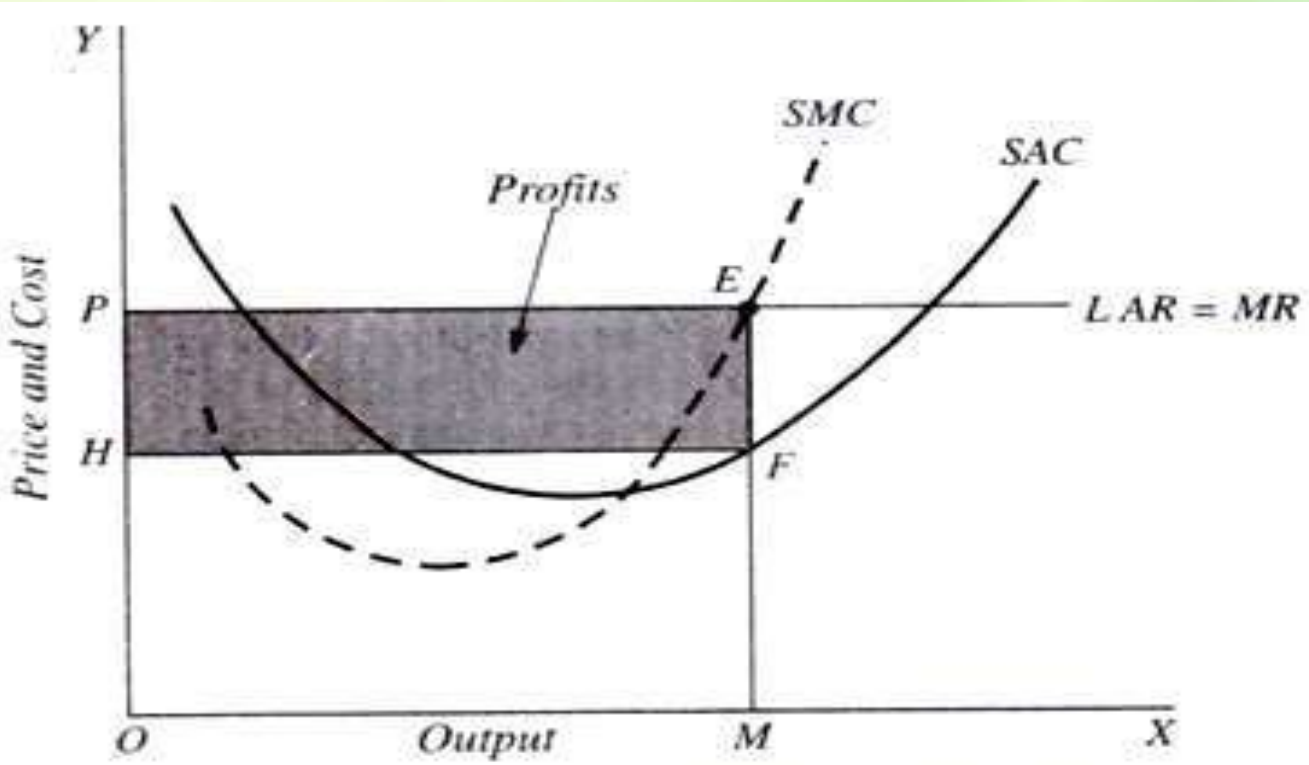


Fig. 23.3. *Short-Run Equilibrium with Profits*

Short Run Equilibrium of a firm with losses

- At the prevailing market price of the product, the average and marginal revenue curve lies below the average cost curve.

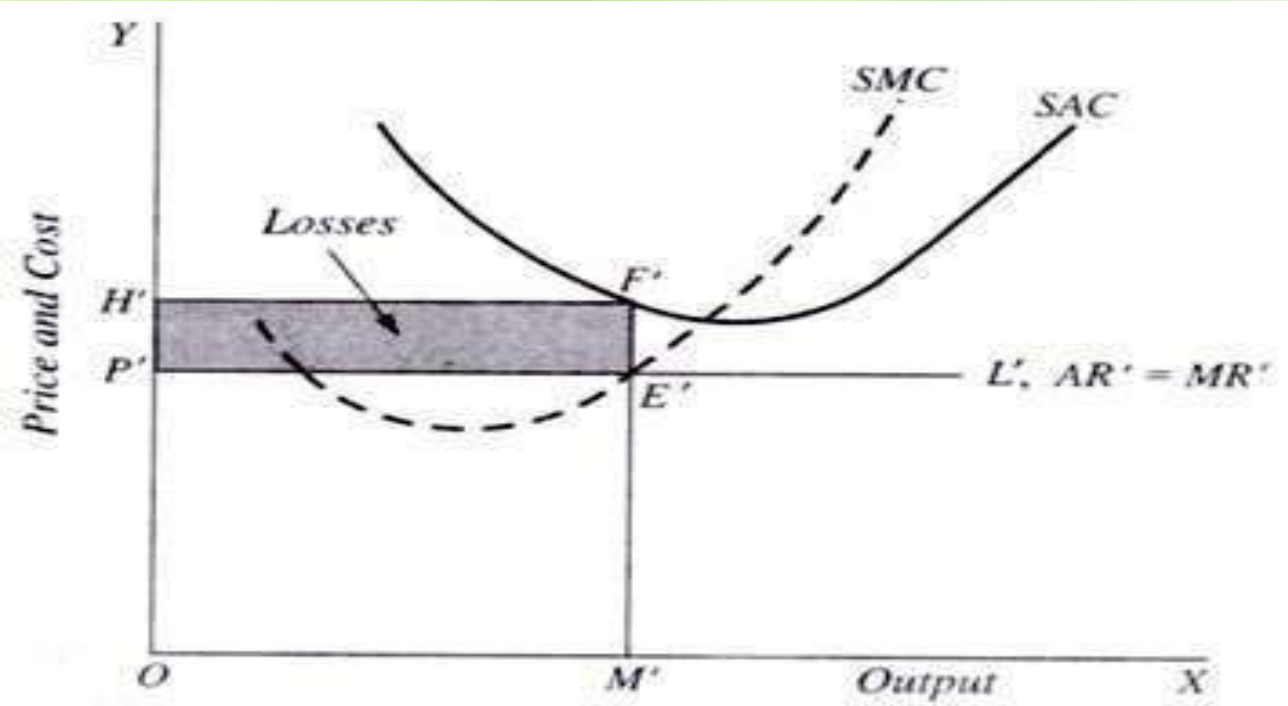
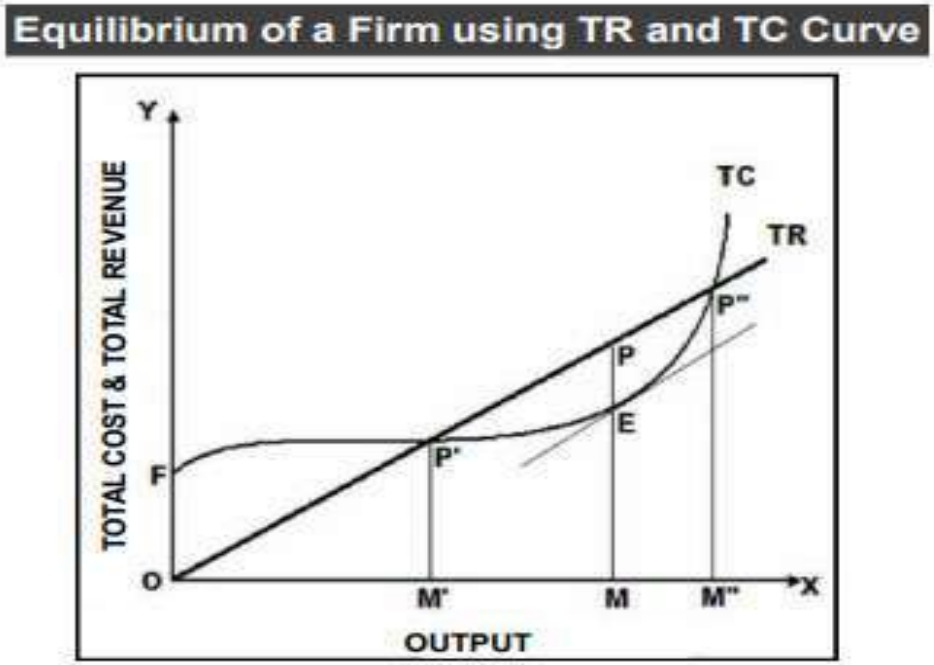


Fig. 23.4. *Short-Run Equilibrium with Losses*

Short Run Equilibrium :Total Approach

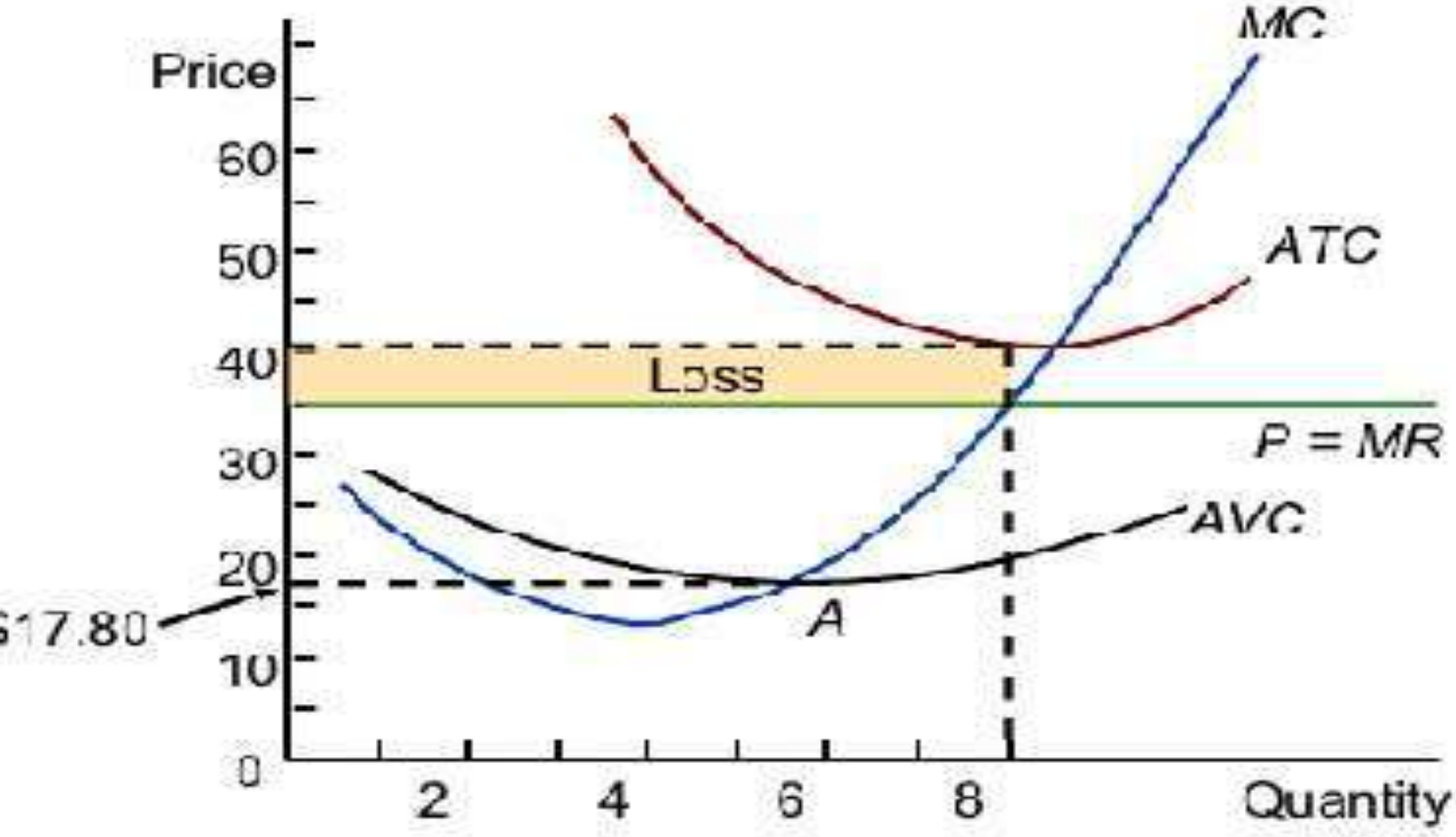
- Firms seek to maximize total profit ,not profit per unit.
- Profit is maximized where the vertical distance



Shut Down Point

- The firm will shut down if it cannot cover average variable costs
- A firm should continue to produce as long as price is greater than average variable cost
- If price falls below that point it makes sense to shut down temporarily and save the variable costs.
- The shutdown point is the point at which the firm will be better off it shuts down than it will if it stays in business.

Shut Down Point for a competitive Firms



Short Run Supply Curve

•The supply curve shows the maximum quantities per unit of time which sellers will place in the market at various prices. At a higher price, a greater quantity will be supplied and, at a lower price, a smaller quantity will be supplied.

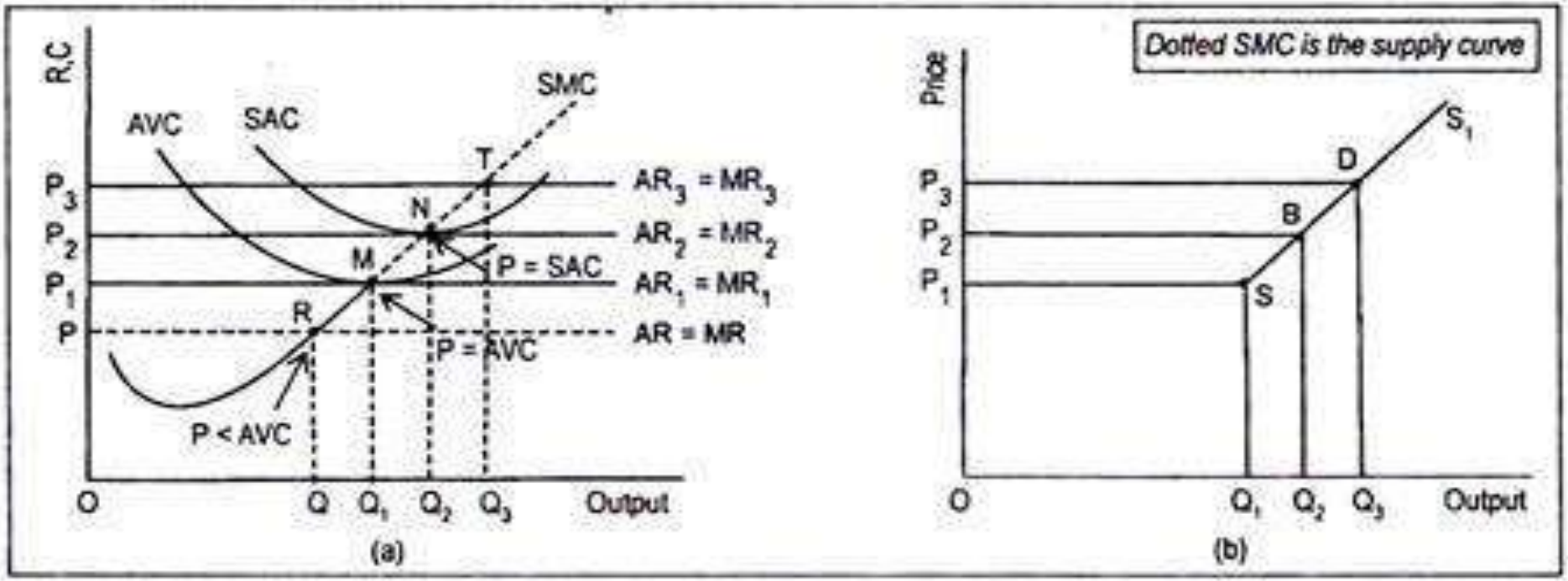
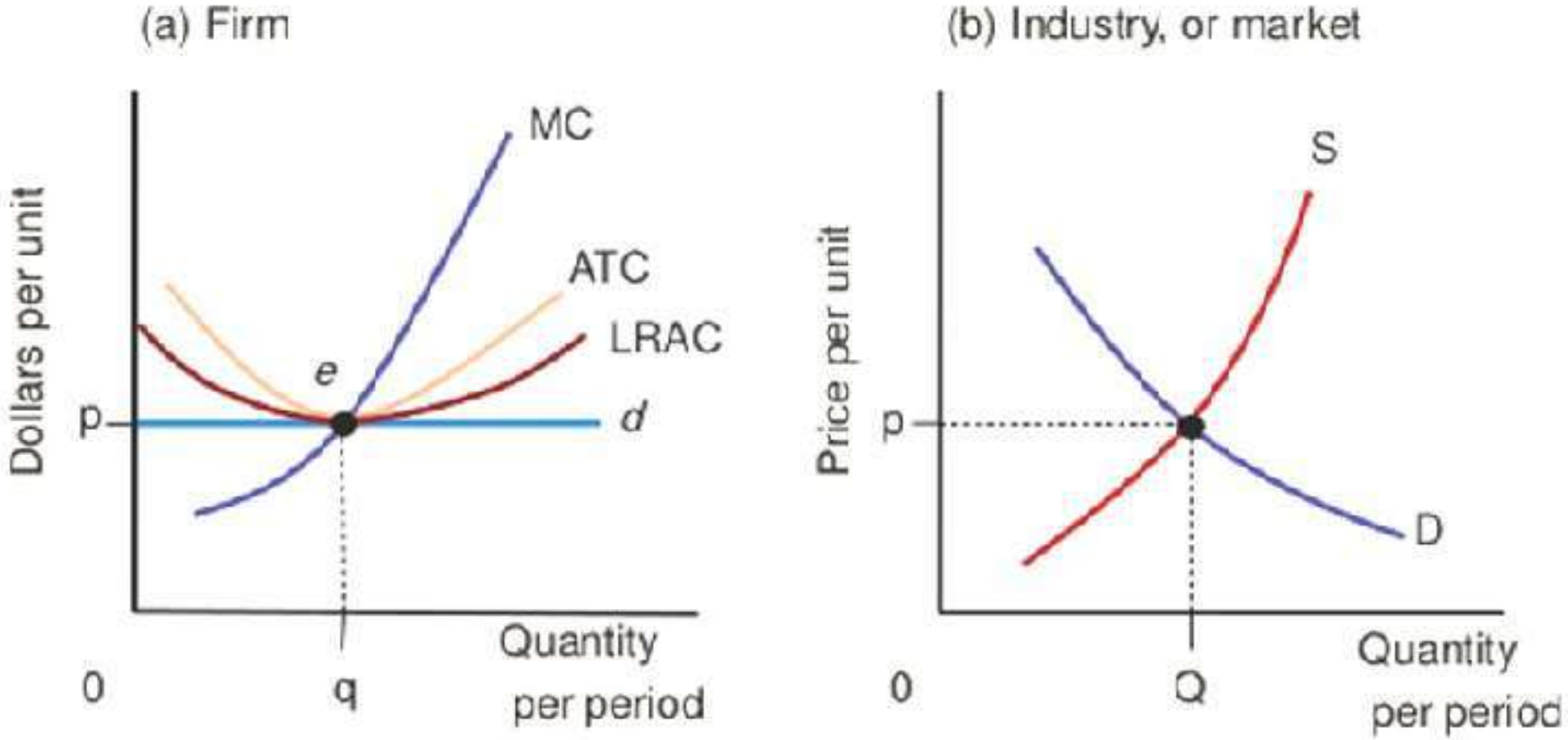


Fig. 4.5: Short Run Supply Curve of a Competitive Firm

Long Run Equilibrium of the Firm and Industry

- All factors are variable in the long run
- Hence all costs are variable
- Firm can change the plant and adjust the capacity according to the requirements of production
- If profit are supernormal, more firms enter the market and vice versa.
- Entry and exit of firms is possible

Long Run Equilibrium of Firm and Industry

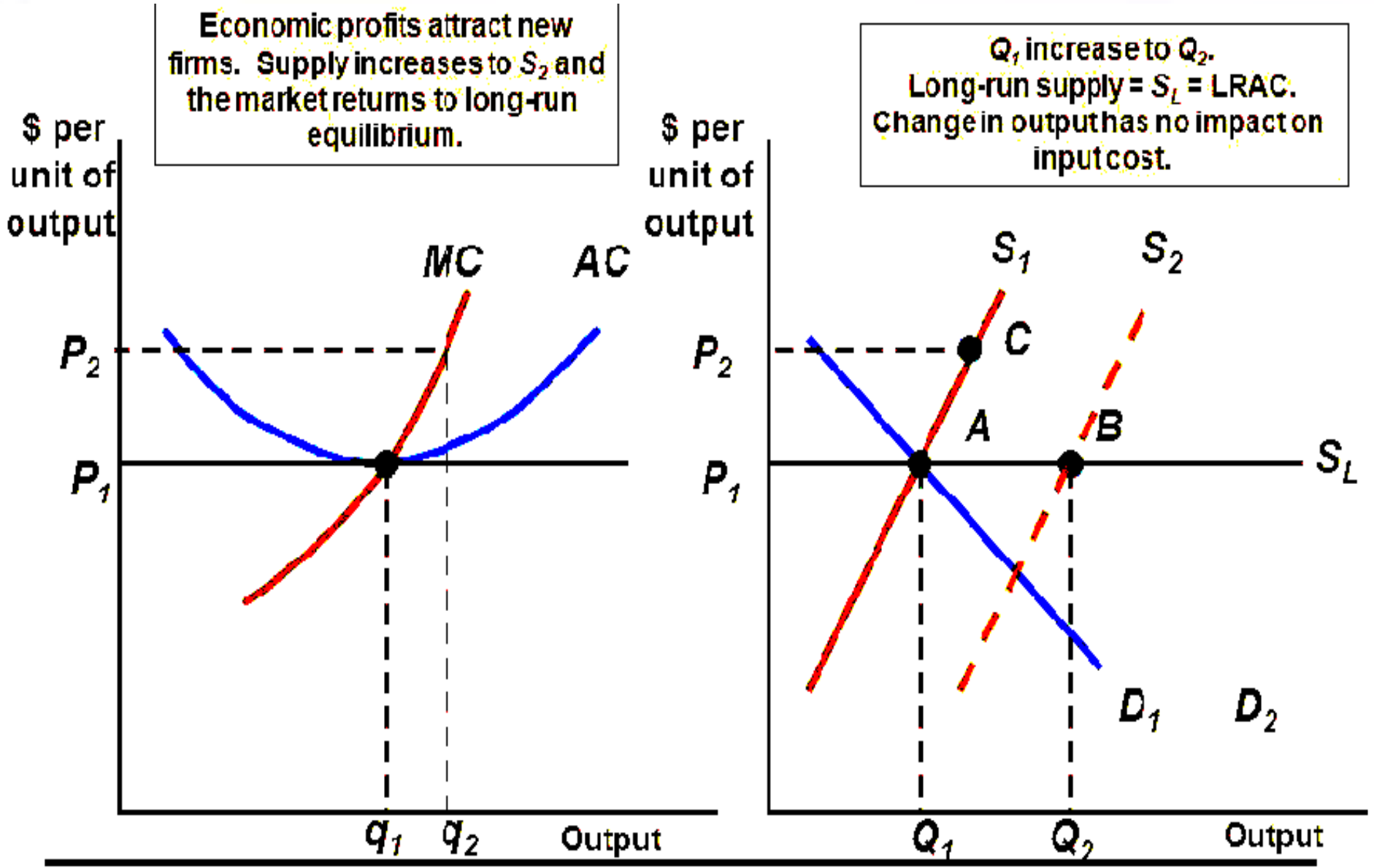


In long-run equilibrium, the firm produces q units of output per period and earns a normal profit. At point e, price, marginal cost, marginal revenue, short-run average total cost, and long-run average cost are all equal. There is no reason for new firms to enter the market or for existing firms to leave. As long as the market demand and supply curves remain unchanged, the industry will continue to produce a total of Q units of output at price p.

Long Run Supply Curve for a Constant-Cost Industry

- In a constant cost industry , firms continue to buy inputs at the same prices.
- The long run supply curve is horizontal at the constant average cost of production
- After the industry expands, the industry settles at the same long-run equilibrium price as before

Long Run supply in a Constant-Cost Industry



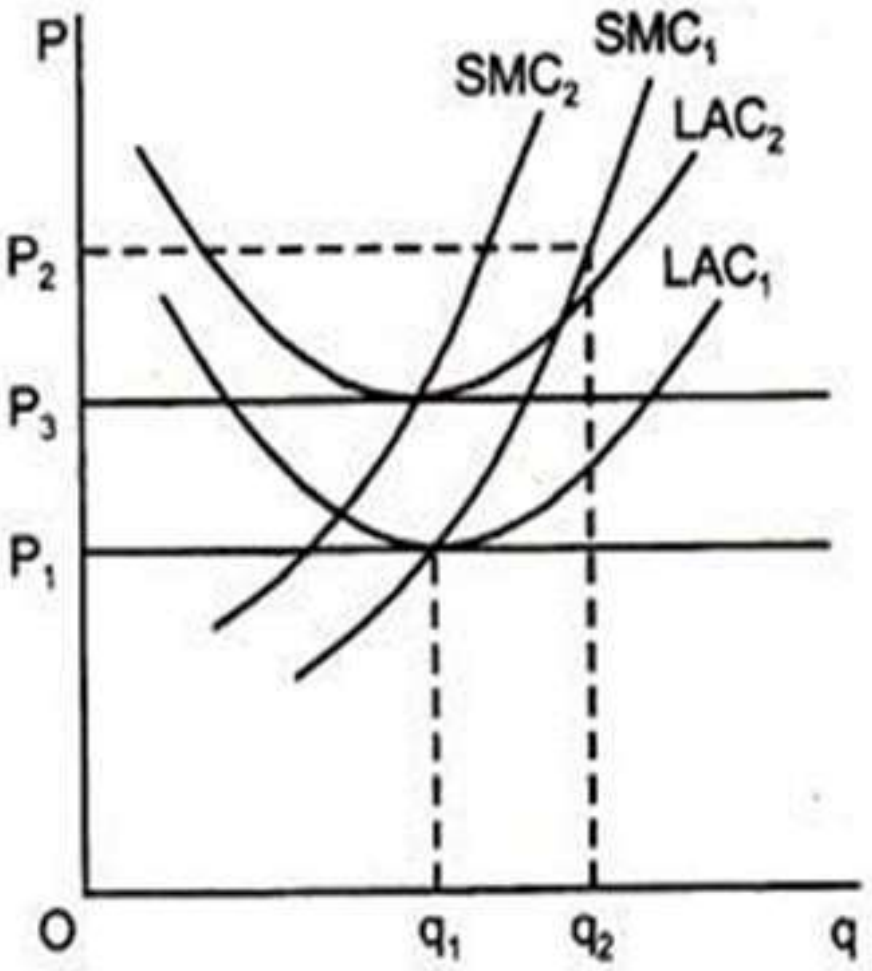
Increasing Cost Industry

- An increasing cost industry is an industry in which the average cost of production increases as the total output of the industry increases.
- The average cost increases as the industry grows for two reasons:

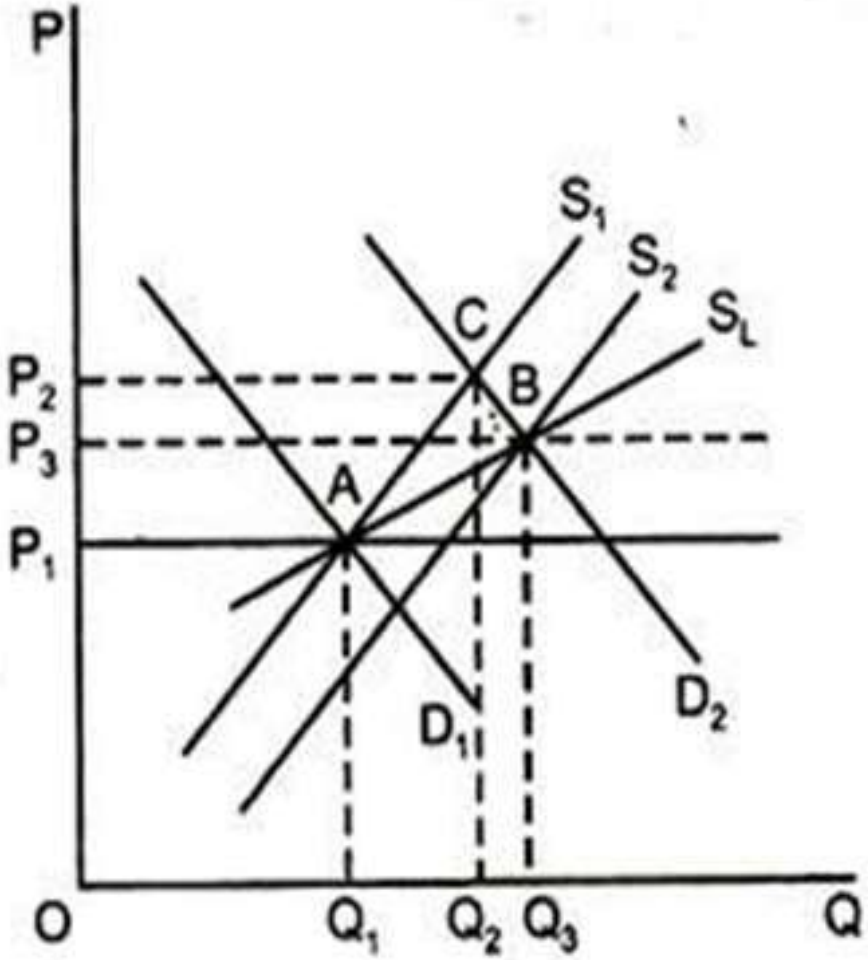
  Increasing input prices

  Less productive inputs

Long Run Supply in an Increasing Cost Industry



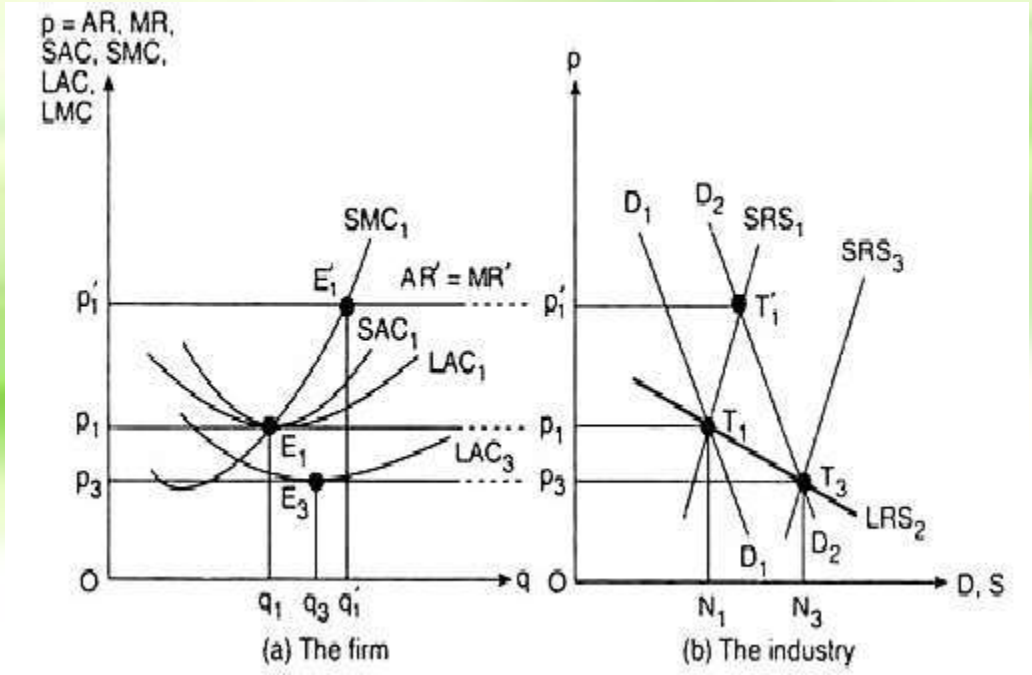
(a)



(b)

Decreasing Cost Industry

In a decreasing - cost industry, the long run supply curve is a downward slopping curve.



UNIT-2

MONOPOLY

MONOPOLY

Derived from two **Greek words**:

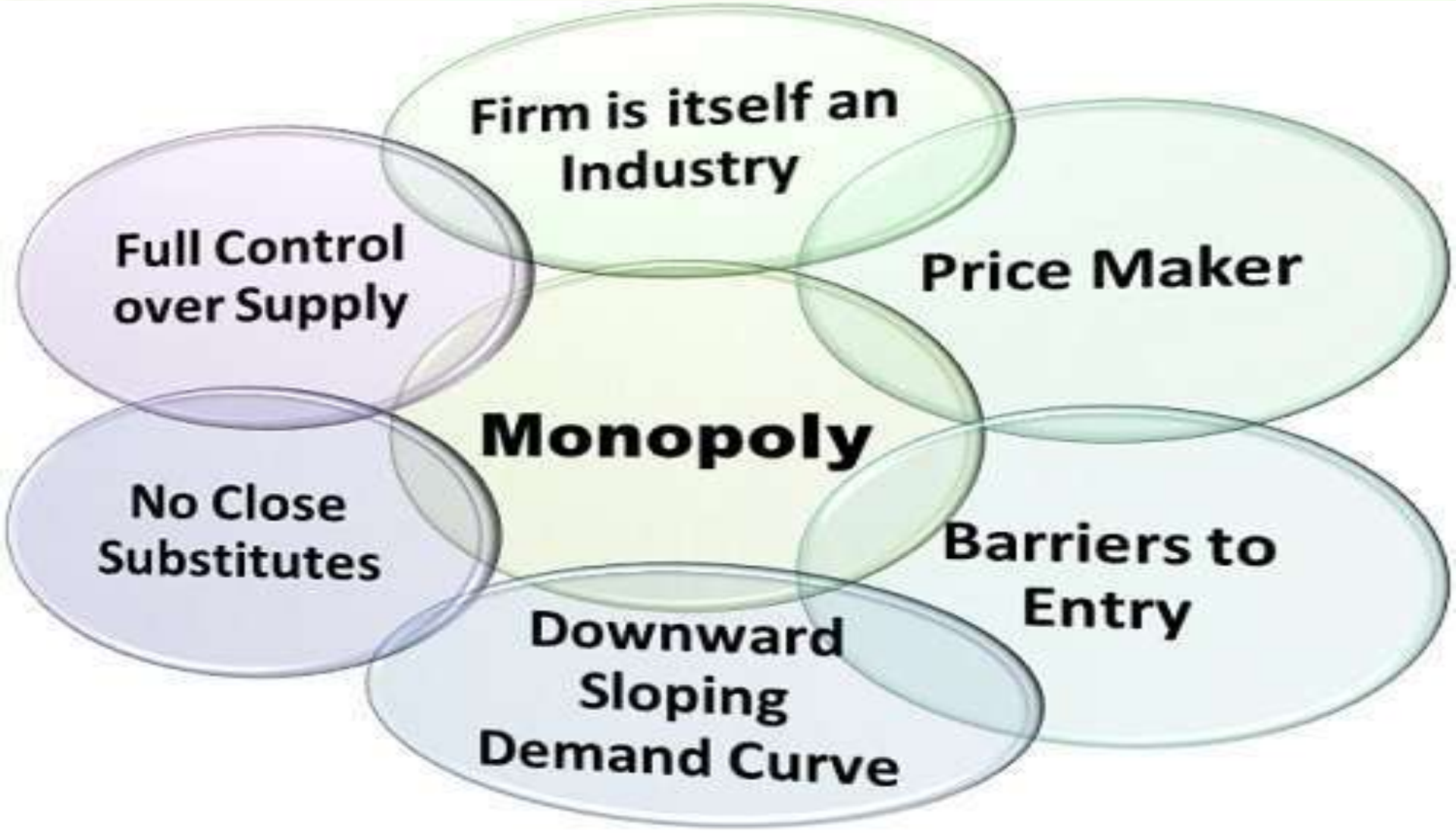
‘Monos’ meaning Single

‘Poles’ meaning Seller

Monopoly means existence of a single producer or seller who produces or sells a product which has no close substitutes.

Example :

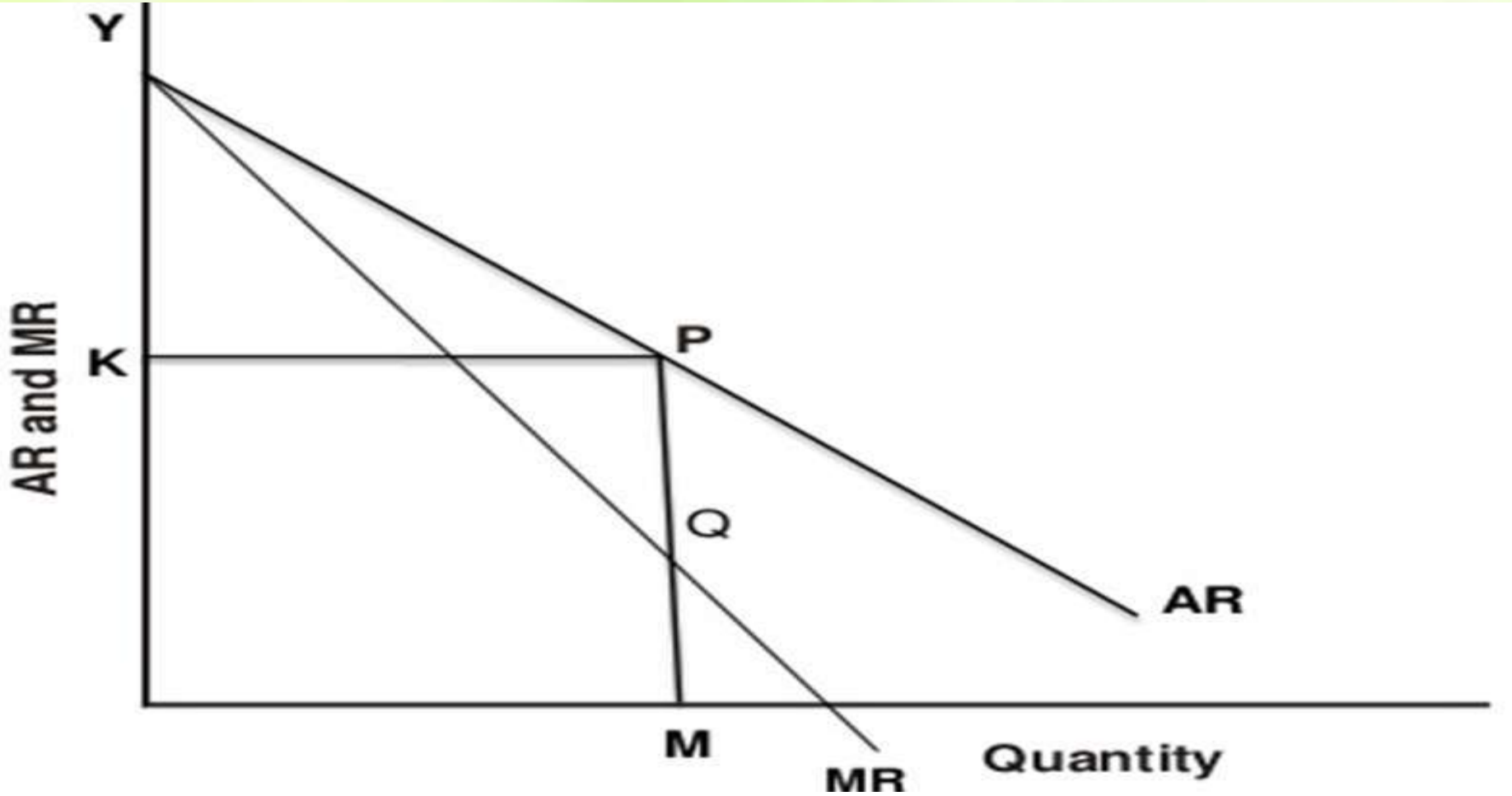
Features of Monopoly



Demand and Marginal Revenue Curves of a Monopolist

- One firm constitutes the **whole** industry.
- The **entire demand** of the consumers for a product faces the monopolist.
- The monopolist faces a **downward sloping** demand curve.

Demand and Marginal Revenue Curves Under Monopoly



Short Run Equilibrium Price and output

- Under Monopoly Price and equilibrium are determined by 2 different approaches:

Total Approach

✓ TR &TC Analysis

Marginal Approach

✓ MR& MC Analysis

TR & TC Curve Analysis

- Monopolist can earn maximum profit by selling that amount of output at which difference between TR & TC is maximum.
- Monopolist tries to find out the level of output at which the difference between TR & TC is maximum.
- The amount at which a monopolist earns maximum profit will constitute his equilibrium situation.

Short run Equilibrium of the Monopolist:

Total Approach

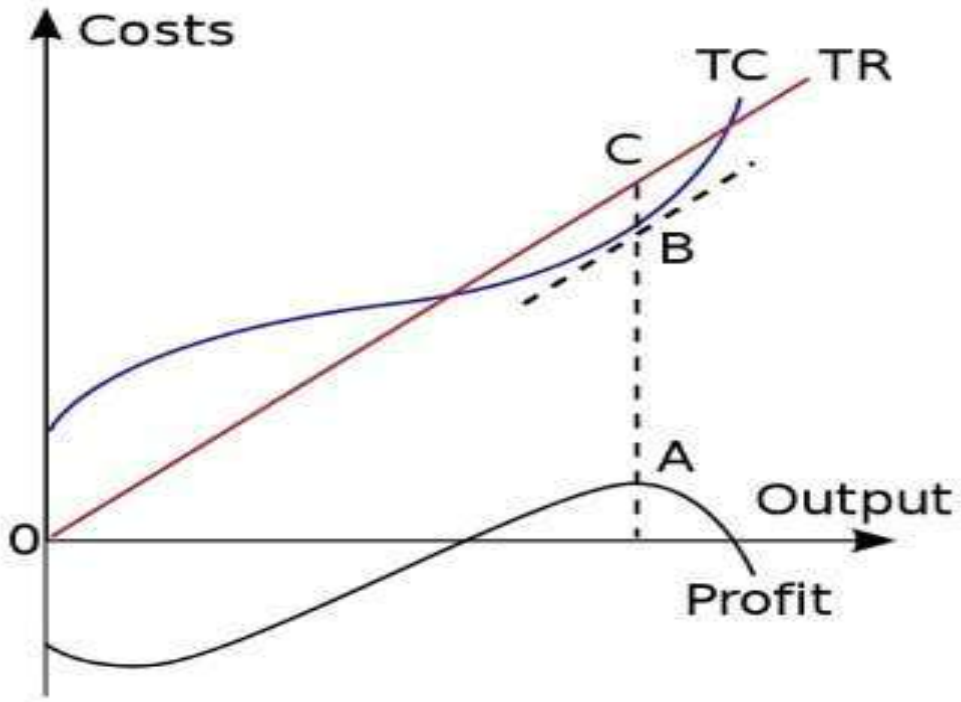
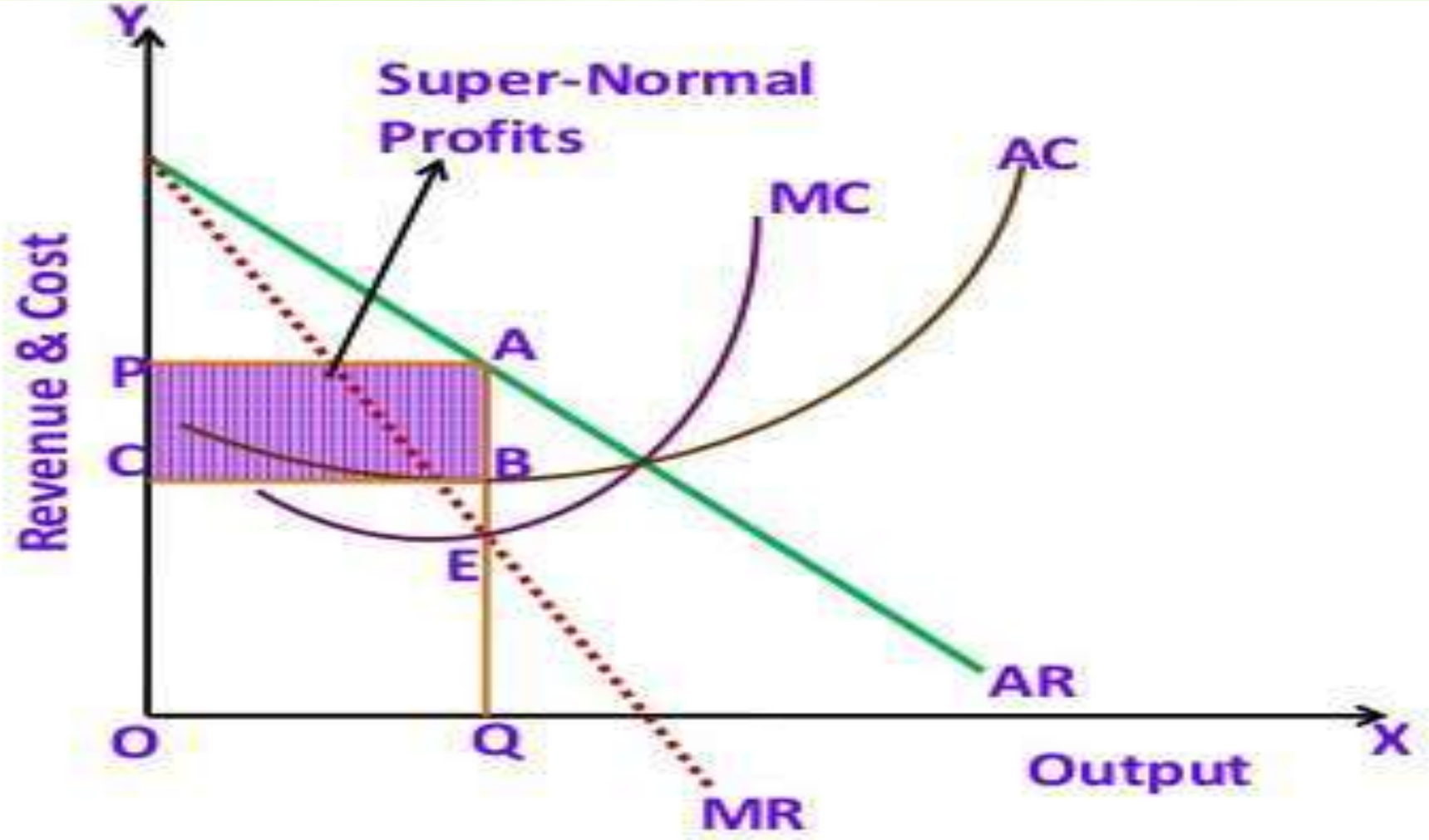


Fig.: Total revenue & total cost curve analysis

MC & MR Analysis

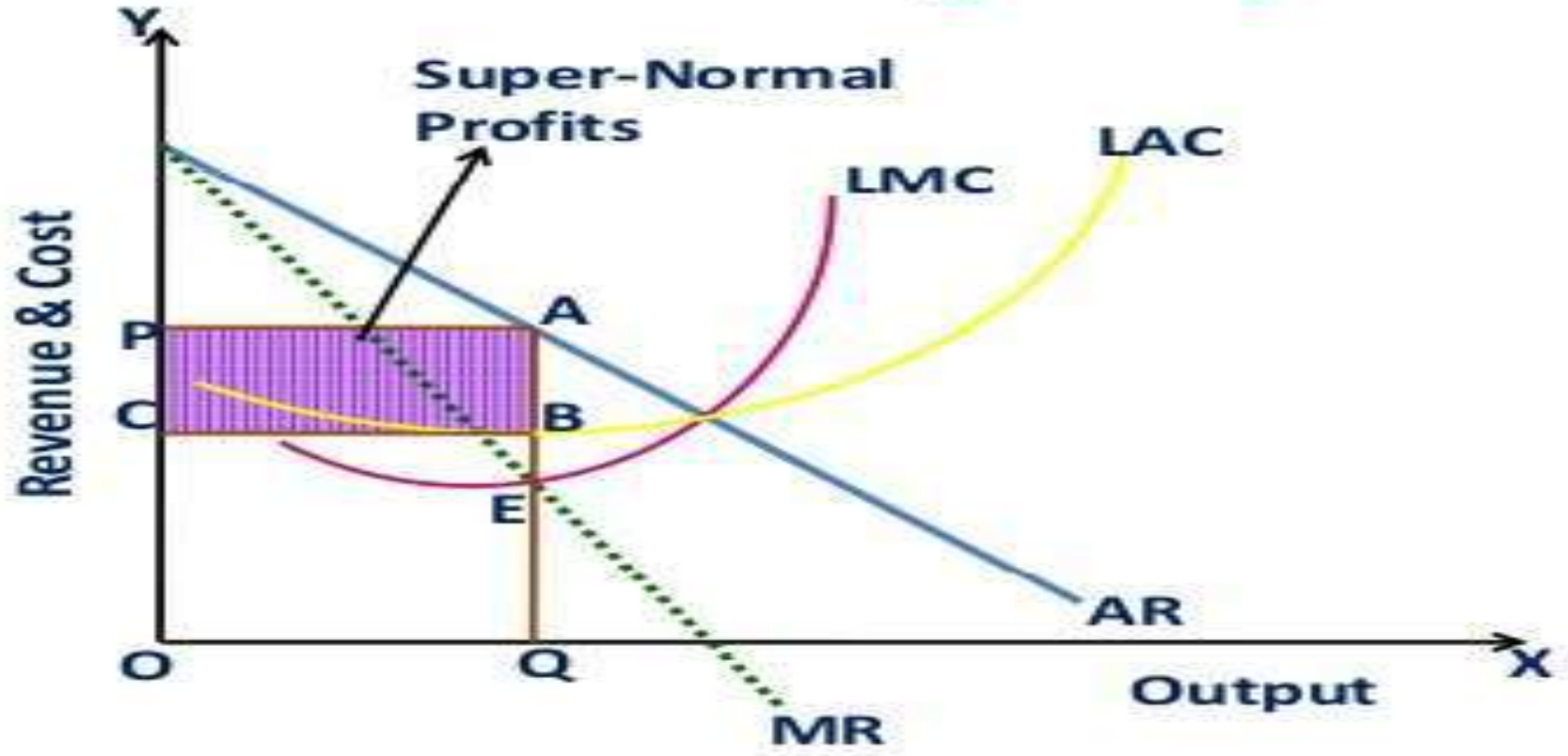
- In case of monopoly ,one can know about price determination or equilibrium position with the help of MR &MC analysis.
- Two Conditions Must Fulfill
- **MC=MR**
- **MC curve cuts MR curve from below**.
- Price & equilibrium determination under monopoly are studied with reference to 2 time periods:
- Short Period and Long Period

Short Run Equilibrium of the Monopolist: Marginal Approach



Long Run Equilibrium Price and Output

- All factors are **variable**
- LMC **cuts** MR from **below**



Price Discrimination

- It refers to the extent to which a seller can divide the market and can take advantage of market division in extracting the consumer's surplus.
- Two important effects of Price discrimination:

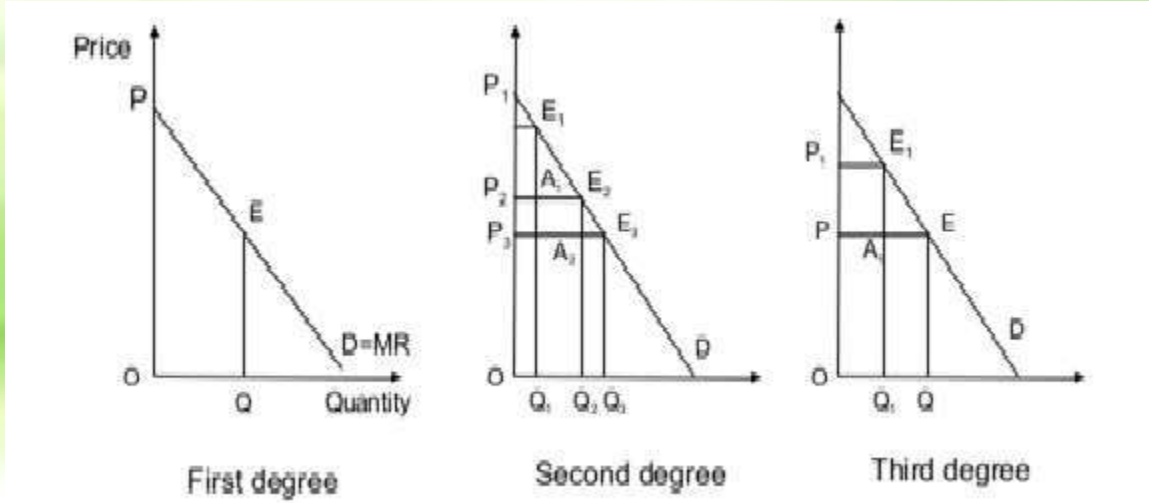
  It can increase the monopolist's profits

  It can reduce deadweight loss

Types of Price Discrimination

- **First-Degree (Perfect)Price Discrimination**: Occurs when the seller charges the highest price each consumer would be willing to pay for the product rather than go without it.
- **Second-Degree Price Discrimination**: Occurs when the monopolist captures part of the consumer's surplus and not the entire amount .It is possible when there are many consumers in the market with different tastes and income
- **Third –Degree Price Discrimination**: Occurs when the seller charges different prices in different market segments of the buying population.

Graphical Representation of Price Discriminations



Bilateral Monopoly

- Bilateral monopoly refers to a market situation in which a **Single Seller** (Monopolist) of a product faces a **Single Buyer** (Monopsonist) of that product.
- Ex: A single firm produces all copper in a country and the metal is used by only one firm
- Few Railway equipment (Fan, Battery) produced by a **Single Firm** and purchased by **Indian Railways**

UNIT -3

MONOPOLISTIC COMPETITION

Monopolistic competition

- Monopolistic competition refers to a market structure in which there are many sellers of a differentiated product and entry into or exit from the industry is rather easy in the long run.
- It is the mid way between perfect competition and monopoly.
- For ex: Tooth paste, soap, Soft drinks, Books etc…

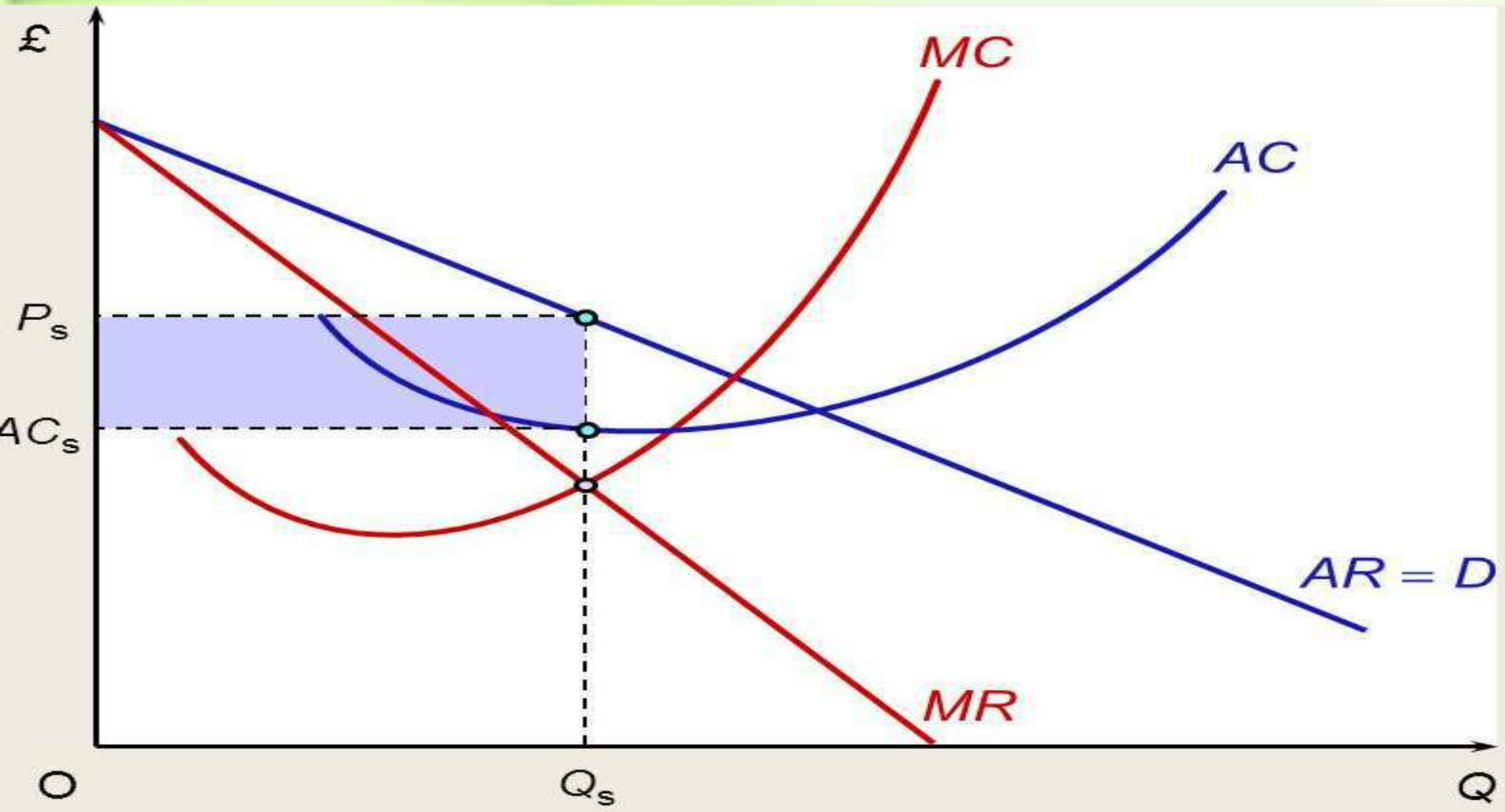
Features of Monopolistic Competition

- Large number of seller and buyers in the market
- Product Differentiation(Tooth paste)
- Higher selling cost(Promotion cost)
- Imperfect Knowledge(Buyers)
- Freedom of entry and exist
- Higher elasticity of demand.(Price sensitivity market)

Short Run Equilibrium of the firm under Monopolistic Competition

- Firms under monopolistic competition also face downward sloping demand curve and therefore have monopoly power to some extent.
- The profit maximizing output in the short run is at the point where MR=SMC.
- It is possible that a firm operating in monopolistic competition could earn: abnormal profit, normal profit or make a loss in the short run.

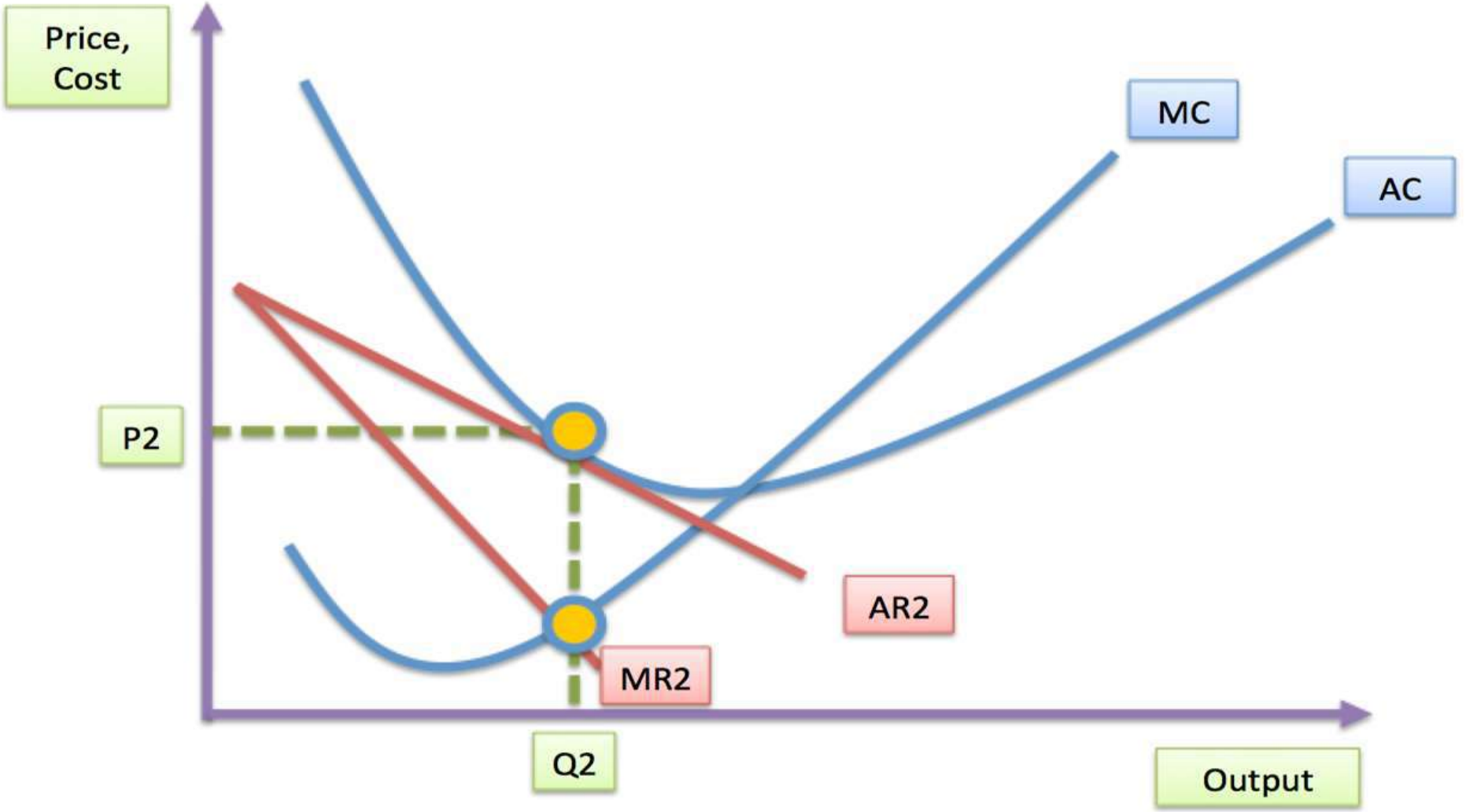
Short Run Equilibrium under monopolistic competition



Equilibrium in the Long Run

- The absence of barriers to entry allow firms to enter the industry.
- Demand curve will shift to the left.
- It will continue to shift until AR=AC
- At this point normal profits are earned and there is no incentive for further firms to enter the industry.
- Excess Capacity

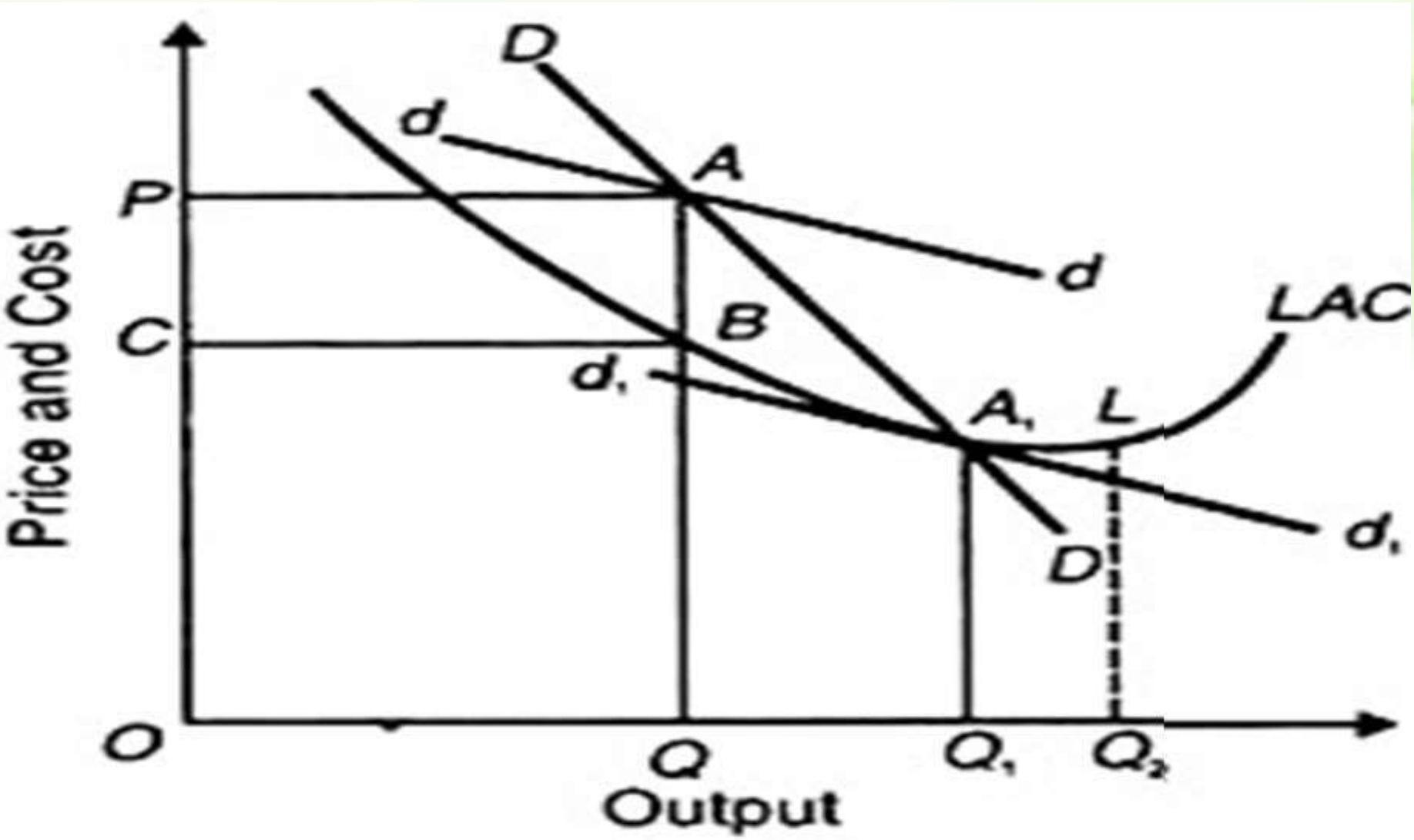
Long Run Equilibrium with Monopolistic Competition



Chamberlin's Group Equilibrium

- Group equilibrium refers to the equilibrium of the product group under a monopolistic competitive market . A product group includes firms producing very closely related commodities.
- The condition for attainment of group equilibrium is that MC=MR and AR curve is tangent to the AC curve.
- The behaviour of the group will be reflected in the bebaviour of the firm and each firm has identical demand and cost curves.

Chamberlin's Group Equilibrium



Selling cost in Monopolistic Competition

- Chamberlin introduced the concept of selling costs.

  According to him selling cost curve is U-Shaped . A firm will continue adding to its selling costs as long as addition to costs (MC) is less than addition to revenue (MR)
- The costs of changing consumers wants are selling costs.
- It includes all expenses incurred in order to increase the demand for the goods and services.
- The purpose of selling cost is to shift the demand curve to the right ,to increase the demand for the product.
- .

Comparison between Perfect Competition & Monopolistic Competition

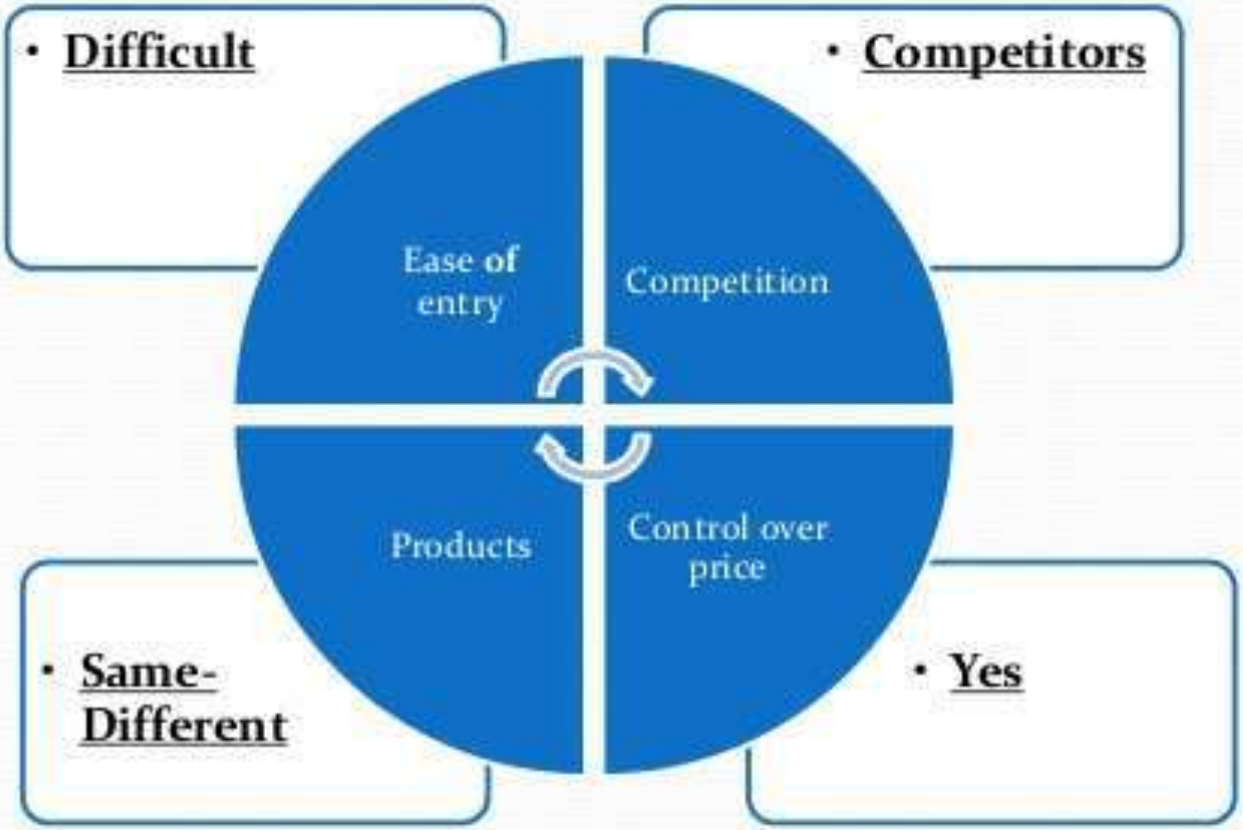
Basis for Difference	Perfect Competition	Monopolistic Competition
Price Determination	Demand and supply	Dominant Firm
Product Standardization	There is Product Standardization	No Product Standardization
Selling Costs	Sharing of Selling costs	No Sharing of selling costs
Average Revenue and Marginal Revenue	AR=MR	AR> MR
Slope of Demand Curve	Horizontal	Downward curve
Barriers to Entry and Exit	Comparatively Easy	Difficult

UNIT-IV

OLIGOPOLY

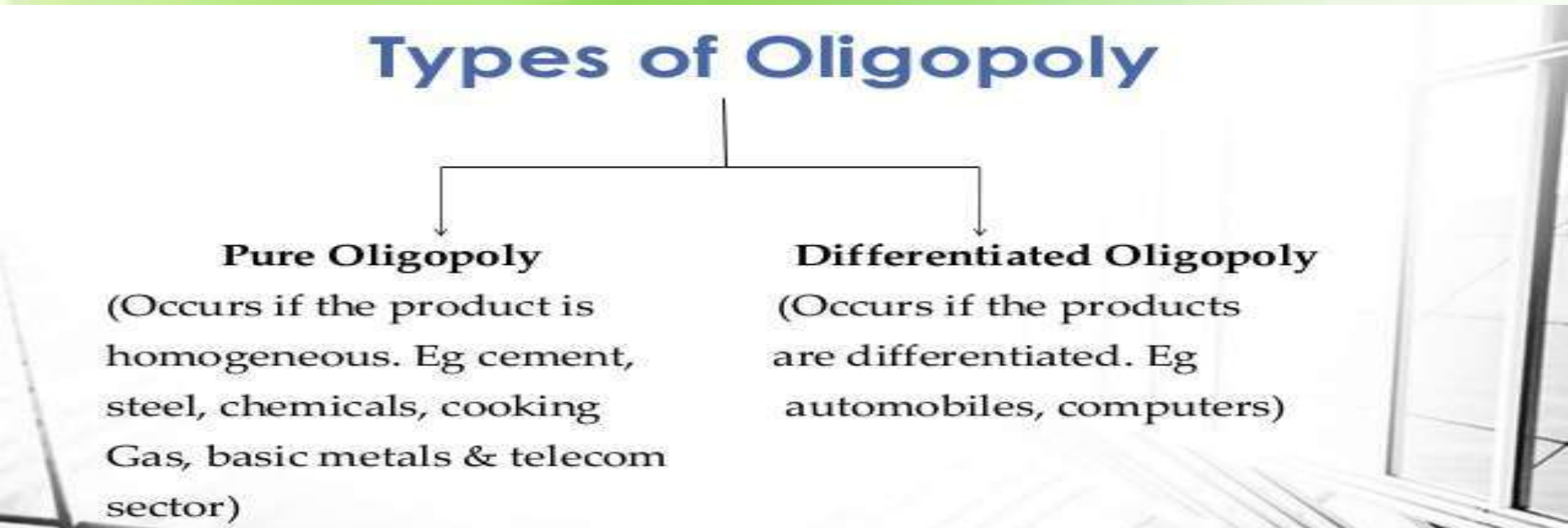
Oligopoly :

- Derived from the Greek word, "oligo'(few) "polo"(to sell).
- Market dominated by a few large firms, i.e.; Competition amongst the few.



Definition of Oligopoly

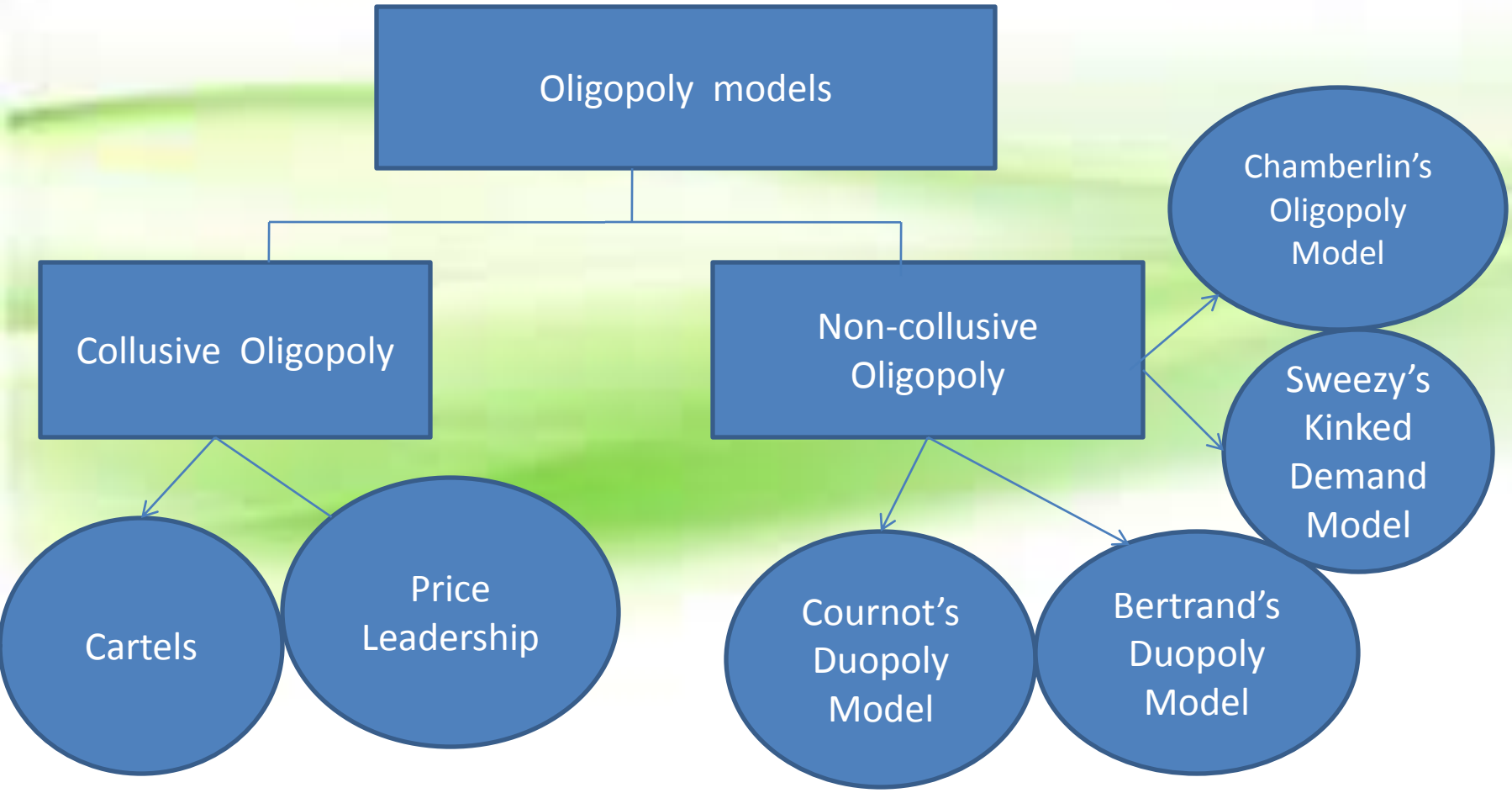
- Oligopoly is a market structure in which there are few sellers of a product selling identical or differentiated products. Here market is dominated by a small number of sellers. Because there are few sellers, each oligopolist is likely to be aware of the actions of the others.



Features of Oligopoly

- Few Sellers
- Interdependence
- Importance of Advertising and Selling Costs
- Group Behaviour
- Indeterminate Demand Curve
- Aggressive and Defensive Marketing Methods
- Competition and Combination
- Identical or Differentiated Products
- Small Number of Large Firms

Classification of Oligopoly Models



Collusive and Non-Collusive Oligopoly

- If the firms cooperate with each other in determining price or output or both it is called **collusive** or cooperative oligopoly.
- E.g.: OPEC
- If firms in an oligopoly market compete with each other, it is called a **non-collusive** or non-cooperative oligopoly.
- **Duopoly** is the limiting case of oligopoly. It assume that there are only two firms.

Cournot Model

- Developed by –**Augustin Cournot in 1838**.
- **Assumptions**

➢ There are two firms and no other firms can enter in the market.

➢ The firms have identical costs.

➢ They sell identical products.

➢ The firm set their quantities simultaneously

➢ **Cournot model is quite unrealistic.**

Bertrand's Duopoly Model

- Developed by **Joseph Bertram** in 1883 was a modification upon Cournot's duopoly solution.

Chamberlin's Oligopoly Model

Developed by **Edward Hasting Chamberlin** in 1933

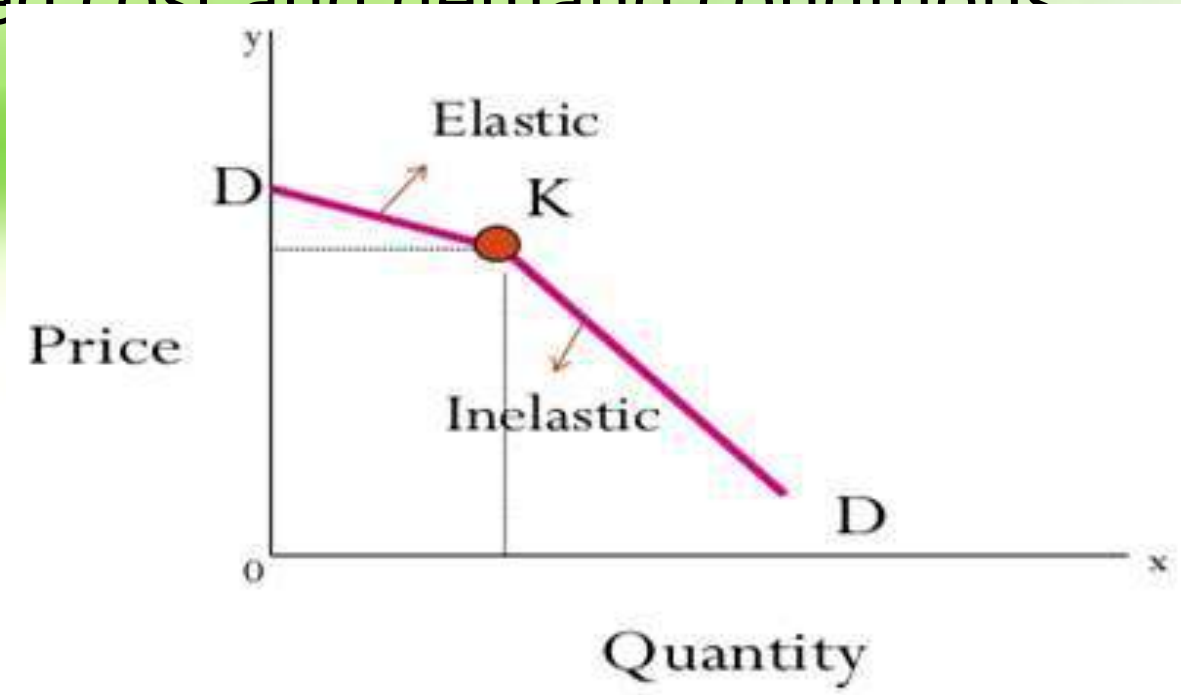
- This model rejected the assumption of independent action by competitors and accepted the fact that firms do recognize their interdependence.

Kinked Demand Curve

- Model was developed by Prof.Paul M.Sweezy in 1939
- It explains the price rigidity commonly observed in oligopolistic markets.
- If an oligopolist raised its price, it would lose most of its customers because other firms in the industry will not increase their price. They cannot increase its market share by lowering its price since its competitors would also reduce their price immediately.
- Oligopolists face a demand curve that is highly elastic for price increases and less elastic for price reductions.

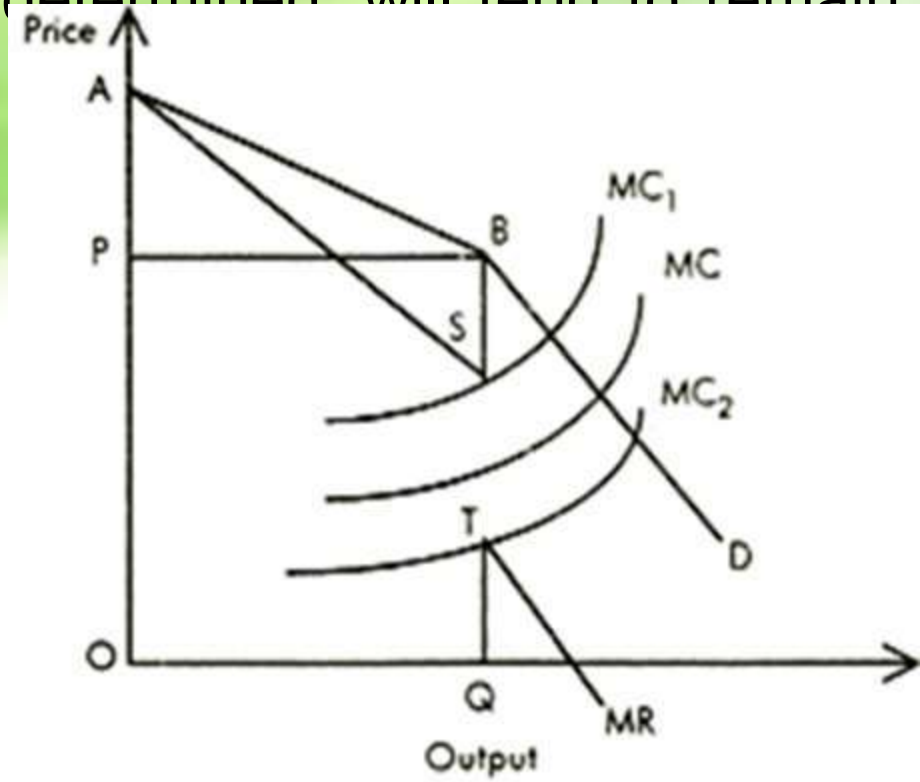
Kinked Demand Curve

- The demand curve of the oligopolist has kink at the established price and the most important implication of the kinked model is that the oligopolist tend to keep the price constant even in the face of changed cost and demand conditions



Kinked Demand Model

- The kink is the consequence of the uncertainty of the oligopolist and of their expectation that competitors will match price cuts but not price increases. It is considered as a tool for explaining why the price, once determined, will tend to remain fixed.

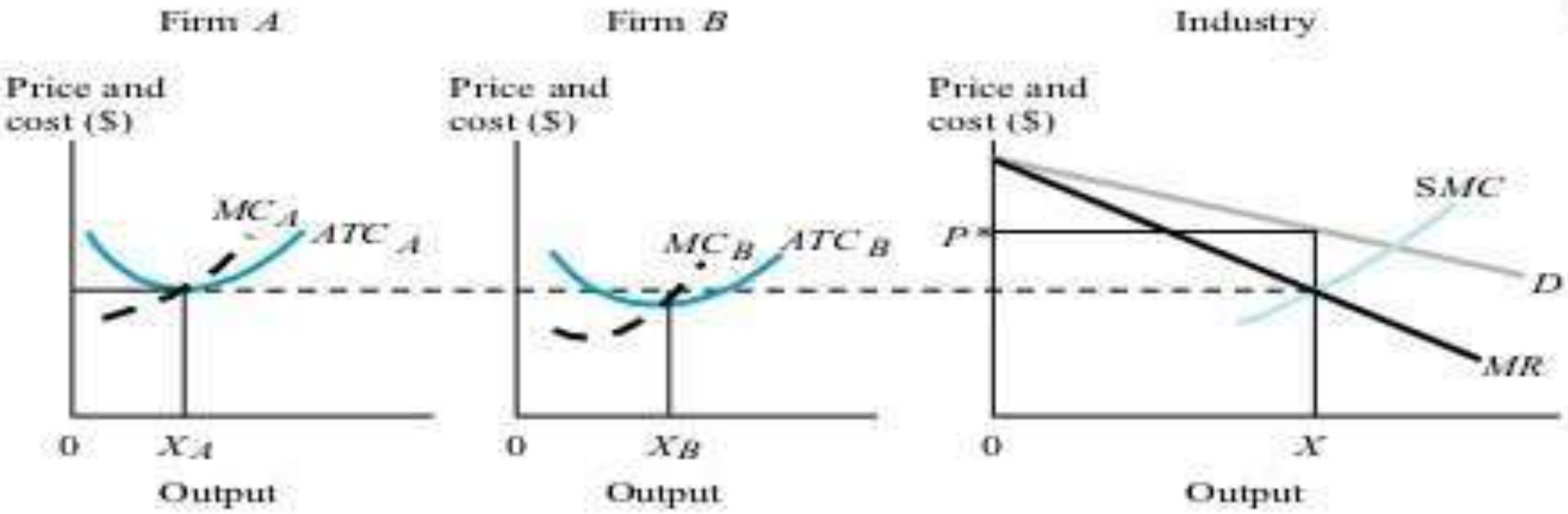


Cartel

- A cartel is Formal "Agreement" among the competing oligopolists.
- It is a formal organization of producers and manufacturers that agree to fix prices, marketing and production. Two forms of cartel: Cartels aiming
- At Joint Profit Maximization (full cartel outcome)
- At sharing of the market (loose cartel)
- Profit is maximized by setting MR=MC1=MC2

Joint Profit Maximization

- The aim is the maximization of the joint industry profit
- It is also known as centralized cartel
- Here the market Mc curve is derived from the horizontal summation of all individual MC curves



Failure of Cartels

- Mistakes in the estimation of market demand
- Mistakes in the estimation of MC
- Slow process of cartel negotiation
- Stickiness of negotiated price
- The existence of high cost firms
- Fear of government Interference
- Fear of Entry
- Lack of freedom regarding design and selling activities

Market Sharing Cartels

- The member firms agree on how to share the market, by keeping a considerable degree of freedom related to the style of their output, their selling activities and other decisions.
- Two basic methods for sharing the market **Cartel** are:
- **Non price Competition**
- Firm agree on a common price
- Firm can sell any quantity at this price
- **Determination of quotas**
- The quantity that each member may sell at the agreed price
- If all firms have identical costs the monopoly solution will emerge.

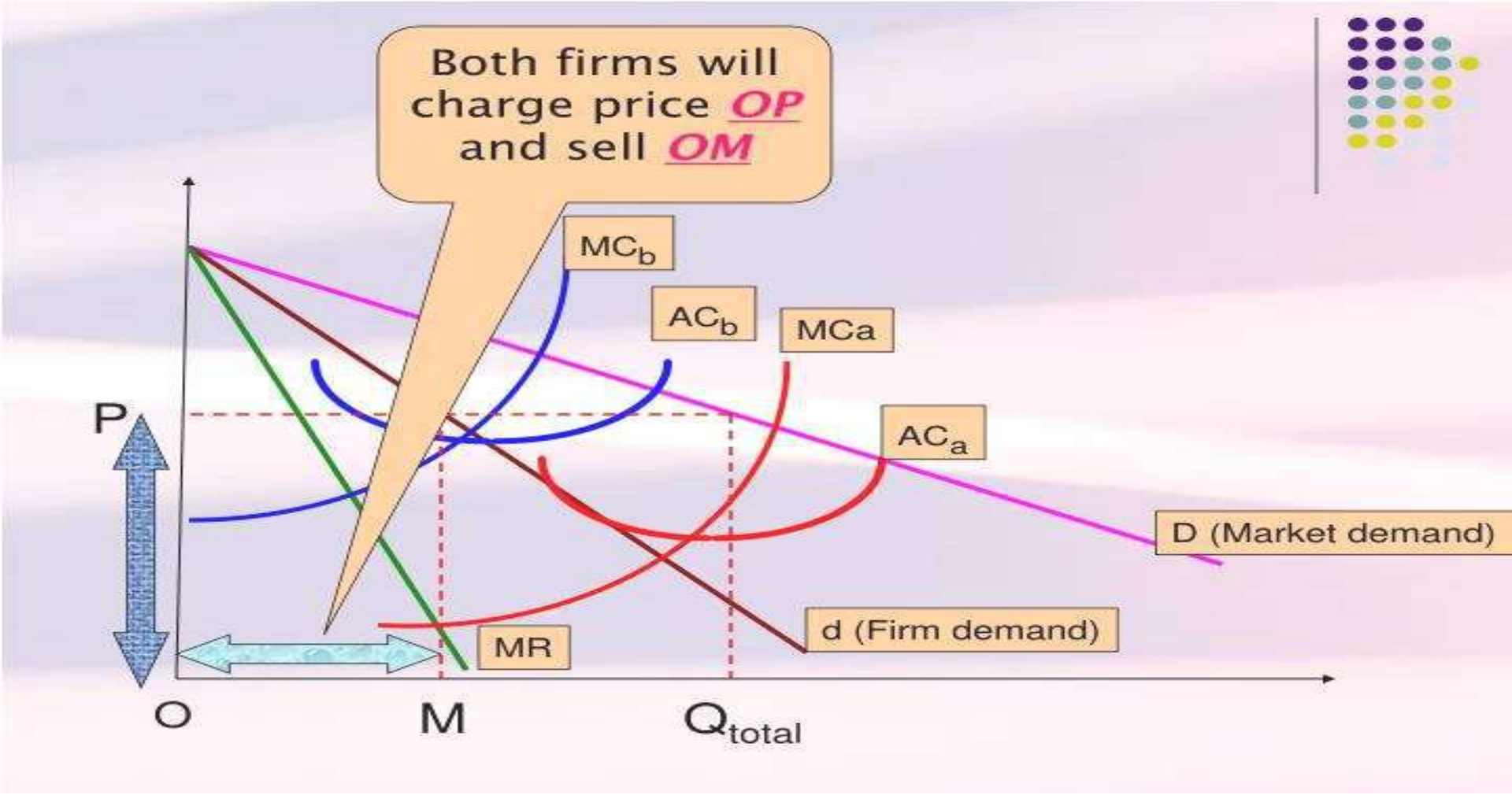
Price Leadership

- A price leadership is informal position of a firm in an oligopolistic setting to lead other firm in fixing price of their product ahead of its competitors who closely follow the prices already announced. The price leader sets the price on marginalistic rules. It includes:
- Price leadership by a low cost-firm
- Price Leadership by the dominant firm
- The barometric price leadership

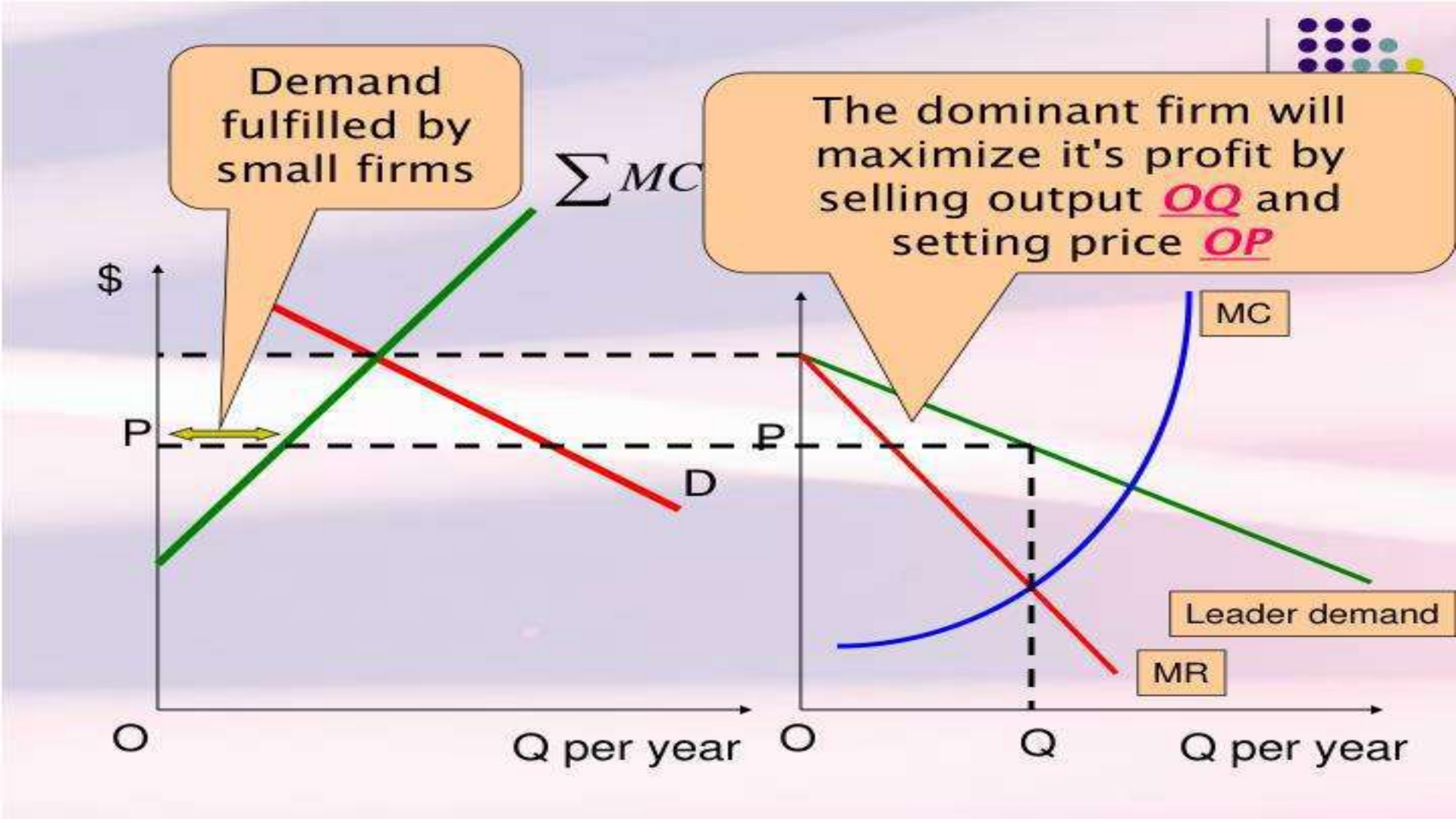
Price Leadership by Low Cost Firm

- Only two firms
- Each of the two firms has equal share in the market
- Suppose two firms are A and B. Firm A has a lower cost of production than B.
- The product produced by the two firms is homogeneous, so that the consumers have no preference between them.

Low cost price leader with equal market share



Dominant Firm Price Leadership



Dominant Firm (Cont.…)

- Dominant firm have to ensure that the small firms will produce only the remainder of demand (not more) otherwise the dominant firm will be pushed to a non-maximizing position.
- If price leadership is to remain, there must be some definite market sharing agreement.

Barometric Price Leadership

- Price leader have good knowledge of the prevailing conditions in the market and forecast the future developments
- Price leader acts as a barometer.
- Leader firm must have a reputation of good forecaster of economic changes.
- Followers always like to avoid risks when economic conditions change
- Rivalry nature not accept.

Long Run Adjustment in oligopoly

- Oligopolistic firms can build best plant to produce their best level of output. But due to uncertainty it is more difficult.
- Entry has to be blocked or restricted if industry is to remain oligopolistic.
- Change price for fear of starting a price war.
- They prefer to compete on the basis of advertising and product differentiation .


Thank You!