Foundation Course in Managerial Economics
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Lecture - 04
Supply Curve, Determinants of Supply Curve

Welcome to the next module of the first week of our discussion, the introductory course the foundation course in managerial economics and we started with introduction of the demand supply framework in the previous lectures and we developed the demand curve.

We said the demand the individual demand curve basically fallows the law of demand where when prices fall people demand for more goods. Now today and we also looked at different determinants of demand, different shifts, what shifts the demand curve. Similarly, today we are going to look at the supply curve and its determinants.

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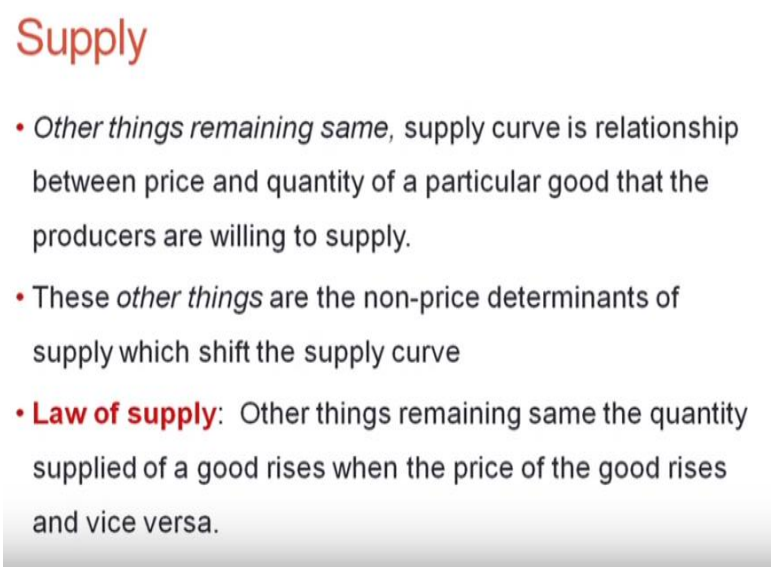

So what is supply? Supply is basically other things remaining same. Supply curve is relationship between price and quantity of a particular good that the producers are willing to supply. So again very similar to the if you have followed the last previous classes on demand you will be able to relate more to the supply curve that we are going to develop right now.

Basically supply what when a producer decides how much to supply. Is he just dependent on the price of the good? No. It is dependent on the lot of factors. Say for example the supply of we started with the market for ice-creams when we discussed demand. So a producer who is

supplying ice-creams, what is his supply dependent on? It is dependent on the price of ice-cream and it is also dependent on other factors say price of ice-cream.

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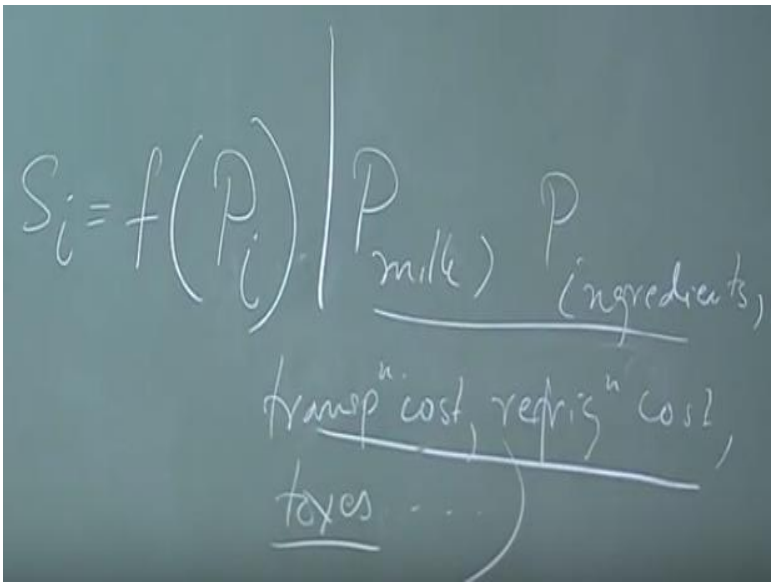

This is of, supply of ice-cream is a function of price of ice-cream and what else? Say for example milk is required for producing ice-cream. So if the price of milk goes up then the it is a problem to the suppliers, their cost goes up. So their willingness to supply more of ice-cream goes down. So supply is also a function of price of say milk. Price of say other ingredients, other ingredients are there in ice-cream.

Then maybe supply of ice-cream is dependent on the cost of transportation, transportation cost, refrigeration cost and maybe taxes. So one can imagine lot of things which influence the supply of any product but what the supply curve that we are trying to develop here that is a relationship between the price of the commodity and the supply of the commodity.

When I say other things remaining same, I am assuming all these other components or other variables, they are fixed. So supply curve or the relationship the supply function that we are developing here is the relationship between the price of the variable, price of the product, and the supply of the product or the quantity supplied of the product, other things remaining constant.

So this is what we do and so these other things are the non-price determinants of supply which shift the demand curve. Now let us draw the supply curve. Now supply curve similar to the demand curve, supply curve also follows the law of supply.

What is the law of supply? It says that other things remaining same the quantity supplied of a good rises when the price of the good rises and vice versa. It is kind of makes sense. It makes it is kind of understandable that when the price is going to increase, the producer is more interested in selling the product. So that is the law of supply.

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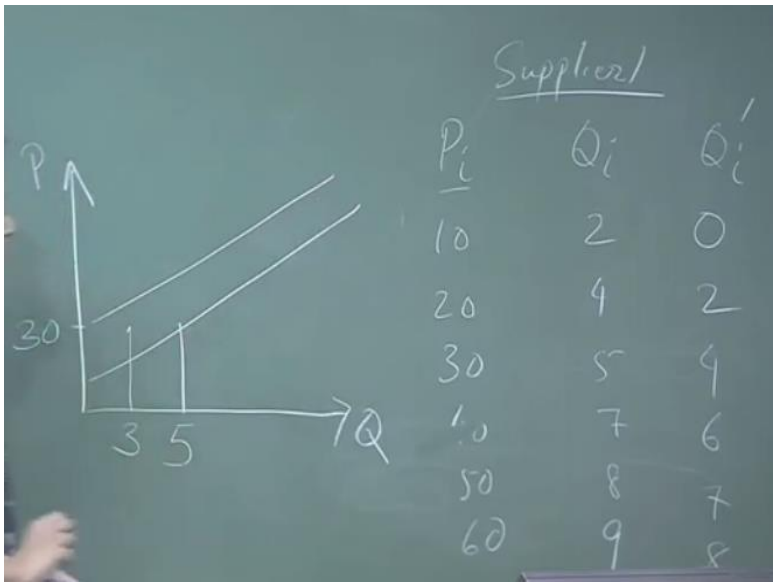

Say for example for 1 person let us assume this is the price of ice-cream and this is the quantity that a particular supplier, supplier 1. So this is his supply condition when the price is 10, 20, 30, 40, 50, and 60 rupees. He is willing to supply say, he is willing to say supply say 2000 kgs of ice-cream okay. So he is supplying to the market. So this is in 1000 kgs maybe. So when if the price goes up he supplies 4, still goes up it is 5, 7, 8, 9.

So this is his supply schedule. So this is his supply schedule. So they are positively related. As price goes up so does the quantity that he is willing to supply. So it is a positively sloping supply curve, is a positively sloping curve. So supply curve is a positively sloping curve. So this is the supply curve of one single individual. How do we find out the supply curve of the entire market because that is what we are aiming to do.

We are trying to find out the market conditions, the equilibrium price in the market from the individual demand and supply curve. So how do we get the market supply curve is the same way that we found out the market demand curve. What we see is basically, so this is one person. This is his willingness to supply. There could be another supplier in the market, say another person whose supply schedule looks something like this. He is maybe he is a less efficient supplier.

So if the price is 10, he is able to supply only 0 units and when price is he cannot supply unless and until the price is more than 10. Say at 20, he is willing to supply 2, 4, 6, 7, 8 okay. So this could be his supply. Similarly, there are n number of lot of suppliers in the market and at each price we sum up all the supply that the producers are willing to do and we say that is the market supply curve. Say at 10 rupees the aggregate of all the quantities is gives us the market supply at that price. Similarly, at 20 the aggregate of all the quantities that gives us the supply and that way we get the market supply curve.

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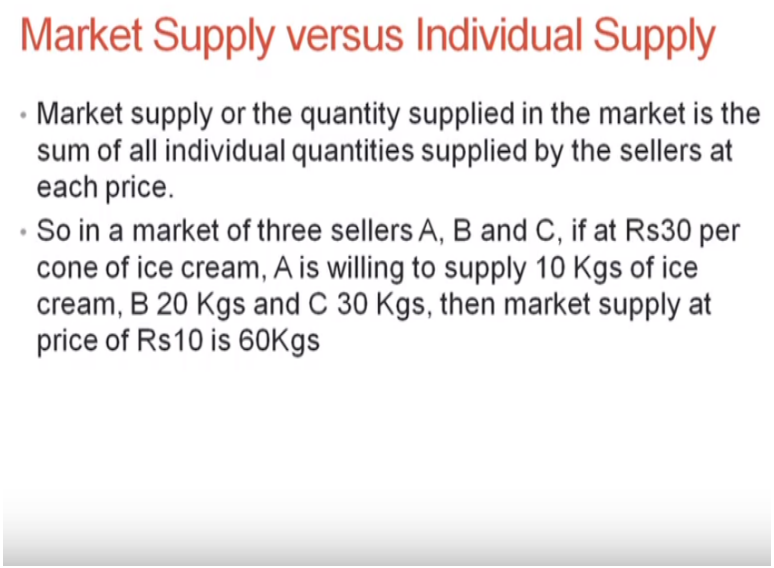

So market supply or the quantity supplied in the market is the sum of all individual quantity supplied by the sellers at each price. So in a market of say 3 sellers A, B, and C if at Rs 30 per cone of ice-cream, A is willing to supply 10 kgs of ice-cream, B is willing to supply 20 kgs, C 30 kgs, then the market supply at price of Rs 10 is 60 kgs.

So again just to remember that at the very beginning we have assumed this is a perfectly competitive market which means that the number of suppliers is much more than 2 or 3. So 2 or 3 suppliers in the market actually very strictly speaking it violates the assumption of competition, but this is just to explain how the supply curve is the market supply curve is determined. So in a perfectly competitive market obviously the number of suppliers is going to be very high, but the supply curve is determined in this way.

So again, so again coming back to the supply function or the supply condition we are interested in knowing, what affects supply? So this is the relationship between price and quantity in the

market so obviously if the price is going to move up or down similarly supply is going to move up or down. So that is the price determinant of supply. That is price determining supply.

But there are other factors like the supply function we wrote in the beginning and there were lot of variables there, lot of things which were influencing supply and we assumed them to be same when we developed this supply curve. Now what happens if any of those components, those variables they change? Then what happens to supply? That is what we are interested in knowing also and they are called the non-price determinants of supply.

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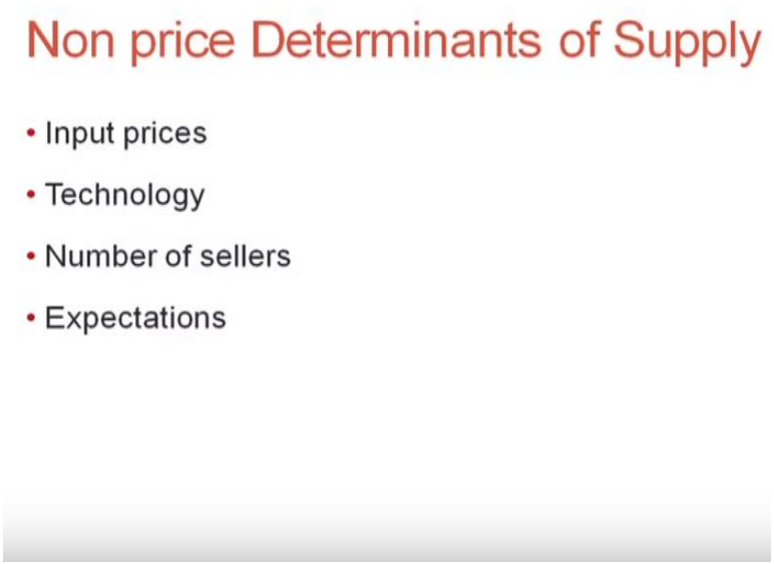

So there can be various non-price determinants of supply. Say for example input prices as I said the prices of ingredients, price of milk, even the transportation cost, all these are costs to the supplier. So any price goes up, then the supplier is willing to supply less. So if input prices are going up so at the same price say the supplier was say at when price was 30 rupees, the supplier was willing to sell 5000 kgs of ice-cream.

Now when costs go up when it is very difficult for the supplier to buy the ingredients, buy the milk, pay the transportation charge etc., he will be willing to supply less than 5000 kgs of ice-cream. So at the same price at 30, now probably he is supplying 3000 kgs. So in that case for and that happens at each price. At each price, the supplier is now willing to supply less than what he was supplying earlier. What does that mean? That means that the supply curve is shifting to the left. So supply curve has shifted to the left. This is what happens.

Again, another determinant is technology. Now the suppliers they use technology to produce. Now imagine there the same ice-cream producer he gets hold of a machine which produces ice-cream quicker and more efficiently. He needs maybe less electricity. He is able to produce more amount of ice-cream in lesser time. In that case what happens is at the same price he is now willing to supply more because the cost has gone down for him.

So in that case maybe he is willing to supply at 3 at 30 at 30 rupees he is willing to supply 7 units. So in that case for every price his supply curve has shifted to the right. Another non price determinant of supply is number of sellers. This is kind of obvious. If the quantity, if the number of sellers here goes up this total summation is going to go up and the supply curve is going to shift to the right and if the number of some sellers say they are quitting the market, so in that case the supply curve is going to shift to the left.

Similar to the demand curve, the supply curve is also influenced by expectations. So if the, it may not happen so much in the case of ice-cream, I am not aware, but say price of oil. If the price of oil if the market is kind of speculating that the price of oil is really going to go up in the future then the oil companies might like to hoard the oil. They might like to increase their inventory and reduce their supply today so that they are able to sell the oil at a future point of time at a higher price. So this is what expectation does to supply.

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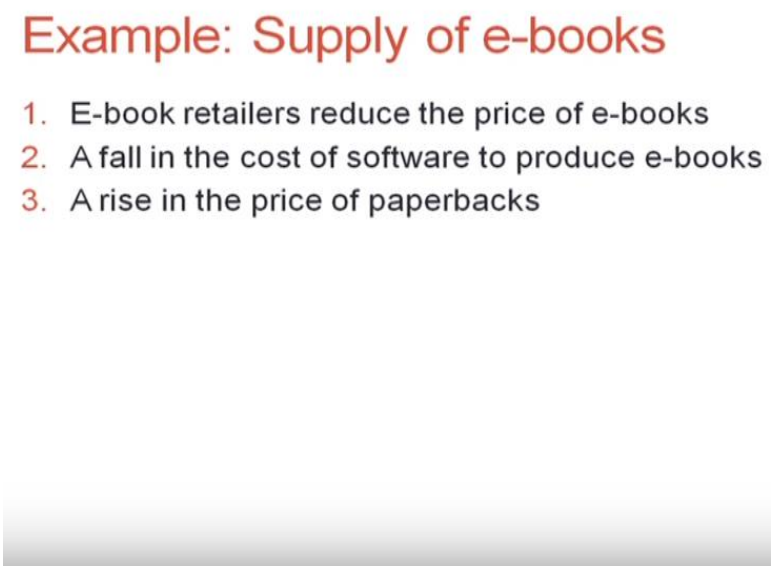

Now let us take a example and finish off this module of understanding the supply curve. Say, so let us take the example of supply of e-books. What happens if the e-book retailers reduce the

price of e-books? So we have discussed about lot of determinants of supply. Now which determinant is getting affected here?

Now here the price of e-book itself is changing. So what happens is there is no movement of the supply curve. The movement is along the supply curve. So if this is the supply of e-books then if the price of e-books is reducing so is the supply of e-books, the supply of e-books is going to come down.

What happens if a fall in the cost of software to produce e-books happens? If the, so it is basically becoming cheaper to produce the e-books. So when it is cheaper to produce the e-books the same thing is going to happen, the supply cure is now going to shift to the right. So basically at each price the supplier is able to supply more number of e-books.

And third is a situation where a rise in the price of paperbacks happen. So what are paperbacks? We discussed in the last lecture also, paperbacks are basically substitutes of e-books, the books that you generally get in the market and they are basically the e-book market is replacing the market for paperbacks.

So now if the if there is a rise in the price of paperbacks is it going to affect the supply curve? No. It is not going to affect the supply curve because it is going to affect the demand curve of the e-books because the paperback is a substitute of the e-books and price of e-books falling or rising is going to if the rise if there is a rise in the price of paperbacks the demand for e-books is going to increase and nothing is going to happen to the supply curve. So nothing is going to happen to the supply curves but obviously if there is a rise in the price of paperbacks that is affecting the demand supply framework in the e-books market but that we are going to discuss in a later module.

So that ends our discussion on supply curve. We have developed the supply curve. We know what are the determinants. We know how the supply curve shifts and in the following module we are going to discuss on the we are going to use both the demand curve supply curve bring them together in the market and see how they represent the market together and how that determines the equilibrium price and quantity in the market. Thank you.