MONOPOLY AND ITS DRIVING FORCES, PRICING AND PRODUCTION STRATEGIES, PROFIT MAXIMIZATION, SOCIAL EFFICIENCY OF MONOPOLY

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Abstract: This article delves into the phenomenon of monopoly, exploring its definition, characteristics, and implications on social efficiency. The report examines the pricing and production strategies employed by monopolistic firms, emphasizing profit maximization, marginal revenue and cost analysis, and the impact of price discrimination. The investigation illustrates the social efficiency of monopolies under perfect price discrimination.

Keywords: Monopoly, Pricing Strategies, Profit Maximization, Marginal Revenue, Social Efficiency, Deadweight Loss, Economic Welfare.

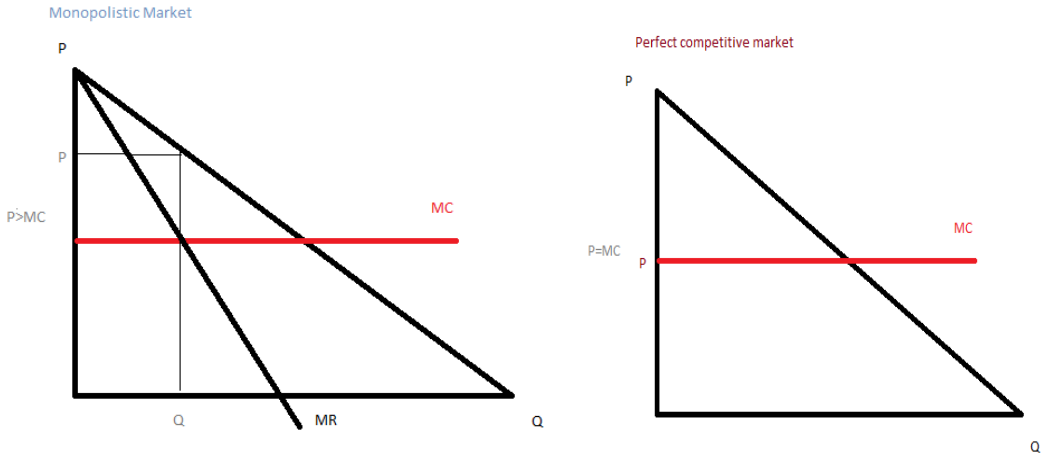
Introduction.

The topic of monopoly has always been a big phenomenon and a series of papers have been implemented to study its behavior by scholars. During their studies they each come up with new contributions to the subject. Thus, the aim of this report is to review and analyze the work done by scholars on the subject of monopoly and its behavior. Moreover, having considered all the aspects of the study, a proper conclusion will be drawn at the end. So as to make it easy to follow the structure of this paper, the report is divided into three distinct sections. In section one; there is a brief description about monopoly, its pricing and production strategies along with social efficiency concerns. In section two; a number of empirical researches conducted by scholars will be analyzed and discussed. Finally, section three concentrates more on the results of the research papers and tries to analyze monopoly behavior on the example of a real monopolistic firm.

Monopoly and its driving forces

So, the formal definition would be as follows: "Monopoly is the only supplier of a good or service for which there are no close substitutes" (Jeffrey, 2009, p349). Jeffrey (2009) also states that monopoly has been in practice even in ancient times dating back to the fifth century B.C , Thales, Greek philosopher, took control over the most of the olive presses when exceptional productive harvests occurred during a year. Here, we need to concentrate on how monopolies arise. Today, an inventor of a unique good or a new product, service, design is granted with a patent, an exclusive right to sell, by almost every country, (Jeffrey, 2009). Natural barriers such as license, copyright, patent and economies of scale that prevent new firms from entering the market and make monopolist companies even more powerful are also to be taken into account. Finally, Pindyck and Rubinfeld (2013) claim that interaction among big firms, rather than competing, is another barrier for new firms to join the market. So, since there is no close substitute, monopoly is not a price taker like in a competitive market, instead it sets the price. When setting a price, monopoly should always consider the demand curve it faces. Thus, although it is a sole producer, it cannot simply charge any price it wants. Production and pricing strategy of a monopolistic firm, therefore, depends on its power in market. Because a pure monopoly is rare, most markets today are owned by a few firms competing with each other while each of these firms still retain monopoly power as they have product differentiation, (

Pindyck and Rubinfeld 2013). In a perfectly competitive firm, price equals marginal cost whereas a firm with monopoly power sets higher price than its marginal cost (Figure 1 and 2).



This is because in a perfect competitive market the firm faces with an infinitely elastic demand curve whereas demand elasticity is elastic but not so high for a firm with monopoly power. In figure 1, one thing to consider is that MR, Marginal revenue, lies below the Demand curve. MR curve itself is a straight line starting from the vertical axis just like as the demand curve but half slopes of the demand curve (Jeffrey 2009).

Pricing and production strategies, Profit Maximization

As any firm or entity the major goal of the monopolistic firm is to maximize its profit. To do this, the first approach is to find the most appropriate price and quantity for the commodity it produces. Because marginal profit can be found by subtracting marginal cost from marginal revenue, all firms, no matter they are competitive or monopolies, maximize their profit when MR=MC. Thus, by equating monopolist's marginal revenue to its marginal cost it is possible to find the profit maximizing price and amount of output for monopolist to produce. To understand even better and make more precise, let's take an example. The monopolist's demand and cost functions are as follows:

$P(q) = 24 - q$ (Demand function) $C(q) = q^2 + 12$ (Cost function)

Here, what we do is to derive marginal revenue from demand function and marginal cost from cost function. Since$TR = P * Q$, our total revenue is $TR = 24q - q^2$. Now we find MR by taking derivative from TR: $= 24 - 2q$. Now the same is done with our total cost where q^2 a variable and 12 is a fixed cost. So $MC = 2q$ which is derived from TC . So as to find profit maximizing output now we equal MR to MC.

$$MR = MC \quad MR = 24 - 2q = 2q = MC \quad q = 6$$

Putting q=6 to our demand function we find that p=18. So monopolist maximizes its profit by setting the price of 18 and quantity of 6, thus makes total revenue: $TR = p * q = 18 * 6 = 108$. Below this monopolist's profit maximizing curve is shown in Figure 3.

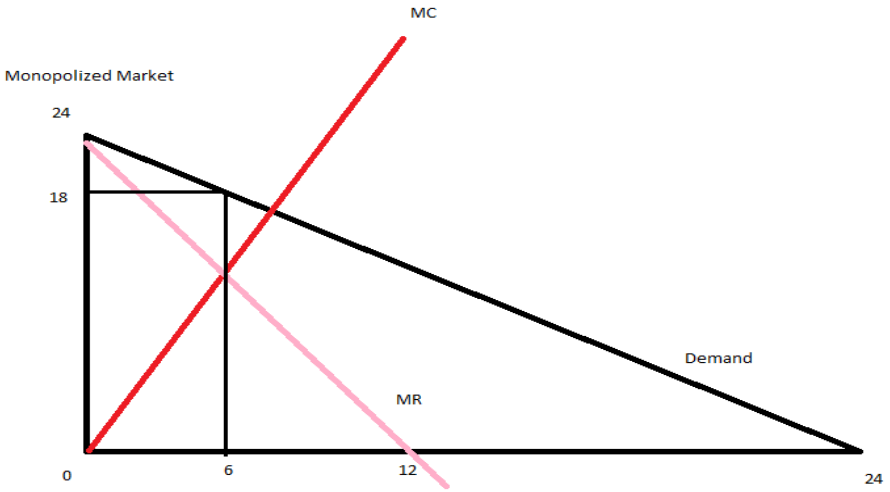
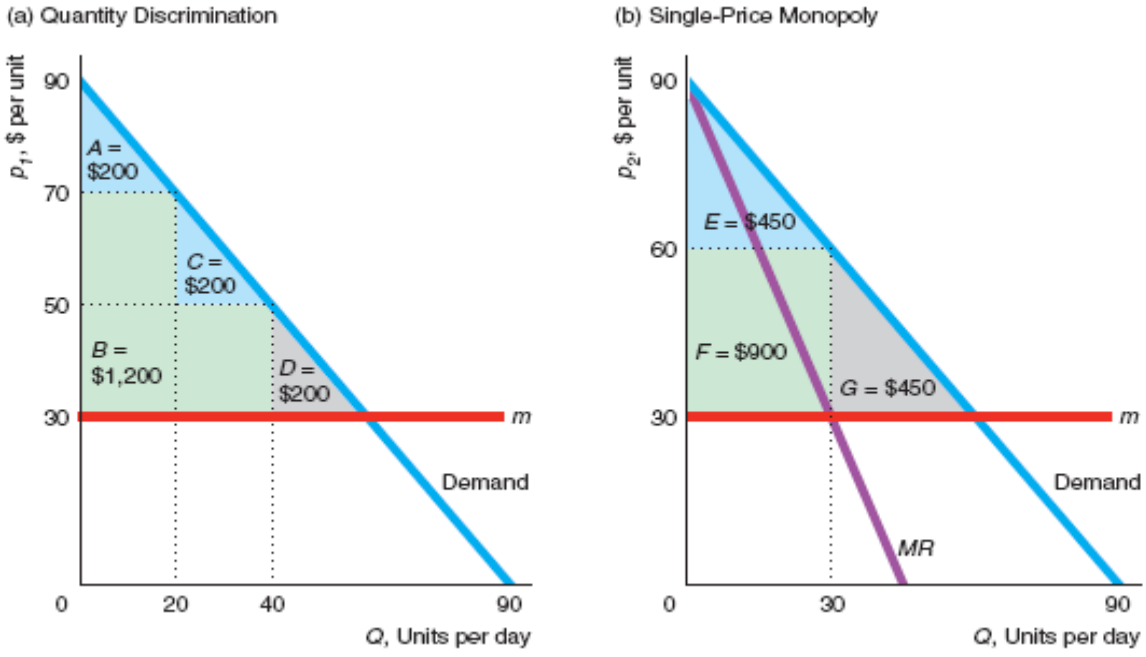


Figure 3

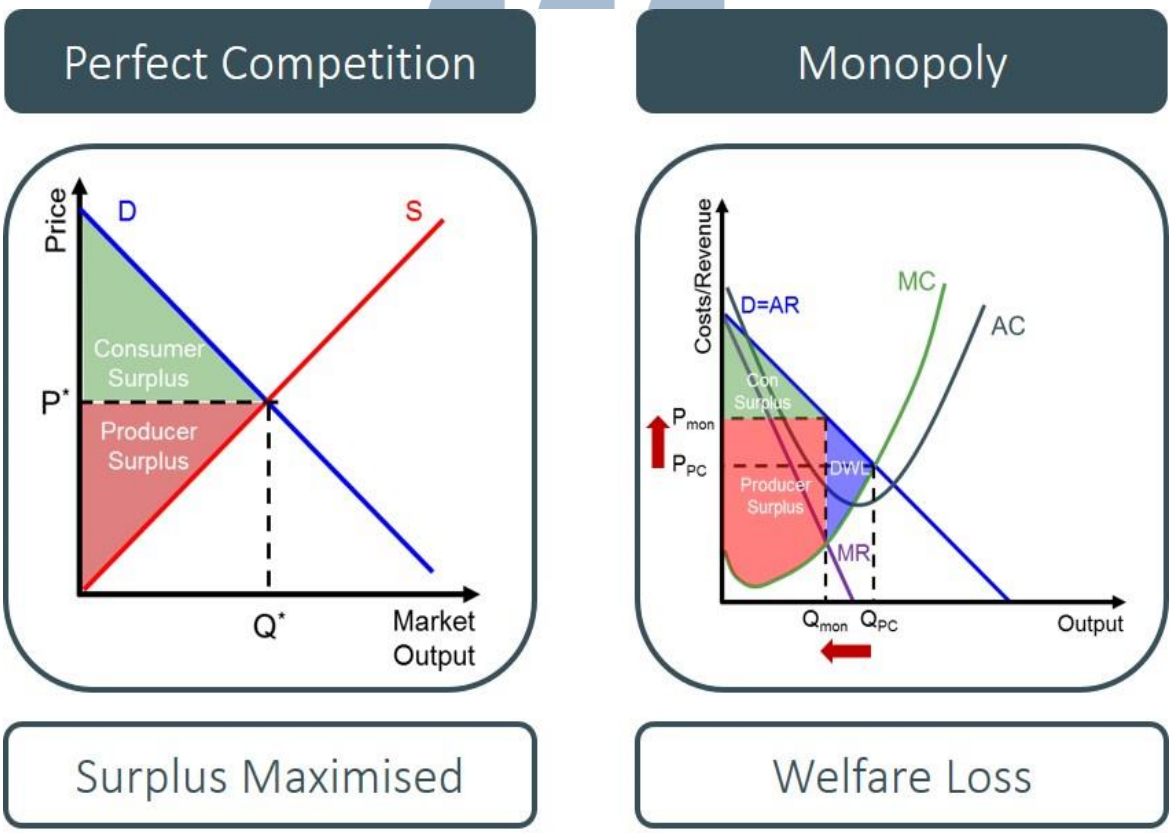
Whereas it might seem quite simple to understand the pricing strategy of monopoly, there are other pricing strategies. They include three distinct degrees of price discrimination, bundling and two part-tariff pricing strategies. All pricing strategies, nevertheless, are focused in capturing consumer surplus and transferring it to the manufacturer (Pindyck and Rubinfeld 2013). Price discrimination as Pindyck and Rubinfield (2013) defines is charging different prices to different group of customers or charging a different price according to the amount of the same product while two-part tariff strategy is requiring customers to pay twice, in advance and later. Figures 4 and 5 below illustrate a more precise image for price discrimination. The figure (a) is a clear example of second degree price discrimination, block pricing. In figure (b), monopolist is maximizing its profit to $900 by selling 30 units of products in a single price of $60; however, making a loss from consumer surplus area E, $450 and deadweight area G, $450. In figure (a), however, the monopolistic firm is making $300 more profit by charging two different prices $70 and $50 with quantities of 20 and 40 respectively, thus capturing consumer's reservation area and leaving consumer surplus only $200, area A, and consumer and producer deadweight loss of $200 each, areas C and D respectively.



Figures 4 and 5

Social efficiency of monopoly

Now let's examine if a monopoly is socially efficient or not. To assess this, let's recall what we have learnt so far; in a competitive market price is equal to marginal cost whereas in monopoly price exceeds marginal cost. Because a firm with a monopolistic power produces quantities by setting higher prices, the firm makes better off at the expense of consumers. Pindyck and Rubinfeld (2013) claim that in a socially efficient industry, producers and consumers do not make themselves better off by making the others worse off. Thus monopoly can be assumed as socially inefficient since there are not enough products for consumers who cannot afford monopolist's profit maximizing price. To make it more clear, the market is socially efficient only when there is no producer or consumer social welfare, deadweight, loss. Figures 6 below shows in competitive market there is no deadweight loss since price equals to MC and consumers are making better off, thus the market is socially efficient. In figure 7, however, monopoly maximizes its profit by setting price higher than MC and capturing some of consumer surplus, thus loosing social welfare from both: consumers and producers' side, blue deadweight loss area.



Figures 6 and 7

So, the pricing strategies of monopoly always causes to deadweight loss, social inefficiency. But, the monopolist can decrease its deadweight loss if it uses price discrimination strategy efficiently, figure 4 and 5 where the amount of welfare loss in block pricing strategy is $400 which is to $50 less compared to deadweight loss $450 in single price monopoly. Nevertheless, Jeffrey (2009) argues that monopolistic firm can be socially efficient when it follows perfect price discrimination by transferring all consumer surpluses to producer's profit

because every consumer purchases products at their reservation price, there is no deadweight loss.

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