An Introduction to Microeconomics
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Lecture – 132
Welfare Effects of Monopoly Pricing

Let us talk about Welfare Effects of Monopoly Pricing.

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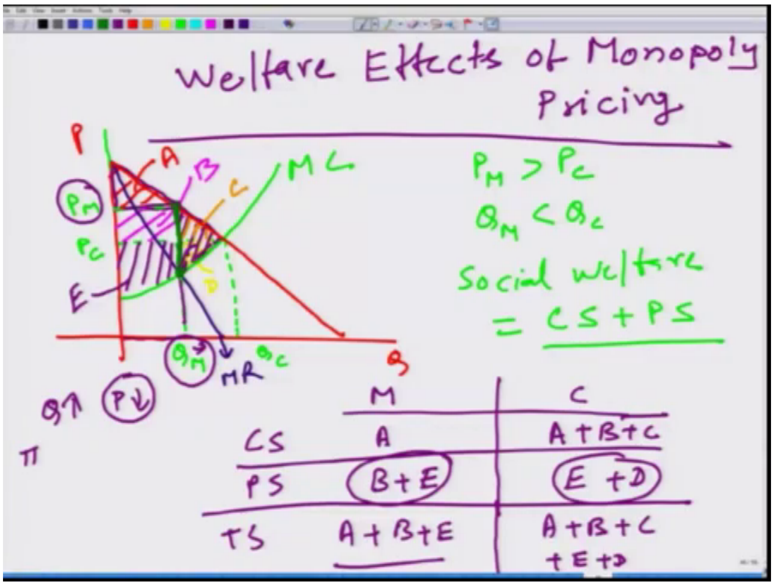

We are going to compare welfare, social welfare in case of monopoly with social welfare in case of perfectly competitive market. And we know in perfectly competitive market operating forms have to have price market price equal to marginal cost when they are maximizing their profit, which is not the case in case of the firm operating as the monopoly. The monopolist charges a price which is higher than their marginal cost. So, let us take a look at it.

We will have as usual a linear demand function this is P, this is Q, we will have marginal revenue function of course, this is marginal revenue function only for the for if the firm is operating in the monopoly not in the case of when this particular firm is operating in the perfectly competitive market. And let us say this is the marginal cost curve. It is clear that if this form is operating in this form is operating in the perfectly competitive market.

Then the quantity supplied is going to be Q C and it would be equal to market price which has to be equal to P C. So, C indicates the perfectly competitive market. What happens if this form is operating as the monopoly? The quantity supplied is going to be equal to Q M, M subscript denotes monopoly. And the price that this form would charge is going to be P M what we see that P M priced that monopoly charges is more than the market price in the perfectly competitive market. But what happens to the quantity? The quantity turns out to be less in the case of monopoly that in the case of perfectly competitive market.

Now, we have already learned that the social welfare is equal to consumer surplus plus producer surplus, ok. So, let us look at first let me mark different areas in this particular diagram to understand how consumer surplus and producer surplus they change in from perfectly competitive market to monopoly. So, let us say let me say this particular area in this red let us call it A, let us use a different color let us call this B, let us use third color, let us call this C, this is D, and this particular part is E, ok. I hope I am not missing just let us check A B C D and E, that is fine. So, let us look at consumer surplus in case of monopoly and in the case of perfectly competitive market.

In case of monopoly the area a gives the consumer surplus. Why because everyone has to pay the price P M to buy this particular object only Q M objects are sold. So, let us see this is the gain that consumers make. In case of the monopoly in case of perfectly competitive market they have to pay slightly they have to pay lower price that is P C. So, in that case the consumer surplus is going to be equal to A B plus C.

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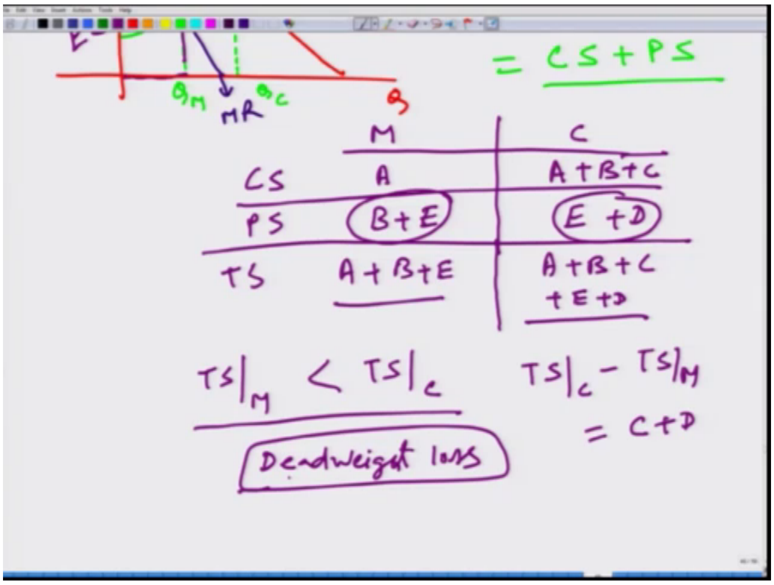

Now, let us look at two producer surplus. What happens to producer surplus? The producer surplus in case of monopoly is B plus E, while in case of perfectly competitive market it is equal to E plus D. Can we say what happens to the producer surplus can we compare B plus E to E plus D, E E is common so basically we have to compare B with D. But we have its certain that B has to be greater than D because no one is stopping perfectly, no one is stopping this monopolist from charging less or equal to P C. The only reason that it is not doing so because, it has a higher gain in case of monopoly than the case of perfectly competitive market that is why B plus E has to be greater than E plus D.

What happens to the total surplus total surplus is a plus B plus E while here in the case of perfectly competitive market it is A plus B plus C plus E plus D. It is very very clear now if we compare this to this what do we get the total surplus in the case of monopoly is less than total surplus in the case of perfectly comparative market. How much is the difference? We can write TS C minus TS M is equal to C plus D, and if we get back to this graph the C plus D area is this particular area. So, this is the welfare loss that happens in the case of monopoly. This welfare loss is also called deadweight loss. Now, what is the reason that we have this loss?

So, very very simple and we had done it in the past, but we will talk about it once again in this particular context. What is happening basically? That monopolist, if monopolist increases its production above Q M, the price that it charges in the market has to come down because this is the only firm supplying its output in the market. So, if it wants to sell higher output it has to bring down the cost. The decrease in cost two things would happen quantity that itself increases, but the price comes down what it cares about is not the quantity or price, but it cares about profit.

What is basically happening that that profit comes down because the P is coming down this effect becomes predominant and that is why monopolist is not selling this extra unit. It is not that it has a higher marginal cost to produce this particular unit. Let us say, let us hypothetically say that it sells Q M amount at price P M and anything more that it is able to sell at the decreased price of course, it would try to do that as long as that decreased price is higher than marginal cost and we have a range. Let us look at it here is the price at Q, Q M the price has to be P M, but the marginal cost is much lower this much of difference we have, ok.

So, it is not like perfectly competitive market that if it supplies one more unit then it is not able to recover its marginal cost, and that is why we are getting this welfare loss in the case of monopoly.

Thank you.