**Economics of Health and HealthCare**

**Prof. Deep Mukherjee**
**Department of Economic Sciences**
**Indian Institute of Technology- Kanpur**
**Prof. Angan Sengupta**
**Department of Management, Amirtha Vishwa Vidyapeetham, Bangalore**

**Lecture - 07**
**Theory of Supply**

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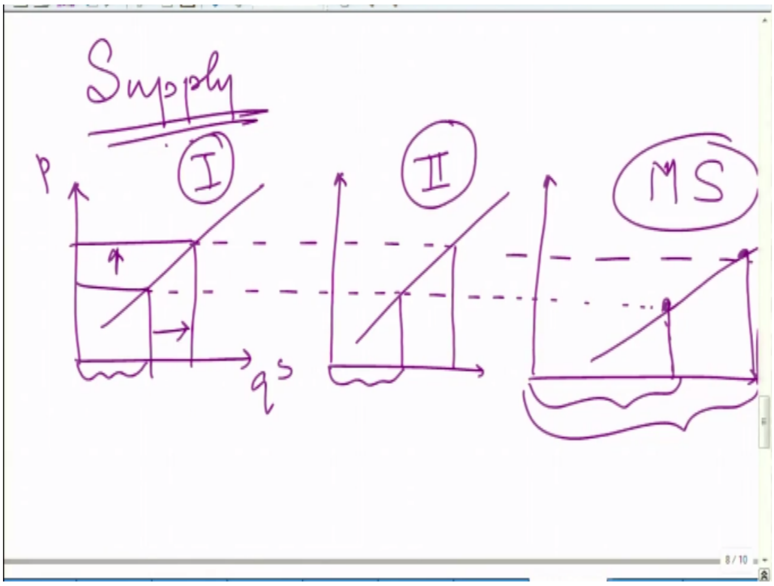


Now we will talk about supply. Supply curve contrary to the demand curve is positively sloping. So when price rises, quantity supplied will also increase because the supplier, the manufacturers, the sellers, they will think at this higher price if I can sell more my revenue, my profit will increase. So when price increases, this quantity supplied qs you can write it like that qs quantity supplied or you can write like say also increases.

And hence it gives you a positive supply curve. Similar to the demand, if at the same price you have got differential supplies from individual suppliers, you can add these two up to determine the market supply and you can add these two up to determine the market supply you know. So at the same price your supply curve is like this. So this is supply curve from individual one supplier, supply curve from supplier 2 and this is the market supply curve.

So this is the summing up of all these individual supply curves. Now as we learnt that it is not only price which affects the demand again it is not only the price which affects the supply. So which are the other factors affect supply? So we started with number of buyers when we started to find for the factors which affect demand, here we will talk about the number of suppliers first.

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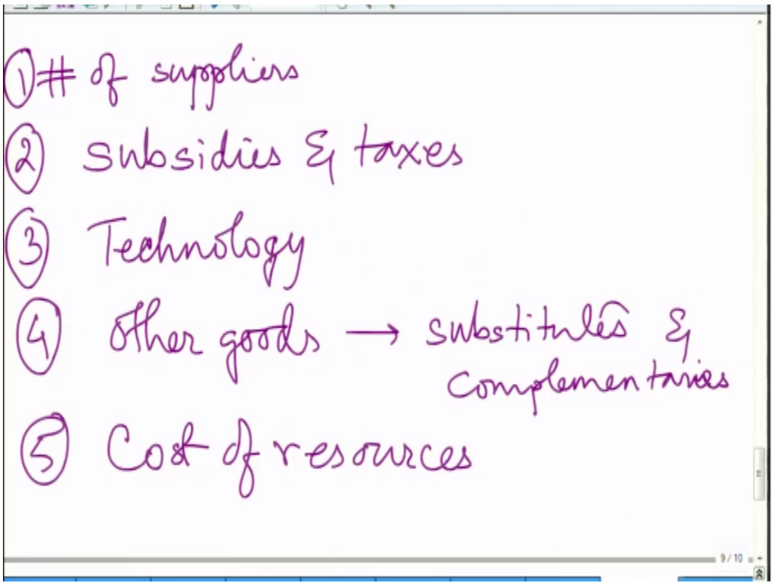


One, number of suppliers. Now how does this number of suppliers matter? When there is larger number of supplier, there is higher supply given the same price. The price of a particular say price of an x-ray is remaining fixed but the number of diagnostic center in a period of two years has increased in a particular area. Therefore, this supply has increased right so the number of suppliers.

The second can be subsidies and taxes. If price is same, subsidies is being given by the government on my production process. That means government pays for me or some amount, some percentage of my cost is covered by the government. Naturally, my cost comes down. When my cost comes down, my relative profit increases keeping the price same. If my price is 100 rupees and the cost of production is 80 rupees, my profit was 20 rupees.

And now my cost of production from my side is 60 rupees because 20 rupees is paid by the government, so keeping the price at 100 rupees my profit is 40 rupees. So my profit is increasing and I am being encouraged by this subsidy. So what I will do? I will increase the supply or the production of that particular commodity where the keeping the price same the supply will increase.

And that is what this government basically intends to do if there is you know if say for an example the healthcare startups, if they are giving some subsidies or some tax exemption. So their relative cost of production goes down and hence they can produce more and more, therefore they encourage giving the tax exemption of the subsidies, the government is encouraging the number of healthcare startups or say the tertiary care hospital or those which are working on non-communicable diseases.

Yes, so the subsidies and taxes. Number 3 is technology. Keeping the price same, better technology can increase the supply. See the price you know the charge of one x-ray has been remained same in 200 rupees. What happens? Initially, we used to get one big x-ray sheet. Now we get 10 or 5 or 7 multiple x-ray diagrams in one sheet and that too instantly. That means with the technology I am getting more number of photos at a lesser period of time.

So given the time constraint, I can produce more and given this number of you know the multiple products at the same time, I am having again lesser cost. My resource cost is going down with the technology. So the supply will eventually increase if I could produce say 50 x-rays, now I can produce say 300 x-rays, yeah with the technology the production can go up and if I use some mundane old technology, naturally with the wear and tear you know my production will also go down.

Four, other goods. This is primarily talks about again substitutes and complementaries. Yes, if the supply of say a particular commodity which supports a particular industry increases say supply of software which helps the connection which helps the connectivity of different departments in a hospital. I have developed a software which connects different departments of a hospital under the same platform.

And number of these softwares are increasing you know, so similarly the use of electronic health record or electronic medical records in hospital will also increase. Yes, that is because the availability of software has come and it is more. So the cost of those softwares will come down and the benefit will be realized and that will be implemented and utilized.

Otherwise, if the supply of any substitute good increases, then I will think as my competitor has increased its supply, I will think that okay fine if they have increased their supply, I also need to do something with my product, I will also increase my supply. Otherwise, they can overshadow my product yeah or the complementary.

If the supply of the complementary good increases, then I can think that if they are increasing supply so they have probably have seen that the market is expanding so I will also increase my supply so that you know I have a balance with my complementary goods otherwise the complementary goods will lose its market which will eventually have an adverse you know effect on my product.

Because if my complementary good loses its market or earns a bad name, my product will also like say if the contact lens solutions are earning good name or a bad name, it has a direct impact on the contact lens sells. Five, cost of resources. If the cost of my resources increase, the cost of my production will increase and my profit will go down and finally if my profit will go down, I will reduce my supply.

Therefore, these five has direct impact on supply of a particular product apart from the price, what we see as we have seen in case of demand.

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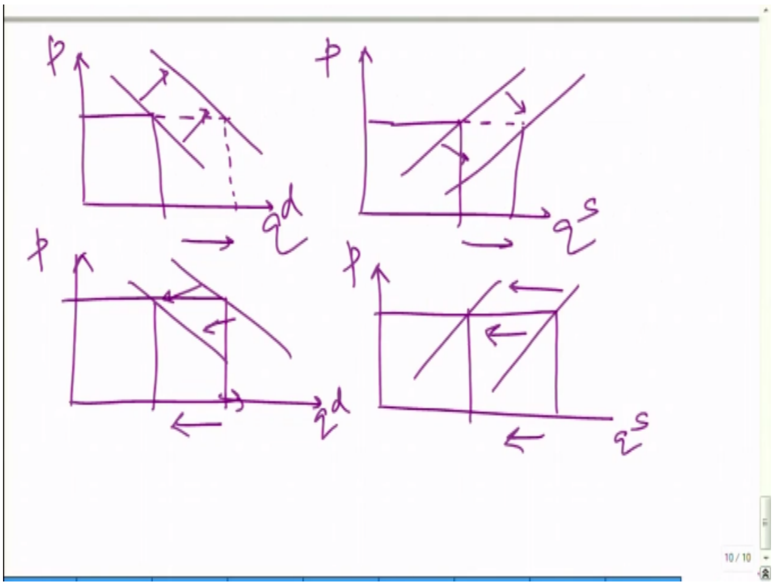

What we see is when apart from price, anything changes my demand and it increases my demand, my demand curve shifts rightwards. So in the same price my quantity demanded increases but in case of supply at the same price if my supply increases at the same price, if my supply increases, I will shift rightwards, so both of them are on the right sides but if you see you know either on the upward direction or in the downward direction.

In case of demand, it goes upwards. In case of supply, it goes downwards. In case of supply, it goes downwards but primarily both of them are moving rightwards because the quantity is increasing keeping the price same. If the quantity falls keeping the price same, then demand shifts leftwards and the supply also shifts leftwards because this supply is decreasing. Here the demand is decreasing, here the supply is decreasing, qd, qd, qs, qs.

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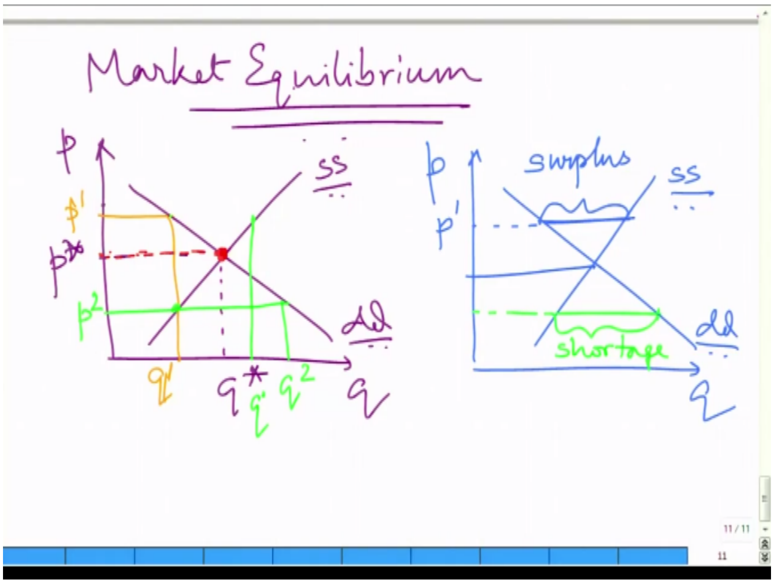


Yes, now having discussed about this demand and supply, we will talk about the last topic of this demand and supply or related to demand and supply which is market equilibrium. What is market equilibrium? Equilibrium is a stable state. When you move a pendulum you know you just make it in stable and when it comes to the stability, it you know comes to a point you know where it is stable, so that is its equilibrium.

Similarly, the market equilibrium is where the demand meets the supply. Let us take an example, if I plot both the demand and supply curve together, this is my supply curve, this is my demand curve together. In this price with this quantity, my demand and supply is similar. Now how does it work? It is like when I go to a market, we do bargaining right. We ask that how much you know you will give me, what is the price?

They may say that it is 10 rupees, a high price you know say they can say that it is 10 rupees and you can say that 10 rupees is too high, so I will not get a 10 rupees or I will get only say q1 amount at this 10 rupees p1. Then, they say no, no how much you want? Then, you can say to reduce the price you can say that I want q2 amount. Yes, so and they may say that and you can say that at this p2 price which is very, very low you will say that I can get q2, you give me at this price, I will get q2 but it is very low for him.

So he says at price p2 I can only give you q1 amount but if you can pay me p1, you pay me p1 I can give you this amount. Yes, so you end up in a bargaining. At this point, where supply is higher than the demand you know in a higher price only it is possible when price is higher that supply is higher than the demand then this point is known as surplus because supply is more, this is known as surplus.

On the contrary, because at this price high price, the demand will be low but the supply will be high. On the contrary if my price is low over here, it is known as shortage because I have a higher demand which the supplier does not want to supply me but I want that much. So in that shortage, the supplier wants to supply a very limited amount which does not meet my demand or maybe my bare minimum.

On a surplus, the supplier charges so high that my demand is not meeting, so if I have a private hospital which charges too much, so I would not go there right and then if I do not have many choices then probably there is a higher supply, they have all the equipments, all the facilities but they are charging enormously. So the supply is there but the demand is not there, so there is a surplus right.

So they need to decrease their price to attract the common people or the community in general whereas there is a person sitting with you know with not much of medical credibility, so he charges very low right. So there are many people who want to go visit him at that lower rate, lower fee but the problem is that he is very limited in terms of his ability to cater people, so the demand is there but the supply is not there.

So in that case, there is a shortage. So there will always be in these kinds of scenarios if now in this healthcare single system, I was talking about two different market player but in general when you engage yourself in a bargaining with a particular supplier or a seller, we always come to a consensus that okay (FL) you have something, I have something right. So we will come to a point where our consensus emerge that means the demand and then the supply is equal in a particular common price.

At that price, what I demand that is made and what the supplier wants to supply that is also made. So we are on the common point and then we can have our market equilibrium other than whenever there is a shortage, the price will increase because I want to get and then the supplier would not give me, so it will push the price upwards. Whenever there is a surplus, there is no demand but the supply is there.

And eventually you know I could not satisfy my demand but at the same time the supplier cannot sell their supply even if he has everything he cannot wear probably you know sell his entire bounty. So what happens is that it will again push down the price and eventually we will emerge in our equilibrium price we can call it pe or p star with an equilibrium quantity which is qe or q star and this is known as the market equilibrium where the demand meets the supply. Thank you.