Welfare consequences of monopoly power economics essay

[Economics]

ASSIGN BUSTER

COURSE: ENERGY ECONOMICS (EC 928)LECTURERS: KIM SWALES & ALAN GRANTDescribe, using diagrams, the welfare consequences under a monopoly compared to the perfectly competitive market? Explain what is meant by a natural monopoly, and the welfare consequences of average cost and marginal cost pricing under natural monopoly.

INTRODUCTION

In the market economy, the monopolist is identified as the only producer that has the right to producer certain goods. The monopolist is at will to raise the price he charges for his product without worrying about his rival. " The monopolist is the market and completely controls the amount of output offered for sale" (Rubinfield, 2009)On the other hand, the competitive producer is not at leverage to fix any price he wishes because of a large number of identical producers in the same industry that produce similar products; he may however charge a lesser price in other to attract customers and gain control of the market. However, a monopolist doesn’t just fix any price because he is at the unique position to do so. For example if a monopolist charges a high price for any good that he has rights or patent over; only few people might purchase it and runs the risk of making a loss thereby not covering total cost. From the above descriptions, we can depict that the main difference between the monopolist and the competitive producer is the difference in their behaviours which they both employ when charging prices. For the monopolist, price is fixed above marginal cost[1], while for the competitive firm, price has to be equal to the marginal cost.

WELFARE CONSEQUENCES OF MONOPOLY POWER

The ability for the monopolist to fix price above marginal cost is known as monopoly power. The determinants of monopoly power include the number of firms in the industry, the elasticity of demand and the market demand. Due to monopoly power, higher prices tend to be charged at less quantities and the burden is borne by the consumers. However, as we noted above, competitive firms pricing mechanism is different from the monopolistic firms because for the former, price is equal to marginal cost. More so, because we are concerned about the welfare of the consumer; we shall ascertain whether the monopoly power leaves a consumer more contented or discontented. By distinguishing from the consumer surplus[2]of the monopolist after it supplies the market and the competitive industries surplus when it produces a good, will give us a clear representation of the social cost of monopoly power. However, we make two assumptions before pointing out the social cost of monopoly power. Firstly, that the marginal cost curve also represents the marginal social cost indicating that there is no externality in the market. Secondly, that the monopolist and competitive market share the have the same cost curves and are operating in the same industry. From the figure 1 below at the end of this work. (Labelled figure 1)Pm is the price charged by the monopolist while Pc is the price charged by the competitive firm. QM and QC stands for the quantity produced by the monopolist and the competitive firm respectively.[3]For the monopolist to make profit, it will produce at the meeting point where marginal revenue (MR) and marginal cost (MC) both intersect. On the other hand, the competitive markets makes profit at the point where marginal cost is equal

to price so that the price and quantity is traced at the meeting point of average revenue.[4]Because of monopoly power, the monopolist is able to take over the industry and in other to make maximize profit charges a higher price Pm leading to a lost consumer surplus represented by the area labelled A. However, if the consumer decides not to buy at the monopolist prices and decides to purchase at the competitive market price Pc, the consumer will lose surplus which is identified by the area labelled B. Therefore total consumer surplus lost are the areas A and B. Conversely, the monopolist maximizes profit at price Pm and realizes a surplus indicated by the area labelled A; though he loses the opportunity to make profit if he charged at the competitive price which is represented at the area shaded C at price Pc and supplies quantity QC. A net loss is identified by summing areas B and C which is known as the deadweight loss[5]from the monopoly power. Conclusively, there will be inefficiency in the industry if the monopolist takes over the competitive market industry because due to monopoly power output would be low and price will still be higher. According to Pindyk (2009), from the analysis of the social cost of monopoly power, even if the monopolist was taxed and the income realized was reallocated to consumers of its product; there would still be inefficiency because output would be lower than under the conditions of the competition2) NATURAL MONOPOLYA firm is said to be natural monopoly when the cost of producing a range products is less than its marginal cost of providing it to consumers. In theory, a natural monopoly exists when average cost is decreasing along the range of goods being produced." There is a natural monopoly in a particular market if and only if a single firm can produce the desired output at lower cost than any

combination of two or more firms" (Sharkey, 1982)More so, natural monopolies appear to be the controllers of the market in which the exist and operate in. They create a high barrier of entry and gain with the advantage of economies of scale. This is due to the fact that, they enter the market at a high cost, most of the costs incurred in the beginning are sunk costs[6], thereby enabling then to operate with reduced costs. For example, in the electricity sector, the cost incurred in putting cables in the ground is far more expensive than the cost incurred in increasing or reducing the voltage and transmission." In the case of distribution networks for electricity, gas, telecommunications, posts, and water, the reason for declining costs is what can be called an economy of density" (Robert Baldwin, 2012)An important aspect of natural monopoly is the concept of economies of scope. It describes a situation whereby an industry is able to provide two similar products at a least cost than it would cost two individual firms that specialize in producing such products. A natural monopoly is more prominent when the features of economies of scale and that of scope are merged together by one firm or industry. In addition, big firms that operate in large scale with skilled employees and generating output at the least cost can also be attributed with the qualities of a natural monopoly. From the figure at the end of this work labelled figure 2, it depicts the movement of long run average and long run marginal cost curve under a natural monopoly. The average cost curve declines gradually as output increases on the horizontal line. The marginal cost curve is declines everywhere under the average cost curve.

Welfare consequences of average cost and marginal cost pricing under natural monopoly

Having understood the concept of natural monopoly, we now turn to ideal pricing policies that aim to regulate and amend its inefficiencies. The main goal of these pricing policies is to maximize social welfare.

MARGINAL COST PRICING:

Marginal cost pricing occurs when the natural monopolist is made to charge a price that is equal to marginal cost. Although this meets the efficiency requirement of price being equal to marginal cost (P = MC); the firm which is a natural monopoly incurs a loss. We observe this from figure 3, at points PoSTR. This is a loss because price is below average cost[7]and because the firm is needed in the society the government either compensates or decides pays a subsidy to the monopolist in other for them to continue with their operations; if not they would leave the market and society would suffer a loss. On the other hand, government doesn’t have the authority to support the monopolist with direct funding, the source should come either through taxation or the monopolist charges price above marginal cost. Both options are however detrimental to the society and the following argument supports the case:[8]Consumer benefits might be less than total cost: On normal occasions producers are meant to incorporate consumer expenses into the total cost; however, in this situation there is a possibility that consumer expenses isn’t covering total costs, implying that consumer benefits might be less than total cost which is shown by the area under the demand curve in figure 3Non-buyers of good paying for buyers?: It seems unfair that if government implements such taxing policies like lump sum tax that it is

going to be borne not only by consumers of the natural monopoly product but also by other non-buyers of the good. In the words of Roger Sherman (1989) " This is the problem that results from pursuing efficiency without paying compensation to those who are made worse off" Moral hazard: Because workers in the industry know that there is possibility that losses will be subsidized, there is weak incentive to cover and control costs. In trying to solve the problem of sourcing for revenue to cover cost in the marginal cost pricing situation; we are led to the second best pricing[9]result which is also known as the average cost pricing solution

AVERAGE COST PRICING

Under the average cost pricing policy, regulators set price equal to the average cost. Although, this is not welfare satisfying, it is better than the condition under the marginal cost pricing." When it is not possible to obtain the most desirable economic outcome in a situation—marginal-cost pricing in this case—society has to compromise and accept the next most desirable outcome". (Schooter, 2009)From figure 4, (can be seen at end of this work), as price Po and quantity Qo is charged by the natural monopolist, we can notice a deadweight loss depicted by the shaded area, this is because price exceeds the marginal cost. However, the monopolist is still making zero profit at this point.