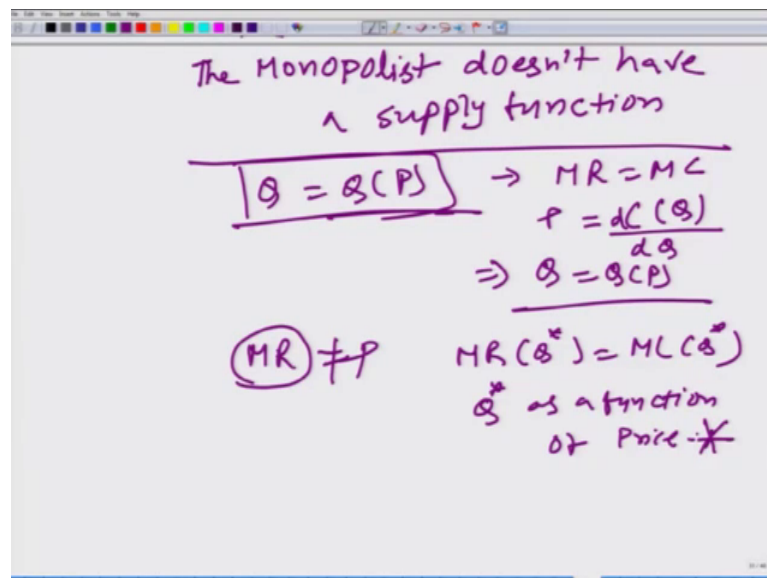


An Introduction to Microeconomics
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Lecture -129
No Supply Function for Monopoly

So, let us talk about the supply function in case of a monopolist.

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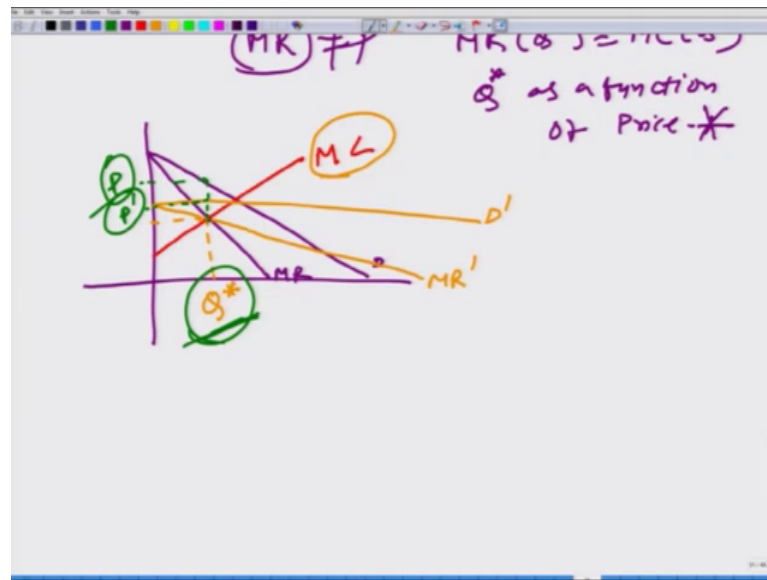
So, let me write the monopolist does not have a supply function. What does it mean that the monopolist does not have supply function? Remember how we obtained the supply function for firm operating in the perfectly competitive market. What we did? The firm did the profit maximization. It took price as given and it obtained the quantity that it would produce as a function of price.

So, what we get? That Q as a function of price, basically from here we obtain the supply function ok. And it is very very clear, if you just if you remembered the derivation what we had was that $M R$ is equal to $M C$. And $M R$, in case of a firm operating in the perfectly competitive market is simply P . And $M C$ is a function of output and from here we derived Q as a function of P .

Why cannot we do the similar thing in case of monopolist? Remember that for monopolist $M R$ is not equal to P ok. The marginal revenue depends on the demand

function which is not in control of the monopolist. So, what we get here? That $M R$ at Q star is equal to $M C$ Q star. From here we cannot express Q star as a function of price independently. This is simply not possible. It would become clear when we draw a diagram.

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Let us say that here is the demand function and of course, this is the marginal revenue function; demand function marginal revenue function. And let us say that this is the marginal cost function. Let us keep the marginal cost the same, but let us take another demand function and I will draw it slightly in a different manner. I will start with first the marginal revenue in this case and this is. So, this is another demand function D dash, this is another marginal revenue function. So, we are talking about two different kind of market demand, but marginal costs remain the same because marginal cost is coming from the firm side the technology side. So, it remain the same..

what happens ? In both the cases the Q star remains the same ok. Now let us look at, what happens to the price? In the first market that we discussed price is going to be P and in the second case the price is going to be P dash. So, you see same quantity this firm would supply at different prices given that the market have different demand function. So, very clearly this Q cannot be expressed as a function of P . And when we cannot express Q as a function of P , we cannot write the supply function ok. So, that is why we say that the monopolist does not have a supply function.

Thank you.