1. Details of Module and its structure

Module Detail	
Subject Name	Economics
Course Name	Economics 03 (Class XII, Semester - 1)
Module Name/Title	Oligopoly – Part 3
Module Id	leec_10603
Pre-requisites	Knowledge about market in Economics
Objectives	After going through this lesson, the learners will be able to understand the following: 1. Meaning of Oligopoly Market 2. Real life Market Structure 3. Features of Oligopoly 4. Types of Oligopoly 5. Distinguish between different markets 6. Summary
Keywords	Oligopoly, Interdependence, Non-price competition

2. Development Team

Role	Name	Affiliation
National MOOC Coordinator (NMC)	Prof. Amarendra P. Behera	CIET, NCERT, New Delhi
Program Coordinator	Dr. Rejaul Karim Barbhuiya	CIET, NCERT, New Delhi
Course Coordinator (CC) / PI	Dr. Jaya Singh	DESS, NCERT, New Delhi
Course Co-Coordinator	Ms. Anjali Khurana	CIET, NCERT, New Delhi
Subject Matter Expert (SME)	Mr. Naveen Sadhu	Guru Nanak Public School Rajouri Garden, New Delhi
Review Team	Ms. Meeta Kumar Mr. Nitesh Kashyap Dr. Jaya Singh Dr. Bharat Bhushan	Miranda House, University of Delhi Miranda House, University of Delhi DESS, NCERT, New Delhi Shyamlal College, University of Delhi

Table of Contents:

As now you are aware that there are different kinds of market structure that lie between monopoly and perfect competition. One such market structure is oligopoly, where a small number of producers compete with each other. Here, the sale of a commodity by one firm depends not only upon its price and quantity but also upon the price and quantity of the other producers. To see the interplay between the firm's prices and its quantity, let us imagine there are two grocery shops in a town owned by Mr. A and B, respectively. Mr. A decides to lower the price of grocery products. Now Mr. B has three options: One, he can remain indifferent and not react; two, he can lower not react; two, he can lower the price in the same proportion as by Mr. A; third, he can indulge in a price war and slash price of his products more than that of Mr. A. The strategy or reaction chosen by Mr. B has important implications for demand for products of Mr. A. In case of option I, where Mr. B does not react, the demand for products of Mr. A will increase immensely. In case of option II, where Mr. B also reduces price of his products by as much as Mr. A, the demand for products of Mr. A will increase only marginally. Finally, in case of option III, when Mr. B reacts sharply and reduces price more than by Mr. A, the demand for products of Mr. A will actually decline.

1. Oligopoly Market

Oligopoly is a market structure in which a few firms have the large part of market share. The firms then take the decision like how much to produce, what price to charge, how much to spend on advertisement and when to launch the new product and so on. An oligopoly is similar to a monopoly except that two or more firms dominate the market rather than one single firm. Each firm can influence the market price. The important feature of oligopoly is that it relates to strategic behavior in two ways (i) reacting to the decision of other firms (ii) anticipation about their future course of action. Here, the firms may compete or cooperate with each other. The firms' different behavior impacts the market structure. Cooperation among the firm will motivate the monopoly behavior, while the strategic move of the firms makes it similar to the competitive market structure. For example, BSNL, Airtel and Vodafone are the major Indian service providers in the field of telecommunication.

A few more examples of Oligopoly market are as follows:

1. Coke and Pepsi are the only two major giants that are competing with each other in the global market of soft drinks.
2. General Motors, Toyota, Hyundai, Ford are some significant automobile firms that are competing in the global automobile market.

Oligopoly is the most complex and prevalent form of market structure where there exist few firms producing either homogenous or differentiated products. Why do we study this form of market structure? An oligopolistic market structure emerges on account of 'Economies of Scale'. The Economies of Scale happen when average cost of production falls with increase in output.

2. Features or Characteristics of Oligopoly

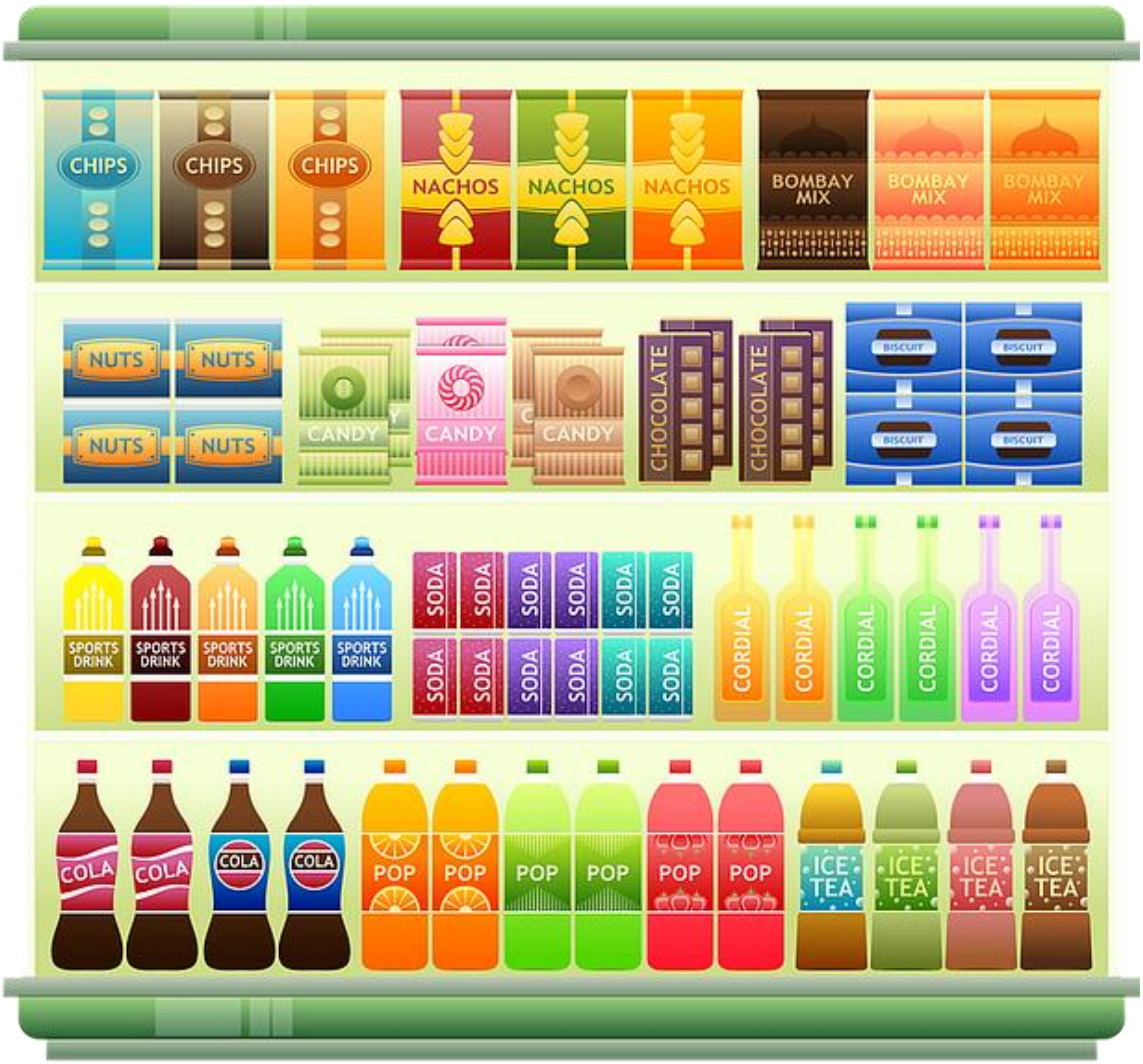
The following are the main features or characteristics of oligopoly:

(1) Few Sellers and Many Buyers: Oligopoly is a market structure in which few firms dominate the industry. There is large number of buyers in the market. 'Few Firms' mean that every firm controls significant share in the total market supply. For example, in India, three or four major companies produce more than 75 percent of small cars. One may think licensing, huge initial investment, control over raw material as contributing towards emergence of oligopoly markets.

As each firm controls significant share in market supply, it can influence the market price by increasing or decreasing its output. Each firm is a price maker but at the same time, each firm keeps a close watch on activities of the rival firms. This results in strategic price setting behavior among the firms.

(2) Homogeneous or Differentiated Products: Firms in an Oligopoly market may produce homogeneous or differentiated products. If the firms produce a homogeneous product like cement or steel, the industry is referred to as a pure or perfect oligopoly. If the firms produce a differentiated product like automobiles, the market is said to have imperfect oligopoly.

Product Differentiation



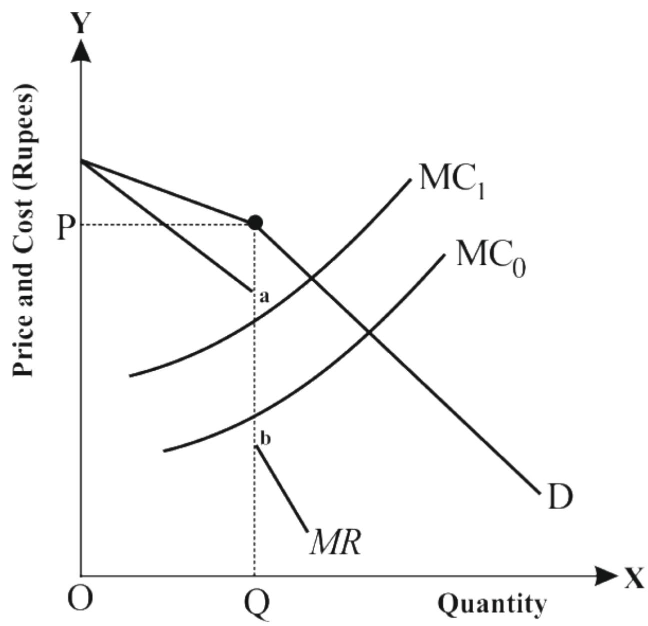
Source: https://pixabay.com/en/supermarket-shelf-products-snacks-1094815/

(3) Mutual Interdependence: It means that the firms are significantly affected by each other's price and output decisions. A firm considers the action and reaction of the rival firms while determining its price and output levels. For example, market for cars in India is dominated by a few firms. A change in price by any one firm will induce other firms to change their prices or features in their respectively produced vehicles. So, before deciding to cut its prices, the first firm tries to predict how other firms will react and then it attempts to calculate the effects of their reaction on its own profits. In oligopoly, the cross-price elasticity of demand is very high between the brands produced by different oligopolistic firms in a market, as because the products are close substitutes of each other.

Therefore, in an oligopoly market, the firms are likely to react to any price and output decision taken by rival firms. It is like a chess game where a player decides his moves anticipating the moves played by the rival player.

(4) Existence of Price Rigidity / Non-Price Competition: Another feature of oligopoly is existence of price rigidity. In oligopoly, firms are in a position to influence the prices; however, they try to avoid price competition for the fear of a price war. The term price rigidity means that the firms would not like to change the prices, since any change in price by an oligopolistic firm may not benefit that firm; and so, it will stick to its price. If a firm tries to reduce the price, the rivals will also retaliate by reducing their prices. Likewise, if a firm tries to raise its price, other firms may not do so. As a result, the firm will lose its customers and incur loss. So, there is price rigidity in an oligopoly market. Firms use other methods like advertising, better services to customers, etc. to compete with each other. So, firms prefer non-price competition instead of price competition.

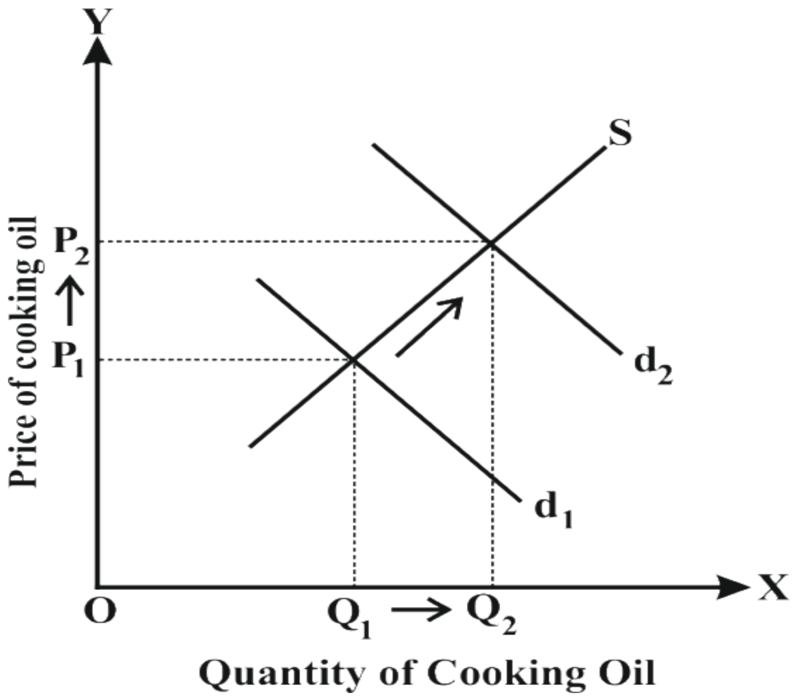
Sticky Price / Price Rigidity is a prominent feature of Oligopoly Market



This figure depicts the price charged P and quantity produced Q by an oligopoly firm. If any firm increases the price for its product above P, then in such a case, it will be able to sell a smaller quantity which would be lesser than Q, as because its customers will shift to other firms that had not raised their prices. If a firm reduces its price below P, then the other firms will also decrease their prices in accordance to that firm. Thus, it will not let that particular firm gain much from the decreased price, i.e. price decrease will not witness much increase in the quantity. No firm will have price advantage because of the similar decision taken of lowering prices by the other firms. A firm believes to have a D demand curve. There is a break point which is indicated by points 'a' and 'b' in the MR curve. This break point is due to the kink in the demand curve. The MC curve cuts the MR curve in between these two break points only, thus indicating that maximum profits can only be earned by charging P price and selling the Q quantity.

(5) Role of Selling Costs: An oligopoly firm has to incur much expenditure on advertisement. Given, high cross price elasticity of demand and price rigidity, the only way open to an oligopolistic firm is to promote its sales by advertising its products. The expenditure on advertisement is aimed primarily at shifting the demand in favor of the advertised product. In oligopoly, selling cost is a crucial part of a firm's expenditure because where a firm fails to keep up with the advertising budget of its competitors; there it may find its customers drifting off to the rival firms' products.

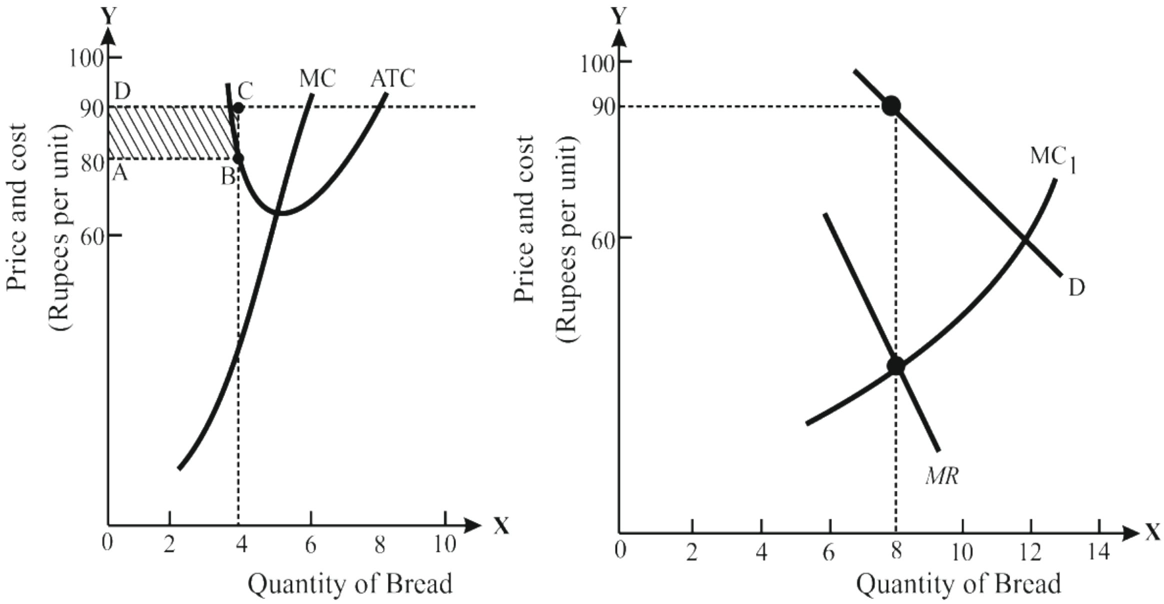
Impact of Advertisement on the sale of cooking oil



This figure shows that on account of advertisement, the quantity demanded for cooking oil has increased from Q1 to Q2, thereby shifting the demand curve from d1 to d2.

(6) Element of Monopoly: In an imperfect oligopoly, the firms enjoy some monopoly power. The existence of product differentiation creates 'Brand loyalty' on the part of the customers. Every firm has monopoly of its own brand and no other firm can sell its product under that brand name. For example, there are some very famous brand names in noodles. When someone goes to the market to buy noodles, then he asks for a particular brand.

Element of Monopoly and Economic Profits earned from Collusion



(a) Individual Firm **(b) Industry**

In this figure, part (a) indicates the individual market situation for a firm and part (b) portrays the market condition for the industry. The individual firms collude and agree to fix the output at such a price where the Marginal Revenue and Marginal Cost are equal. It is at this point where the monopoly element can be observed by the firms after colluding and agreeing to fix the price and quantity produced by each. Thus, the industry had set Rs. 90 as the price and 8 units of bread (where MC is equal to MR) as the quantity. The individual firms agree to produce 4 units each and they sell this quantity at Rs. 80 (as because the Average Total Cost (ATC) is Rs. 80 per unit). The difference of revenue earned by the individual firms and by the industry is of Rs. 40 per unit (Rs. 10 × 4 units). This is the Economic Profit (indicated by the box ABCD in the part (a) of the figure) earned by the individual firms.

Given, there are a few firms which dominate the market. These firms may collude among themselves and restrict the supply of the commodity in order to raise the price of the product and enjoy higher profits. Such collusion among firms leads to the creation of a Cartel. A cartel is a group of firms that agree to collide for maintaining the market price at a particular level by restricting the industry supply. In other words, when firms in an industry agree to co-operate with one another, so as to behave as if they were a single seller, then they maximize joint profits. The cartel can restrict the total output produced and increase the prices in a similar way just as what a monopoly firm does with an intention to raise its profits.

OPEC (Organization of Petroleum Exporting Countries) was set up in 1960 by five major Oil-exporting countries: Saudi Arabia, Iran, Iraq, Kuwait and Venezuela. This is perhaps one of the best-known Cartels in the recent history.

Its objectives were:

(i) To co-ordinate and unify the petroleum policies of the member countries.

(ii) To organize in a way that ensures price stabilization and eliminates the harmful as well as unnecessary fluctuations in price of petroleum.

By 1973, the number of members increased to 13 countries. The OPEC gained effective control over the oil prices and on how much oil to produce, and thus, also upon the oil revenues of its member nations.

(7) Indeterminate Demand Curve: The demand curve for a firm in an oligopoly market is uncertain. The demand curve faced by an industry is known. However, what is the firm's share in the industry demand is not clearly known as it depends upon the actions of that firm itself, and also upon the actions of its rival firms. It implies that the demand curve is unknown under oligopoly due to the different behavioral patterns of different firms in the industry. Under oligopoly, every organization/firm keeps an eye on the actions of its rival firms and formulates the strategies accordingly. No firm can precisely predict its sales because of mutual interdependence. Therefore, the demand curve for a firm in oligopoly is never stable and it fluctuates in response to the actions of its rival firms.

(8) Barriers to Entry: Usually an oligopolistic firm is also characterized by the feature of – 'Barriers to Entry' in the industry. Some common reasons that cause barriers to entry are – economies of scale, absolute cost advantage of old firms, patent rights, control over important inputs, preventive price and prevailing excess capacity, etc. Such barriers discourage the entry of new firms. As a result of this, only those firms that are able to cross these entry barriers can only enter the industry in the oligopoly market condition. So, the difficulty in entering the market by the new firms leads to the earning of the super normal profits by the existing market firms, in the long run.

3. Types of Oligopoly

Oligopolies are classified into various types, depending upon product differentiation ability and firm's collusive behavior.

1. Pure or Perfect Oligopoly: In this case, firms produce homogeneous products like cement, copper, iron, steel and aluminum. So, the decision by the consumers to purchase the good of a particular firm is influenced only by the Price Consideration. In most of these organizations, technology limits the number of firms that can operate in the industry.
2. Imperfect or Differentiated Oligopoly: In a differentiated oligopoly, firms produce differentiated products. The products are differentiated on the basis of some features, such as passenger cars, auto-rickshaw, trucks; etc in the automobile industry can be differentiated on the basis of their utility, space of the vehicle and also other features like shape, size, design, etc.
3. Collusive Oligopoly: If the firms cooperate with each other in determining price or output or both, it is called Collusive or Co-operative Oligopoly. Cartels come under this type of oligopoly.
4. Non-collusive Oligopoly: If firms in an oligopoly market compete with each other, it is called a Non-collusive or Non-cooperative Oligopoly. For example, in providing internet and telecommunication services, there is a cut-throat competition among the rival firms.

4. Distinction between Different forms of Markets

S.No.	Basis	Perfect Competition	Monopoly	Monopolistic Competition	Oligopoly
1	Number of Sellers	Very large number of sellers	Single seller	Large number of sellers	Few sellers
2	Products	Homogenous	No close substitutes	Differentiated products	Homogenous or differentiated
3	Entry & Exit	Free entry and exit	No entry	Free entry and exit	Barrier to entry
4	Determination of price	Firm is price taker	Firm is price maker	Firm is price maker	Firm is price maker
5	Demand curve	Perfectly elastic demand curve	Less elastic demand curve	Highly elastic demand curve	Indeterminate demand curve
6	Selling cost	No selling cost	Nominal selling cost for informative purpose	High selling cost on advertisements, etc.	Huge selling cost on advertisements, etc.

5. Summary

Oligopoly is a market structure in which there are a small number of firms in the industry. An oligopoly is similar to a monopoly, except that rather than one firm, two or more firms dominate the market. There is no precise upper limit to the number of firms in an oligopoly, but the number must be low enough so that the actions of one firm significantly impacts and influences the production and market decisions taken by the other firms.

The main features of oligopoly are: (i) Few firms (ii) Mutual dependence of firms (iii) Barriers to the entry of firms (iv) Non-price competition (v) Indeterminate demand curve (vi) Selling cost.

We can also divide oligopoly market on the basis of homogenous or differentiated products (perfect and imperfect oligopoly, respectively) and on the basis of co-operation and competition (collusive and non-collusive oligopoly, respectively).