Module-3

Market Structures

- List a company/companies that have no real competition
- List a company/companies that have a few (one or two) competitors
- List a company/companies that have many competitors
    - Which situation is best for consumers (buyers)? Why?
    - Which situation describes most markets

All of the above are called Market Structures or Models of Competition.

Each one exists to some degree in our economy.

They are important because the model of competition determines in a large degree the availability of products, choice of product and most importantly price of products.

Market Structures.

A description of the type of market that a particular business or industry operates in.

4 Types of Models of Competition

1. **Perfect Competition**
2. **Monopoly**
3. **Monopolistic Competition**
4. **Oligopoly**

1. Perfect Competition

- There is generally a large number of buyers and sellers.
- Buyers and sellers sell identical products (there is no need for advertising).
- Each buyer and seller acts independently.
- Sellers and buyers are reasonably well-informed about products and prices.
- Competitors are free to enter into the market, conduct business or leave the market.

Examples: local vegetable farmers, dry cleaning businesses, grocery retailers, plumbing, etc.

- Perfect competition markets are highly competitive markets in which many sellers are competing to sell their product.
- Each seller produces a product that has no unique characteristics so buyers "don't care" about which seller's product to buy.

➢ Firms cannot influence the market price because the individual firm's production is an insignificant part of the total market. Firms are "price-takers."

➢ Market demand and market supply determine the market price and quantity. - The demand for a firm's product is perfectly elastic (i.e. one firm's product is a perfect substitute for another firm's product).

➢ In perfect competition, the firm's marginal revenue equals the market price. - If MR = MC, economic profit is maximized.

➢ SUPPOSE THERE ARE 100 VEGETABLE SELLERS IN ERNAKULAM MARKET

➢ HOW WOULD THE EQUILIBRIUM PRICE AND QUANTITY IS DETERMINED

Price	**Demand (Units)**	**Supply (Units)**	**Analysis**
1	50	10	Excess Demand
2	40	20	
3	30	30	**P = 3 = D=S**
4	20	40	Excess Supply
5	10	50	

Price(p)	**Quantity Sold(Q)**	**Supply (Units)**	Average Revenue$\frac{TR}{Q}$	Marginal Revenue $\frac{\Delta TR}{\Delta Q}$
3	1	3	3	3
3	2	6	3	3
3	3	9	3	3
3	4	12	3	3
3	5	15	3	3

PRICE AND OUTPUT DETERMINATION / EQUILIBRIUM OF THE FIRM:

Under perfect competition a firm faces a horizontal demand curve or AR curve (perfectly elastic demand curve). Since perfectly competitive firm sells additional units of output at the same price, MR curve coincides with AR curve. MC curve is U shaped. Now in order to be in equilibrium, the firm will compare MC with MR. It will be in equilibrium at the level of output at which it is earning maximum profits or incurring minimum losses.

.It can attain equilibrium only when conditions are satisfied:

(i) The Marginal Cost should be equal to the Marginal Revenue i.e. MC - MR

(ii) Its MC curve must cut its MR curve from below i.e. its MC curve must be rising at the point of equilibrium.

Monopoly

- **There is only one producer or seller of goods and only one provider of services in the market.**
- **New firms find extreme difficulty in entering the market.**
- **The existing monopolist is considered giant in its field or industry.**
- **There are no available substitute goods or services so that it is considered unique.**
- **It controls the total supply of raw materials in the industry and has no control over price.**
- **It owns a patent or copyright. Its operations are under economies of scale.**

Types of Monopolies

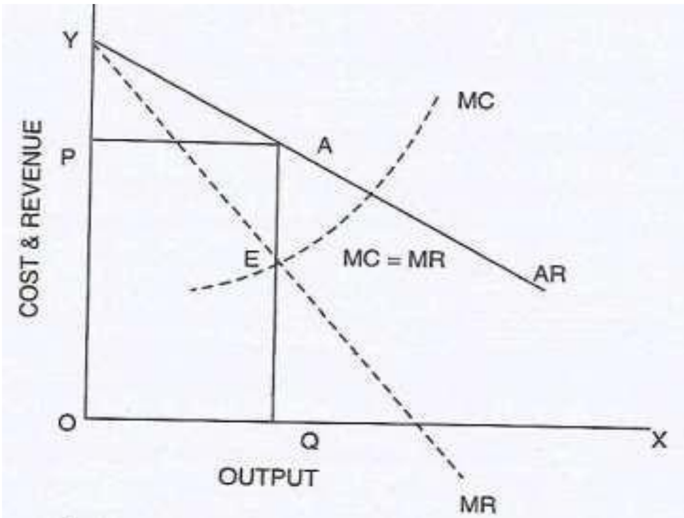
1. **Natural Monopoly**

   Market situation where the costs of production are minimized by having a single firm produce the product (e.g. public utility companies
2. **Geographic Monopoly** – based on absence of other sellers in a certain geographic area (e.g. gas station or drugstore in small town)
3. **Technological Monopoly** – based on ownership or control of a manufacturing method, process or other scientific advance (e.g. certain pharmaceutical drugs) ***a. Patent – exclusive right to manufacture, use or sell invention (usually good for 20 years). b. Copyright – authors, art (good for their lifetime plus 50 years)***
4. **Government Monopoly** - monopoly owned and operated by the government (e.g. military, water and sewage)

EQUILIBRIUM OF THE MONOPOLY FIRM (OUTPUT AND PRICE DETERMINA- TION):

1. **Firm Equilibrium:** In case of monopoly, the price-output equilibrium is that level of price and output produced which gives maximum profit to the monop-olist or which minimize losses. The price-output combination, which yields maximum or optimum profits to the monopolist, is determined at the point where two conditions are satisfied-

Price P=AR	Quantity (q)	TR= P*Q	MR= TR/q
11	0	0	-
10	1	10	10
9	2	18	8
8	3	24	6
7	4	28	4
6	5	30	2
5	6	30	0
4	7	28	-2



In the figure at point E, MC = MR, so equilibrium output is OQ and price is AQ or OP, so TR is OPAQ.

(a) MC - MR and

(b) MC cuts MR from below

And one additional condition must be satisfied in case of loss that

P >AVC. This is true for both the short-run and the long –run

REGULATION OF MONOPOLY

In India Competition Commission of India have the task of regulating the monopoly practices Competition is the best means of ensuring that the 'Common Man' or 'Aam Aadmi' has access to the broadest range of goods and services at the most competitive prices. With increased competition, producers will have maximum incentive to innovate and specialize. This would result in reduced costs and wider choice to consumers.

It is the duty of the Commission to eliminate practices having adverse effect on competition, promote and sustain competition, protect the interests of consumers and ensure freedom of trade in the markets of India. The Commission is also required to give opinion on competition issues on a reference received from a statutory authority established under any law and to undertake competition advocacy, create public awareness and impart training on competition issues.

The Competition Act

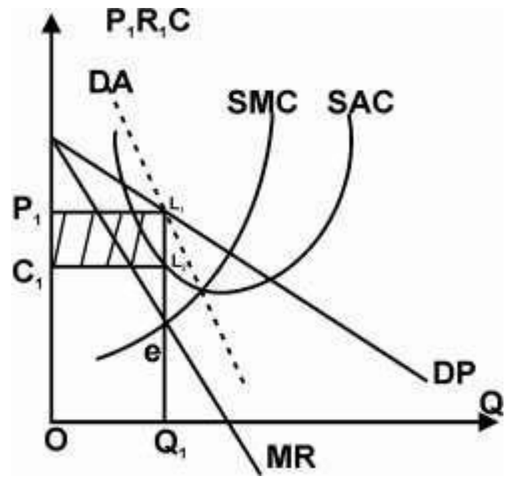
The Competition Act, 2002, as amended by the Competition (Amendment) Act, 2007, follows the philosophy of modern competition laws. The Act prohibits anti-competitive agreements, abuse of dominant position by enterprises and regulates combinations (acquisition, acquiring of control and M&A), which causes or likely to cause an appreciable adverse effect on competition within India.

3. Monopolistic Competition

- There are large number of buyers & sellers
- Freedom of entry & exit
- The principal goal is to maximize profits.
- Firms also try to compete on the basis other than price 'known as 'non-price competition' e.g. advertising, product development, after sales service, better distribution arrangement etc.
- The products sold by the sellers are differentiated, yet they are close substitutes. i.e., in a monopolistic competitive market, the products of different sellers are differentiated on the basis of brands. These brands are generally so much advertised that a consumer starts associating the brand with a particular manufacturer and type of brand loyalty is developed.

Product differ-entiation gives rise to an element of monopoly to the producer over the competing product. As such, the producer of an individual brand can raise the price of his product knowing that he will not lose all the customers to other brands because of absence of perfect substitutability.

- **Equilibrium of Firm**



During the short-run, the firm operates within the existing capacity. The objective is to maximize profit, which can be obtained at point ‘e’ where three conditions are complied with:

(1) MC = MR

(2) Slope of MC > Slope of MR

(3) Perceived demand curve intersects Actual de mand curve at equilibrium price (L_1)

In this figure we get ‘e’ as equilibrium point where the above three conditions are satisfied. The monopolistically competitive firm fixes equilibrium price OP_1 where the Total revenue =❑$OP_1L_1Q_1$

and total cost = ❑$OP_1L_2Q_1$.

The total profit earned by monopolistically competitive firm is ❑$C_1P_1L_1L_2$.

4. OLIGOPOLY

- **Oligopoly exists where few large firms producing a homogeneous or differentiated product dominate a market.**

  Examples are automobile and gasoline industries.

  Forms of Oligopoly

- **Collusion and Cartel**

Cartel model is when firms enter into formal agreement for deciding price and output.

e.g. OPEC

AIMS

- It reduces uncertainty
- Maximizes profit

Types of Cartel

Centralized Cartel > it is an agreement where a centralized body decides on the pricing of goods

Market sharing Cartel > it is an agreement by all the members to divide the market share among themselves and fix the price independently

Collusive oligopoly

Collusion model is when firms enter into an informal agreement to decide output, price etc., The main aim is to reduce competition and maximize profit among themselves

Company	JIO	AIRTEL	VI
Tariff	150	120	150

- IF Airtel increases the price will the other rivals follow?
- The rivals wil not follow the price action of Airtel
- IF Airtel reduce price will the other rivals follow the action
- The rivals will follow the reduction in price

Characteristics: -

1. Few sellers: Oligopoly often described as 'competition among the few'.
2. Interdependence: In oligopoly, when the number of competitors is few, any change in price, output, and advertising technique, by a firm will have a direct effect on the fortune of the rivals
3. Advertising and selling costs (Non price competition): There is a great importance of advertising and selling costs in an oligopoly market. It is to be noted that firms in such type of market should avoid price cutting and try to compete on non-price basis (advertisement basis) because if they start under-cutting one another a type of price-war will emerge which will drive a few of them out of the market as customers will try to buy from the seller selling at the cheapest price.
4. Group behaviour: There is no generally accepted theory of group behaviour. In the oligopoly, the members of a group agree to pull together in promotion of. common interest or will they fight to promote their individual interests. Each oligopolist closely watches the business behaviour of the other oligopolists in the industry and then designs his moves on the basis of some assumptions of how they behave or are likely to behave.

5. **Kinked demand curve / Indeterminateness of demand curve**: Because of interdependence of the firms in oligopoly and because of inability of a particular firm to predict the behaviour of other firms, the demand curve facing an oligopolistic firm loses its definiteness and determinateness.

The demand curve facing an oligopolist may have a 'kink' at the level of the pre- vailing price suggesting stickiness in the price level. The kink is formed at the pre- vailing price level at 'K' because the segment of the demand curve above the 'P' is highly elastic and below the 'P's inelastic.

This difference in elasticities is due to the particular competitive reaction pattern. Each oligopolist believes that if it lowers their price below 'P', his competitors will follow him and will accordingly lower their prices, whereas if he raises the price above the 'P', his competitors will not follow his increase in price.

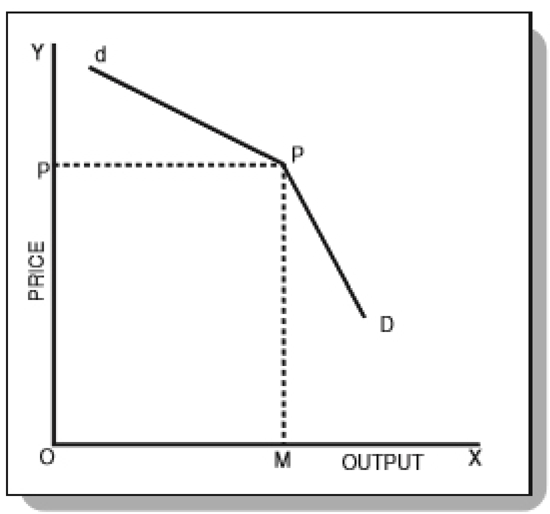


Fig. 1 : Kinked Demand Curve under oligopoly

Price rigidity:

Price rigidity is found in the oligopolist market because when an oligopolist lowers the price its competitors will feel that, if they do not follow the price cut their customers will run away and buy from the firm, which has lowered the price. Thus in order to maintain their customers they will also lower their prices. Thus the upper portion of the demand curve is price elastic. On the other hand, if a firm increases the price of its product there will be a substantial reduction in its sales because as a result of the rise in its price, its customers will withdraw from it and go to its competitors, which will welcome the customers and will gain in sales. These happy competitors will have, therefore, no motivation to match the price rise. The oligopolist who raises [its price will lose a great deal and will, therefore, refrain from increasing the price. This behaviour of oligopolists explains the inelastic lower portion of the demand curve. Each oligopolist will, thus, adhere to the prevailing price seeing no gain in changing it and a kink will be formed at the prevailing price i.e. MP

6. Substantial barriers to entry: In oligopoly there is no free entry and no blocked entry, we can say that there are substantial barriers to the entry.

VARIOUS PRICING METHODS

Cost plus pricing **AC + % of AC = Cost plus pricing**

Cost-based pricing refers to a pricing method in which some percentage of desired profit margins is added to the cost of the product to obtain the final price. In other words, cost-based pricing can be defined as a pricing method in which a certain percentage of the total cost of production is added to the cost of the product to determine its selling price. Cost-based pricing can be of two types, namely, cost-plus pricing and mark-up pricing.

Target return pricing

Helps in achieving the required rate of return on investment done for a product. In other words, the price of a product is fixed on the basis of expected profit.

Let's understand the concept of Target-Return Pricing through an example:

Suppose the tractor manufacturer has invested 2 million in his venture and he expects to earn 20% as an ROI. Therefore, he will set the price accordingly. The cost and sales expectation are:

Unit cost: 20

Expected sales: 50,000 units

The Target-Return Pricing is given by:

Target-Return Pricing = unit cost + (desired return x invested capital) /unit sales

Thus, Target-Return Pricing = 20 + (0.20 x 2,000,000) / 50,000 = Rs 28

Penetration

Penetration pricing is a strategy used by a firm who wishes to enter a new market and gain a high market share through selling at a low price.

The aim of penetration pricing is to attract a loyal customer base through offering the most competitive price in the market and undercutting rivals and well-known brands.

Penetration pricing is also a marketing ploy. By setting eye-catching low prices, the firm hopes that it will be able to gain consumer awareness of the firm's entrance into the market.

Ex: Smart Phones

The two major suppliers of smart phones, Samsung and Apple, follow markedly different pricing strategies. Apple uses a skimming pricing strategy, and has been able to establish a strong brand loyalty with its customers. This strategy keeps prices high and never drops or offers any discounts. Apple customers are convinced that its products are high quality, and each new phone model comes with more exciting features. And people are willing to pay the steep prices.

On the other hand, Samsung is continuously offering Android phones at introductory prices and discounts, hoping to build brand loyalty. Samsung also partners with cell-phone companies to provide Android phones at cheap prices in exchange for commitments to long-term contracts. Consumers get enticed by the low prices and overlook the cost of the terms of the contract.

Apple sells expensive phones to a small market, while Samsung sells a high volume of phones to a broader consumer base

Predatory pricing

Predatory pricing is the practice of using below-cost pricing to undercut competitors and establish an unfair market advantage.

Predatory pricing is a method in which a seller sets a price so low that other suppliers cannot compete and are forced to exit the market. A company that does this will see initial losses, but eventually, it benefits by driving competitors out of the market and raising its prices again. This predatory pricing practice often results in the formation of monopolies controlling market power for a lengthy period of time.

Going rate pricing

The Going-Rate Pricing is a method adopted by the firms wherein the product is priced as per the rates prevailing in the market especially on par with the competitors.

Basically, the company sets a price of its products and services in line with the competitor's prices, and may sometimes charge more or less depending on the value, product offers.

This type of pricing is mostly followed in Oligopolistic industries where they deal in homogenous goods, and in which less variation is seen from one producer to another. Such products are steel, aluminium, paper, fertilizer, etc. The firms dealing with these usually charge the same price from the customers.

Now the question arises, which company must be chosen that decides the price for the entire industry? Normally, the smaller firms "follow the leader", and change their pricing strategy, according to the leader irrespective of their demand and changed cost.

With a going-rate pricing method, companies feel secure as they are sure to get the customers because of the same rates prevailing in the industry. But however, it is difficult to determine the changing trends of the competitor and often it is not possible to match the cost of a product with the price that others are following.

Price skimming

Another popular pricing strategy is price skimming, where a product is sold at a high price initially but is lowered with time. On the contrary, penetration pricing refers to a setting where initial price is lower than later as this type is focused on cost reduction over time and discouragement of competitors' entry

Pure or perfect competition is rare in the real world, but the model is important because it helps analyse industries with characteristics similar to pure competition. This model provides a context in which to apply revenue and cost concepts developed in the previous lecture. Examples of this model are the stock market and agricultural industries.

MODEL QUESTIONS

1. Explain the equilibrium of a firm under monopolistic competition.
2. Why a monopolist is called price maker?
3. What are the methods of non-price competition under oligopoly?
4. What is collusive oligopoly?
5. What is predatory pricing?
6. What do you mean by non- price competition under oligopoly?
7. A. What are the features of monopolistic competition?

   B. Explain the equilibrium of a firm earning supernormal profit under monopolistic competition.
8. A. Make comparison between perfect competition and monopoly.

   b) Explain price rigidity under oligopoly with the help of a kinked demand curve.