LECTURE NOTES ON MANAGERIAL ECONOMICS FOR STUDENTS ACADEMIC USE BY DR.NEHA MATHUR MA'AM

Oligopoly: Definition, Characteristics and Concepts

Oligopoly Origin

The word Oligopoly is derived from two Greek words – 'Oligi' meaning 'few' and 'Polein' meaning 'to sell'.

Oligopoly Definition and Meaning

Oligopoly is defined as a market structure with a small number of firms, none of which can keep the others from having significant influence.

Meaning of Oligopoly Market

An Oligopoly market situation is also called 'competition among the few'. An oligopoly is an industry which is dominated by a few firms. In this market, there are a few firms which sell homogeneous or differentiated products. Also, as there are few sellers in the market, every seller influences the behaviour of the other firms and other firms influence it. Oligopoly is either perfect or imperfect/differentiated. In India, some examples of an oligopolistic market are automobiles, cement, steel, aluminium, etc.

Characteristics of Oligopoly

Now that the Oligopoly definition is clear, it's time to look at the characteristics of Oligopoly:

Few firms

Under Oligopoly, there are a few large firms although the exact number of firms is undefined. Also, there is severe competition since each firm produces a significant portion of the total output.

Barriers to Entry

Under Oligopoly, a firm can earn super-normal profits in the long run as there are barriers to entry like patents, licenses, control over crucial raw materials, etc. These barriers prevent the entry of new firms into the industry.

Non-Price Competition

Firms try to avoid price competition due to the fear of price wars in Oligopoly and hence depend on non-price methods like advertising, after
sales services, warranties, etc. This ensures that firms can influence demand and build brand recognition.

Interdependence

Under Oligopoly, since a few firms hold a significant share in the total output of the industry, each firm is affected by the price and output decisions of rival firms. Therefore, there is a lot of interdependence among firms in an oligopoly. Hence, a firm takes into account the action and reaction of its competing firms while determining its price and output levels.

Nature of the Product

Under oligopoly, the products of the firms are either homogeneous or differentiated.

Selling Costs

Since firms try to avoid price competition and there is a huge interdependence among firms, selling costs are highly important for competing against rival firms for a larger market share.

No unique pattern of pricing behaviour

Under Oligopoly, firms want to act independently and earn maximum profits on one hand and cooperate with rivals to remove uncertainty on the other hand.

Depending on their motives, situations in real-life can vary making predicting the pattern of pricing behaviour among firms impossible. The firms can compete or collude with other firms which can lead to different pricing situations.

Indeterminateness of the Demand Curve

Unlike other market structures, under Oligopoly, it is not possible to determine the demand curve of a firm. This is because on one hand, there is a huge interdependence among rivals. And on the other hand there is uncertainty regarding

the reaction of the rivals. The rivals can react in different ways when a firm changes its price and that makes the demand curve indeterminate.

Firms behaviour under Oligopoly

Based on the objectives of the firms, the magnitude of barriers to entry and the nature of government regulation, there are different possible outcomes in relation to a firm's behaviour under Oligopoly. These are:

1. Stable prices
2. Price wars
3. Collusion for higher prices

Further, Oligopoly can either be collusive or non-collusive. Collusive oligopoly is a market situation wherein the firms cooperate with each other in determining price or output or both. A non-collusive oligopoly refers to a market situation where the firms compete with each other rather than cooperating.

Non-Collusive Oligopoly-Sweezy's Kinked Demand Curve Model (Price-Rigidity)

Usually, in Oligopolistic markets, there are many price rigidities. In 1939, Paul Sweezy used an unconventional demand curve – the kinked demand curve to explain these rigidities.

Reason for the kink in the demand curve

It is assumed that firms behave in a two-fold manner in reaction to a price change by a rival firm. In simple words, firms follow price cuts by a rival company but not price increases. So, if a seller increases the price of his product, his rivals do not follow the price increase.

Therefore, the market share of the firm reduces significantly as a result of the price rise. On the other hand, if a seller reduces the price of his product, then the rivals also reduce their price to bring it at par with the price reduction of the firm.

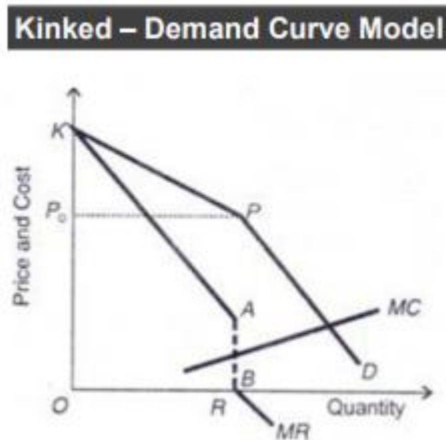
This ensures that they prevent their market share from falling. Once the rivals react, the firm lowering the price first cannot gain from the price cut.

Why the price rigidity?

As can be seen above, a firm cannot gain or lose by changing its price from the prevailing price in the market. In both cases, there is no increase in demand for the

firm which changes its price. Hence, firms stick to the same price over time leading to price rigidity under oligopoly.

Explanation of the Kinked-Demand Curve Model



In the figure above, KPD is the is the kinked-demand curve and OP_0 is the prevailing price in the oligopoly market for the OR product of one seller. Starting from point P, corresponding to the point OP_1, any increase in price above it will considerably reduce his sales as his rivals will not follow his price increase.

This is because the KP portion of the curve is elastic and the corresponding portion of the MR curve (KA) is positive. Therefore, any price increase will not just reduce the total sales but also his total revenue and profit. On the other hand, if the seller reduces the price of the product below OPQ (or P), his rivals will also reduce their prices.

However, even if his sales increase, his profits would be less than before. This is because the PD portion of the curve below P is less elastic and the corresponding part of the marginal revenue curve below R is negative. Therefore, in both price-raising and price-reducing situations, the seller is the loser. He will stick to the prevailing market price OP_0 which remains rigid.

Working of the kinked-demand curve

Let's analyze the effect of changes in cost and demand conditions on price stability in the oligopolistic market. Let's suppose that the prevailing price in the market is OP_0.

Therefore, if one seller increases the price above OP_0 and the rival sellers don't and keep the prices of their products at OP, then it will lead to the product becoming costlier than the others.

Subsequently, the demand for the costlier product will fall significantly. This is seen in the demand curve of a firm for any price above OP_0 or the KP section of the curve, is relatively elastic. The high elasticity reduces the demand significantly as a result of the price increase.

On the other hand, if the seller reduces the price below OP_0, the rivals also follow the price cut to prevent their demand from falling. This is seen in the demand curve of a firm for any price below OP_0 or the PD segment of the curve is relatively inelastic. The low elasticity does not increase the demand significantly as a result of the price cut.

This asymmetrical behavioral pattern results in a kink in the demand curve and hence there is price rigidity in oligopoly markets. The prices remain rigid at the kink (point P). In other words, the price will remain sticky at OP_0 and the output = OR at this price.

Due to the difference in the elasticities, the MR curve becomes discontinuous corresponding to the point of change in elasticity of the demand curve. The kink represents this. At the output < OR, the demand curve is KP and the corresponding MR curve is KA. For output > OR, the demand curve is PD and the corresponding MR curve is BMR.

Collusive Oligopoly

Sometimes, firms may try to remove uncertainty related to acting independently and enter into price agreements with each other. This is collusion. Collusion is either formal or informal. It can take the form of cartel or price leadership.

A cartel is an association of independent firms within the same industry which follow the common policies relating to price, output, sale, profit maximization, and the distribution of products.

Price leadership is based on informed collusion. Under price leadership, one firm is a large or dominant firm and acts as the price leader who fixes the price for the products while the other firms allow it.