Foundation Course in Managerial Economics
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Lecture - 05
Demand Supply Equilibrium

Okay continuing with the previous modules where we developed the demand curve and the supply curve and we discussed about the various determinants of demand, determinants of supply now we are going to see how the demand curve and the supply curve together they can be used in a various ways like they can be used to see if there is any disturbance in the market, how is that resolved, what happens in the market? The basically the demand curve and supply curve they give us the market equilibrium.

We are going to see how that happens and then we are going to see that if that equilibrium is disturbed because of any disturbance either to the consumers who are the people who are demanding the goods or the producers who are the people who are supplying the goods how the market equilibrium is disturbed and does the, does the market again go to reach another equilibrium? How does that happen? So this is what we are going to see in the in this module.

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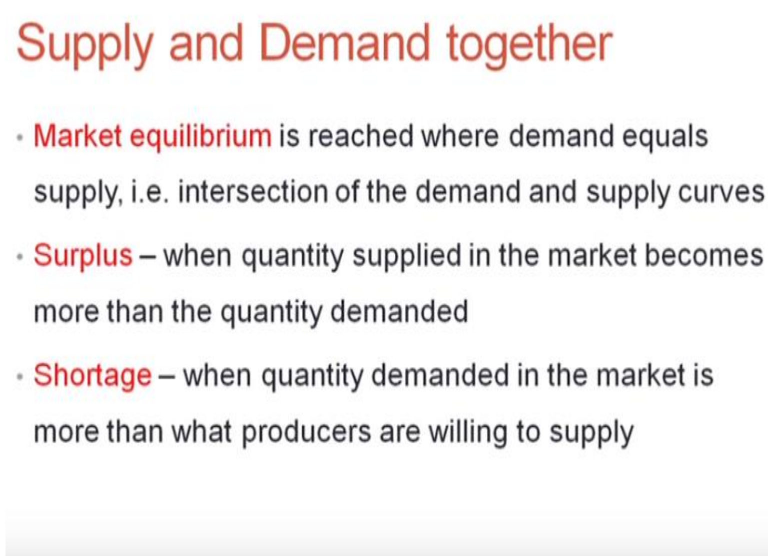

So first we are going to bring the supply and demand together in the market now. So there is a market equilibrium which is reached where demand equals supply that is the only point where which is the intersection of the demand and the supply curves. So basically what we are saying here is there is a bunch of people, the consumers who are looking for certain good.

So they have their demand, they are coming to the market looking for the goods and they have in their mind some idea about not some actually they have a definite idea about their the prices that they would be willing to pay for a certain good of certain quality and quantity. So certain quantity of good how much they are willing to pay.

So this is there in the minds of all the people who are coming to the market and similarly there are the suppliers who are bringing their product to the market and they know that there are various quantities they will be able to supply to the market given a set of prices. So they meet in the market and wherever the demand matches the supply that is the equilibrium. So let us although it is a very simple concept but still nevertheless let us try to draw it here. Let the demand and supply schedules of the so we started with the demand for ice-cream and supply of ice-cream.

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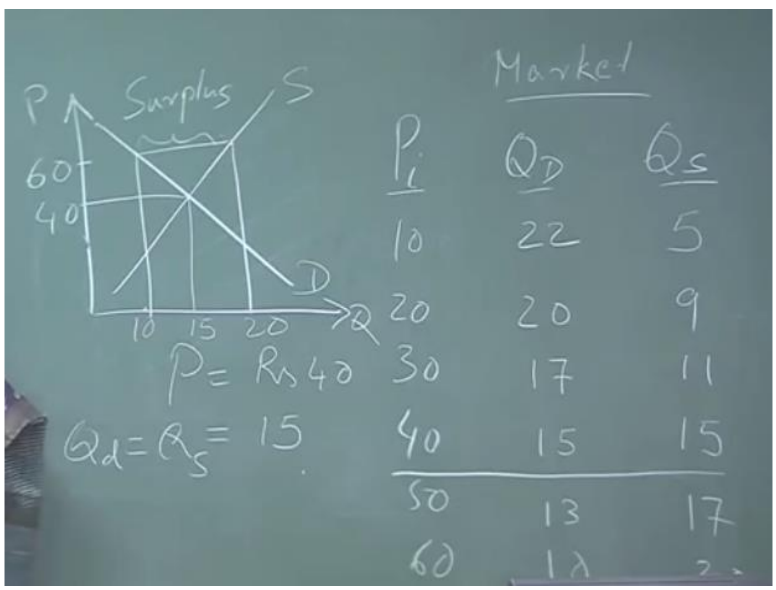

So let us say for example again, the price of ice-cream can be 10, 20, 30, 40, 50, and 60 and this is the market. So we are no longer drawing a individual demand or supply curve. It is not there is a single person coming to the single supplier and a single consumer in the market. There are whole lot of suppliers and whole lot of consumers in the market so this is the equilibrium is in the market.

So in the market this is the demand curve and this is the supply curve. So demand curve is if the price is 10 then quantity demanded is say 22, it is 20, 17, 15, 13, and 10. So the price if the price is very low the market the price is around Rs 10 per cone of ice-cream then the market is going to demand say 20000 kgs of ice-cream and how much is the entire the whole lot of suppliers who are there in the market. How much are they willing to supply?

So they are willing to supply only 5000 kgs. It does not make sense for them to produce more than that. So they are producing they are supplying 5000 kgs. So if the price is slightly less sorry ya when the price is slightly more 20, then the supply is a little more. The price goes up, supply goes up yet again. Price goes up to 40 they are willing to supply 15000. If it is the price is even more they will supply more and so this is the supply schedule and this is the demand schedule. So where do you think the market equilibrium is?

The market equilibrium is that price and that quantity where the amount demanded by the consumers is equal to the amount supplied by the consumer. So we clearly see that that point is here. It is the this is the market equilibrium. So this is the market equilibrium and where we get that the market equilibrium is price is Rs 40 and quantity demanded is equal to quantity supplied is equal to 15. So this is where and if we draw these schedules they will also be so this is the point 15000 kgs ice-cream supplied and demanded at a price of 40 rupees. So this is the demand curve this is the supply curve. So this is the market equilibrium which we get.

Now given the equilibrium now let us understand a couple of a couple of other concepts. One is the surplus; when quantity supplied in the market becomes more than the quantity demanded. Say for example what happens if the price goes up to say 60, due to some reason the price has gone up to 60 in the market. So if the price is 60 the suppliers would be willing to supply 20, 20000 kgs of ice-cream but that cannot be the equilibrium because at price of Rs 60 how much are the consumers willing to buy?

They are willing to buy only 10 units. They are willing to buy only 10 units. So there is clearly a surplus in the market. So there is clearly a surplus in the market where quantity demanded is much less than the quantity supplied. Now what happens in such a case. In such a case the producers are going to see that okay the price is high, I have, we have produced a lot of ice-cream but no one is willing to buy it.

So basically to sell the ice-cream, they will be reducing their price. So when they reduce their price gradually more people or more consumers will be entering the market showing some interest to buy the ice-creams and that will keep on happening till so this basically happens, so the price is so the quantity will gradually demanded will increase to 15 and quantity supplied will fall to 15 and the market will be back to equilibrium.

So what is happening if there is a surplus pressure the price is going to come down and when price comes down suppliers are going to reduce their supply and consumers going to raise their demand for the ice-cream and finally they again come back to the original market equilibrium.

The opposite of surplus is shortage. Now what happens when there is a shortage in the market? Say when quantity demanded in the market is more than what producers are willing to supply. So quantity demanded in the market is more than what producers are willing to supply.

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Say, now say price falls and price falls to 20 Rs, say price falls to 20 Rs. So at 20 Rs the consumers have a lot of demand for ice-creams. They would like to now, they would like to purchase 20000 kgs of ice-cream but at 20 Rs the supplier can only afford to supply 9000 kgs of ice-cream. So what happens in such a case?

In such a case the supplier is going to see that there is lot of demand in the market so they are going to increase their price or on the opposite of this the same reasoning is from the consumer side they will see that there is a shortage in the market, I want the ice-cream but it is not available. What is available in the market at this price is only 9000 kgs.

So many of the people they will be willing to pay a little more for the ice-cream. So gradually what will happen is the suppliers will increase their supply and consumers are going to reduce their demand or they are going to quit the market as they see that the price is going up. So all the people who were expressing their demand over here they are going to gradually quit the market as prices go up. As prices go up, the suppliers will be supplying more and the consumers will be demanding less till they reach the equilibrium level of 15 units.

So this is what happens in case of shortage. So what are we seeing basically? What is correcting the market? When there is any movement away from the equilibrium, there is something which is correcting the market and the market is coming back to equilibrium and what is that? Now that is the price. Price is basically price acts as a signal in the market.

It tells the consumers that at this price what you are demanding is not to be supplied by the suppliers and to the supplier also the price tells that at this price you can only sell so much and you have to reduce the price if you want to sell more. Similarly, to the consumers it says that you have to increase the price if you want to buy more. So price acts as a signal in the market and brings the market back into equilibrium.

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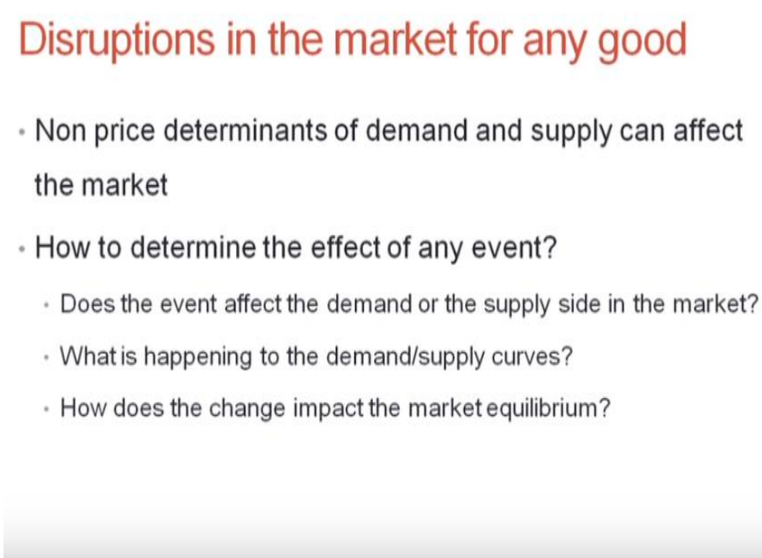

So now let us understand how exactly what happens how we can use this very simple framework to understand any disruptions in the market for any good. So how can disruptions happen in the market? Now this supply and demand shortage that the sorry the surplus and the shortage situations these situations are basically changes in the price that is the price determinant is changing and so the supply demand this equilibrium is happening in the market, but now we are going to talk about what happens any if any of these supply or demand curves any of these curves they shift in the market and what factors shift these curves. They, basically the non-price determinants of demand and supply shift the curves in the market.

So non-price determinants of demand and supply can affect the market. So whenever any determinant any disruption happens in the market how are we going to determine the effect of such an event. So basically the steps are we have to ask the questions, does the event affect the demand or the supply side in the market?

That is the first job that we need to do is we have to see that any event in the market is it affecting my demand side or is it affecting my supply side. If I have been able to figure that out then the next questions is what is happening to the demand and supply curves? Say if I have been able to determine that this event is going to affect my demand how is it affecting the demand? Is it shifting the demand curve? Is it shifting the demand curve to the right? Is it shifting it to the left? So I need to understand that.

And third is how does the change impact the market equilibrium. Once I have figured out that which of the two curves is getting affected and how it is getting affected it is easy to see what the new equilibrium is.

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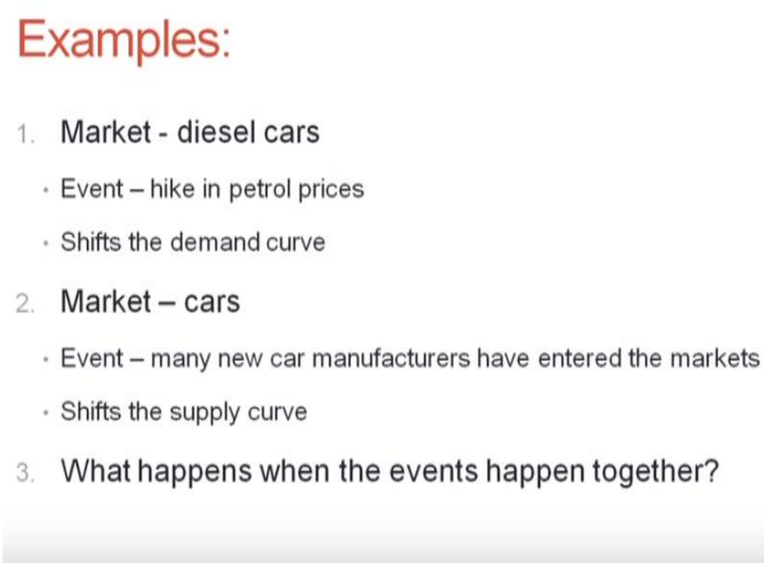

So let us try some examples and see how we can use this model to understand any changes in the market. Say we are talking about a market for diesel operated cars and a event that we are talking about is there is hike in petrol prices. So hike in petrol prices means what? Which of my 2 factors demand and supply is going to be affected?

Now when there is a hike in petrol prices the people who are going to buy the diesel cars or the people who are going to buy the petrol cars or people who are looking for cars they will be more inclined to buy the diesel cars because the fuel of petrol cars is becoming more expensive and petrol cars are basically substitutes of diesel cars and basically using a petrol car or substitute of diesel car is becoming expensive so the consumers are going to demand more of the diesel cars.

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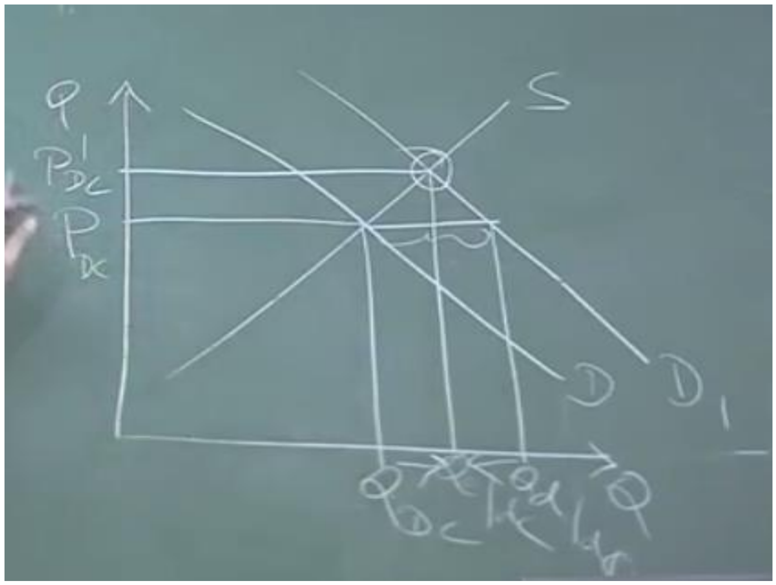

So let us again, so basically there is a increase in petrol prices, diesel cars the demand for diesel cars is increasing so my diesel the demand curve for diesel cars is going to shift to the right. So this is my new demand. So basically what I am saying is initially this was my equilibrium, this was the equilibrium price of car and supply of cars diesel cars say DC and the supply and now the demand has increased. So at the equilibrium level this is the existing price of diesel cars.

Now all of a sudden at since petrol prices have increased at this price of diesel cars demand for diesel car is now here. So this is the sorry this is the quantity. So this is the quantity demanded of diesel cars. This is the quantity demanded of diesel cars. But are they able to buy at this price? No they are not, because no one is supplying. How much are they supplying here? So now when the demand curve has shifted to the right the suppliers are still not supplying so much of diesel cars.

What they have observed in the market is basically demand curve has shifted up and people are willing to pay more for the cars and this is the new equilibrium where this is the new price of diesel cars and this is the new equilibrium quantity of diesel cars. So basically let us go through this once more. At equilibrium price of P DC the demand suddenly increased and quantity demanded also increased. So what situation is happening here? What is happening is a shortage, a shortage of diesel cars.

So when the supplier see that there is a shortage of the diesel cars in the market so and people are willing to buy more so they will supply more at a higher price, obviously, they cannot supply a high quantity at a lower price. So they have to follow their own supply curve and they are willing to they are telling the rest of the customers that if you are willing to pay a little more you can buy some diesel cars and the people here lot of them are going to see that the prices are increasing so they will quit the market.

So as some of them quit the market, the market basically then gradually comes back comes to a new equilibrium at this point where there is a new higher price of diesel cars and new higher quantity of diesel cars which are being sold in the market. So this is one example. So event is hike in petrol prices and this shifts the demand curve.

Now let us look at another situation. Say we are talking about generally the market for cars and the event that has happened is many new car manufacturers have entered the market. It is a some policy of the government which encourages manufacturing sector and maybe there is the economy is thriving and basically they see a lot of promise in this sector, so lot of new manufacturers have entered the market.

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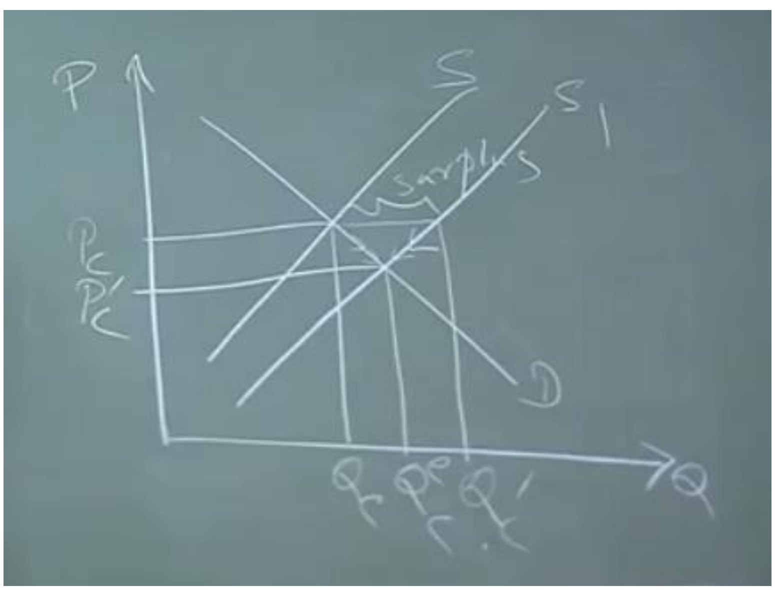

Now what happens in that case? Which of so this event is a non-price determinant of which of the 2 factors, supply or demand? Now when the new car manufacturers have entered the market clearly the number of sellers has gone up in the market and the supply has gone up. So if this is the demand this is this was the original supply and this was the price of cars, this was the quantity of cars getting sold and now since more suppliers have entered the market supply curve has shifted to the right and at this price the equilibrium price of P c there are more suppliers to supply cars and they would be willing to sell Q c dash of number of cars. But are people willing to buy those cars? No. There is a clearly a surplus in the market.

So when there is a surplus in the market as we discussed what happens they know that there is a surplus in the market so suppliers know that they will have to reduce the price to sell the units they are willing to sell and so price goes down and as price goes down some people beyond this point, they would be willing to buy the cars. So as price goes down this is the new equilibrium for cars and this is the new price at which the cars will be available. So this is the so this is the explanation of the event. Many new car manufacturers and shifts the supply curve and what happens when the events happen together?

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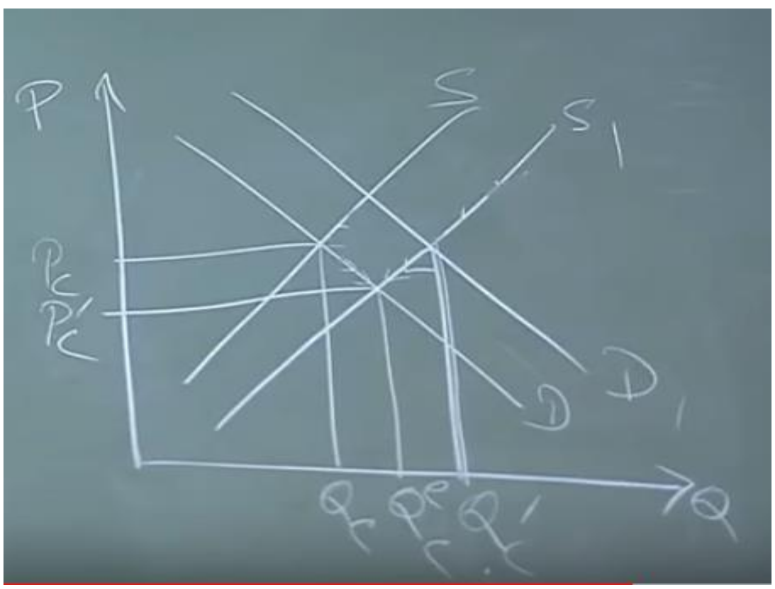

So let us so this this is about the supply and in the previous case we saw that there was a increase in demand. So the demand shifts. So what happens? There is a intersection at this point demand and supply curve and there is a new equilibrium. So basically now there are more number of cars in the market as is so although the difference is diesel cars and cars but mind you that within cars also there are many diesel cars. So we can well assume that if the number of cars the supply of cars has increased the number of diesel cars would also increase. So this kind of situation is going to affect the market for diesel cars also.

So there is a new equilibrium and there is a new equilibrium in the diesel cars market where there is the price is the price has gone down and the output has gone up because the demand has gone up and the number of sellers in the market has also gone up. So the price has gone down and the output has gone up in the market. So this completes our discussion of the demand supply framework. We have introduced the demand supply framework and let me summarize.

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We have we started with the concept of perfectly competitive markets. We are trying to explain equilibrium in a perfectly competitive market and we started with the concept we said that there are many buyers and sellers and all are price takers and the we start we developed the demand supply framework to understand equilibrium in the competitive market. We said the demand curve comes from the law of demand. The supply curve comes from the law of supply although there are various other determinants of demand and supply.

So the intersection of demand and supply determines the market equilibrium and we saw how price corrects shortages and surpluses in the market and any disturbance in the market may be explained through the demand and supply model. It is a very simple model yet a very powerful model even later when we are going to okay we are not going to discuss about macroeconomic concepts but any market which has some price and some quantity say for example investment market the price is basically the rate of interest.

So similarly say foreign exchange market. The price is basically the exchange rate. So there also this very simple framework of demand and supply can be used to understand any kind of fluctuations in this market say if rate of interest changes what happens to saving, what happens to investment, all these could be understood.

So it is a very simple yet powerful and model in the economics course. So in the next week we are going to talk about elasticities of demand and supply. We are going to develop the we are going to talk about elasticity, price elasticity, income elasticity etc. We are going to see how changes in prices change demand etc., and how they also help us understand various factors, the decision-making factors in case of demand and supply. Thank you.