1. Details of Module and its structure

Module Detail	
Subject Name	Economics
Course Name	Economics 03 (Class XII, Semester - 1)
Module Name/Title	Monopoly: Part – 2
Module Id	leec_10602
Pre-requisites	Knowledge about Economics Process
Objectives	After going through this lesson, the learners will be able to understand the following: 1. Concept of Monopoly 2. Features of Monopoly 3. Reason for Emergence of Monopoly 4. Price discrimination 5. Types of Price Discrimination
Keywords	Single Firm, Price Discrimination, Full Control over Price, No Substitute

2. Development Team

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1. Concept of Monopoly

Monopoly is a market structure in which a single firm is the sole producer of a product for which there are no close substitutes and there are barriers to entry of new firms. In other words, one can say it is a market condition in which there exists only a single seller of the particular product in the market. Since the monopoly firm is the only seller in the market, it does not face rivals or direct competitors. By virtue of being an individual seller, its products don't have any close substitutes in the market and the firm enjoys control over setting prices. The monopoly firm is thus called a price maker. Unlike firms in a perfectly competitive market, the monopoly firm sets the price and this in turn determines how much he is able to sell. Its demand curve slopes downward to the right, implying that more quantities can be sold by lowering prices. Since there exists a single firm in a monopoly market; therefore the single firm itself constitutes the industry. In monopoly therefore there is no distinction between a firm and the industry. Monopoly is one of the market forms, which has always attracted the attention of economists. This word has come from the Greek words, monos (single), polein (selling), which mean alone to sell. Therefore, in literary terms, it implies a market structure, where there is a single seller.

Figure 1 (Source: https://bit.ly/2yRnQJg)

The above picture indicate the monopoly firm. Let's take the example of Indian Railways. If one has to travel by train from one city to another, has no option but to board the trains run by the Indian railway. Similarly if a residence wants to take electricity connection in any particular state, he must contact the respective State Electricity Board for obtaining the connection. The exclusivity of services provided by these two firms makes them a monopoly because no other firms can provide those services. Notice also, that such exclusivity over the products or services, with no substitutes in market, gives these firms control over prices, as stated earlier.

2. Features of Monopoly

1. One Seller and Large Number of Buyers: In Monopoly there is a single producer of the commodity. He may be a sole-proprietor or there may be a group of partners or a joint-stock company or the state. So there is only one firm in a Monopoly and there is no distinction between firm and industry but the buyers of the product are in large number. Consequently, no buyer can influence the price but the seller can. The seller can charge high price for the product and sell less output.

Implication: Since there is only one seller selling a unique product to large number of consumers in the market, he can easily influence the market price of the commodity through changes in the supply of the commodity. Moreover, there are no close substitutes available in the market for the product produced by the seller, he can also determine the market price for that particular commodity and they can restrict the output and allow the market forced to determine the price. That is why the firm is called a price maker in monopoly.

2. A Monopoly firm is also the Industry: In a Monopoly, there is only one firm and the difference between a firm and the industry disappears. There is no difference between the study of a firm and the industry in a monopoly. For example, when we talk about rail transport in India, only one corporation i.e. Indian Railway comes to picture. Examining the Indian railway is equivalent to examining the rail transport industry in the country for there is no other firm, which provides rail transport services. Therefore we say, there is no difference between firm and industry under this type of market.

3. Restrictions on the Entry of the New Firms: In a Monopoly, there are barriers to entry for new firms into the industry. These barriers may take several forms such as ownership of essential resources, intellectual property rights liked patents & copyrights, economies of scale, infirm etc.

(a) ***Government restrictions:*** In order to promote social and economic welfare or to pursue certain economic objectives the government may give license to only one company for producing a product or providing a service in a given locality or space. This kind of restriction creates a monopoly for the firm in the production of that particular commodity or services. For instance, Indian railway has the monopoly in India in providing train services.

(b) ***Patent Rights:*** Several Companies engage in research and development work and spend a lot of their resources to invent new products or technology. The government encourages such research works by granting these companies Patents, which is an exclusive right to produce and sell the commodity for which it is granted. However these companies are free to sell their Patent rights to others against a fee. If one reflect, one will realize that granting such exclusive rights to a firm automatically creates barrier for other firms to enter. You should also know that Patent rights exist for a limited period of time after which new firms can enter the market.

(c) ***Ownership of a Key Resource:*** When a firm has sole control over a resource that is necessary for the production of a specific product, the market may become a Monopoly. For example, say in a small country a single farmer owns all sugarcane fields, he automatically thus controls the sugar production in the country. Such exclusive ownership of sugarcane fields restricts others' ability to enter into sugar production.

(d) ***Natural Monopoly:*** A Monopoly may be characterized by the presence of a firm with declining average costs. It becomes more cost-effective for one firm to serve the whole market than to have several smaller firms in competition with one another. Such a firm with declining average costs is referred to as a Natural Monopoly. These firms become natural monopolies due to their position and size, which makes it impossible for new entrants in the market to compete with them on the basis of price. Natural Monopolies are common in industries with high fixed costs and low marginal costs of production such as companies providing postal, telegraph, other public utilities and internet services.

4. No Close Substitutes: The commodity produced by the Monopoly firm has no close substitute. Moreover due to uniqueness of the product and non availability of substitutes, the demand for the commodity is relatively inelastic in the market than in a perfectly competitive market.

5. Price Maker: A monopoly firm is a price maker. This is because the firm is the only seller of a commodity with a large number of buyers. Hence, an individual buyer has no influence over the price of the product. Of course, if the monopoly firm increases the quantity supplied of the commodity, its price will fall. If he reduces the quantity supplied, price may rise. The monopoly firm may affect the prices in two ways:-

(i) Either he fixes the price by himself and allows the output to be determined by the market.

(ii) He fixes the quantity to be sold and allows the price to be determined by the market.

Thus a monopoly firm has control over price directly or indirectly and that is why it is known as a price maker.

6. Price Discrimination: Price discrimination is a situation when the same commodity is sold at more than one price. A Monopoly firm often charges different prices of similar products from different buyers or for different units from the same buyer. This price policy of the monopoly firm is called price discrimination. It is a situation of the market in which a seller charges different price from different buyers of the same product. It becomes possible when there is no competition in the market and different buyers show different elasticity of demand for the product.

Types of Price Discrimination

Price discrimination is mainly of four types:

(i) ***Personal Price Discrimination:*** When a Monopoly firm charges different prices from different customers on the basis of their paying capacity (income level) for the same product, then it is called personal price discrimination. For instance, a doctor charging different fees for the same type of operation from rich and poor patients. Students are charged less for entry tickets to book fairs than the others visitors, this is another example of personal price discrimination.

(ii) ***Geographical Price Discrimination:*** When a Monopoly firm charges different prices in different areas for the same product. For example, an exporter may charge a different price in foreign market than in the home market. Another very common example is price charged by a many food processing firms. It generally charges a little lower price in the state where it is manufactured than to the neighboring states.

(iii) ***Price Discrimination according to Use:*** When a Monopoly firm charges different prices for different uses of a product then it is called price discrimination or trade discrimination according to use. For instance, rate of electricity charge per unit for domestic use is more than for agricultural use.

(iv) ***Price discrimination according to Time:*** Many Public Sector Monopolies sell the same product at different prices at different times. For example, telephone department charges low rates for late night and early morning calls and high rates for day time calls. In cinemas rate of movie tickets are higher during weekends as compared to weekdays. Same is the case with parking vehicles. In the world of shopping malls culture, parking charges increase during weekends and public holidays.

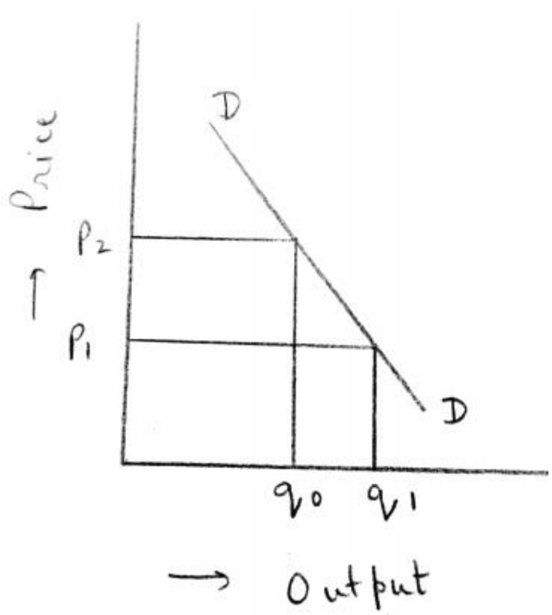
6. Low *Selling Cost*: Selling Costs refer to those expenditures made by firm to effectively raise its products' demand. The firm does not spend much on advertisement, sales tactics, publicity, etc. It incurs very nominal selling cost in the beginning to give information to buyers about its product. Under monopoly there is no competitive advertising. By definition, a monopoly firm produces a product which has no close substitutes. The monopoly firm only needs to inform or to make the buyers aware that his product exists and he need not emphasize on the competitive nature of its product. You will notice that you have rarely seen any advertisement by Indian Railway pursuing you to travel by it. It generally advertises or we can say rather give information to the people about the new trains going to run or any new services, being provided by it.

Of course, the monopoly firm may advertises to promote his sales or demand but it will not be at the expense of its rivals, since no rivals producing close substitutes are there under monopoly. Hence the advertisement by the monopoly firm is informative and promotional and not competitive.

7. *Negatively Sloped Demand Curve:* The demand curve of monopoly is negatively sloped which indicates that a monopoly firm can sell more only at a lower price. He cannot sell more of a commodity at a higher price. Even though firm has full control over market supply and is a price maker, yet to sell more it has to reduce the price. A monopoly firm can fix either the market price of the commodity or decide the quantity to be supplied. If it wants to stick with a particular price it will have to settle for the quantity demanded by consumers at that price. . For example, if government wants people should travel more by trains, it has to reduce the ticket fare to attract more and more customers.

The monopoly firm has a perfect knowledge about the price demand curve. In the figure given below, if it wants to sell q_1 quantity, it will be able to do so at price P_1.

Following diagram shows the price that consumer is willing to pay for different quantities supplied. At price P_2 the quantity supplied in q_0.



8. Absence of Supply Curve: An important feature of the monopoly firm is that it does not have the supply curve. The supply curve of a product by a firm follows the unique price-output relationship, that is, against a given price there is a particular amount of output which the firm will produce and sell in the market.

3. Perfect Competition & Monopoly

When there is change in price due to the change in demand, the firm in a perfectly competitive set up produces up to the output level where the new higher price (i.e. new Marginal Revenue) is equal with its marginal cost. In this way, under perfect competition, marginal cost curve becomes the supply curve of the firm. A Monopoly firm faces downward sloping demand curve and the marginal revenue (MR) curve lies below it. Therefore, a Monopoly firm, in order to maximize profits, equates marginal revenue with marginal cost. Since MR is less than price, therefore MC is not equal to price for a monopoly. The monopoly firm does not have a supply curve independent of the demand curve.. The price that the monopoly receives for the quantity at which MC=MR depends on the demand curve. The monopoly firm simultaneously examines demand (hence marginal revenue) and cost (hence marginal cost) when deciding how much to produce and what to charge. Accordingly, there does not exist a unique supply curve.

You should also realize that a Monopoly market structure may exploit consumers since there is a single firm, having full control over the market supply. The firm may charge any price from the consumers by restricting supply. That's why many such markets are regulated or controlled by the government to avoid such exploitation by the firms.

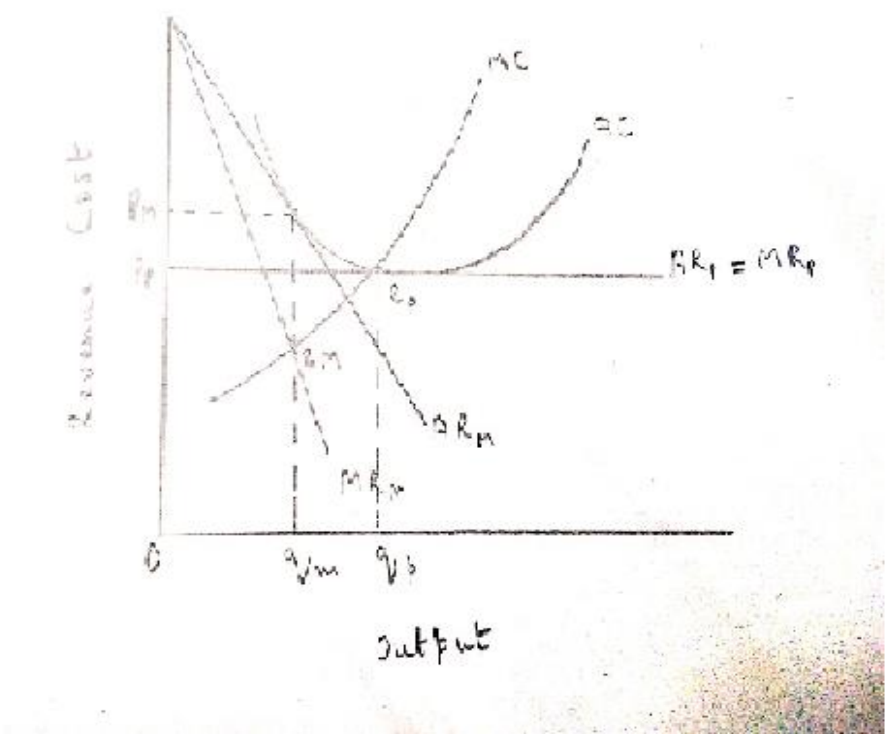


Figure 3: Profit Maximization under Monopoly

The above diagram represents a typical Monopoly firm which faces the downward sloping demand curve denoted as D and below it is the Marginal Revenue Curve denoted as MR. If you carefully notice, Demand Curve shows how with varying prices the quantity demanded changes, so every point represents a combination of the price and the corresponding quantity which the firm can sell. Therefore demand curve is also the average revenue curve. Why?

A downward sloping demand curve essentially tells you that with reduction in prices, so you can sell more at the reduced prices. Therefore your average revenue does decline as you decide to attract more customers by lowering price.

A profit maximizing monopoly firm as represented in the diagram, determines the price of the product from the demand curve, corresponding to the level of output where marginal revenue and marginal cost curve intersect. Profit Maximization condition under monopoly is same as the perfectly competitive firm i.e. MR = MC and MC cuts MR from below. The firm earns profit indicated by the area efgh. Unlike competitive firm, the monopoly sets higher price and sells quantity.

4. Summary

In economic theory, monopoly is characterized by sole producer selling a distinct product for which there are no close substitutes and there are strong barriers to entry. This sole producer (Monopoly firm) controls the entire supply of the market. Under these circumstances, the monopoly firm will have control over the price of the products sold by him. The monopolist faces a downward sloping demand curve. The monopolist maximizes profits by choosing the quantity at which MC=MR, and selling this quantity at the corresponding price determined from the demand curve. Hence a monopolists does not have a supply curve. In monopoly, selling costs are not absent, but do not play a very significant role. They are only incurred with an informative purpose. This market structure is the other extreme of perfect competition.