Economics of Health and HealthCare
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Lecture - 09
Income Elasticity of Demand and Price Elasticity of Supply

Now there is like as we learnt when we were studying demand as we learned that the quantity demanded does not only change because of price. The fundamental law of demand says yes, price and quantity demanded are inversely associated but at the same time we can also see the changes in demand because of several other factors say for income, the number of buyers, the tests and preferences so on and so forth.

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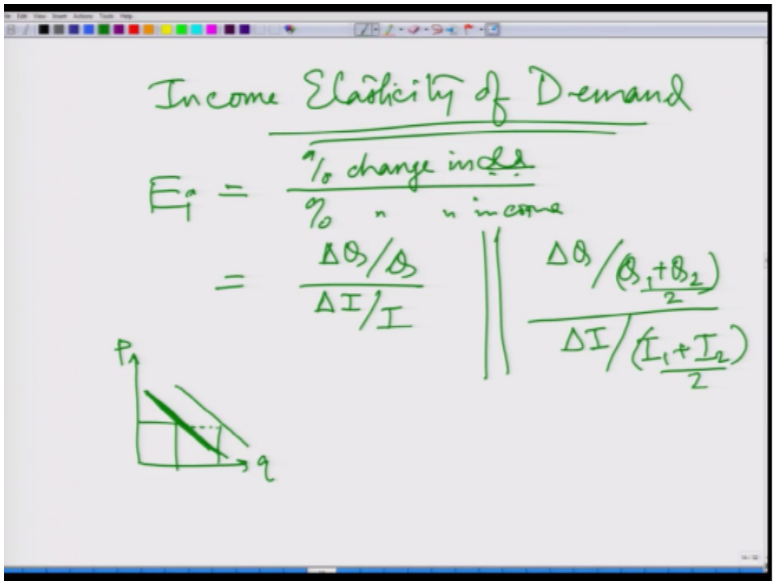

So when we have income elasticity of demand that says that how much my demand changes with percentage change in income. So this is nothing but from price it moves to the income, so price elasticity of demand says with changes in price percentage change in price what is the percentage change in quantity demanded. Here in income elasticity of demand, we say with a percentage change in demand for any good with the responsive change in demand for any good holding its price constant/the percentage change in income.

That means with this percentage change in income how much change in demand takes place, price being constant. Therefore, in income elasticity of demand you know the week we say

that Ei, i stands for income, this is nothing but as percentage change in demand/percentage change in income, so we can estimate it as say a change in demand/change in income.

If you want to take it as an arc elasticity, then change in demand/average demand or average quantity/change in income/average income. So this is following the concept of arc elasticity and what we understand in terms of income elasticity of demand that shows a horizontal shift in the demand curve, that is right here horizontal shift, it increases the demand curve shifts parallelly.

So if this was my demand with the price remaining same, the demand increases, so there is an horizontal shift of the demand curve. So there is a horizontal shift in the demand curve with change in income, so there is an income elasticity of demand. So whereas price elasticity of demand changes shows the movement along the demand curve and we have seen that where exactly you know with the given the elasticity of demand or inelasticity of demand, unit elasticity of demand and how the total revenue changes.

Therefore, the income elasticity of demand can be either positive or negative. Now why can the income elasticity of demand be either positive or negative?

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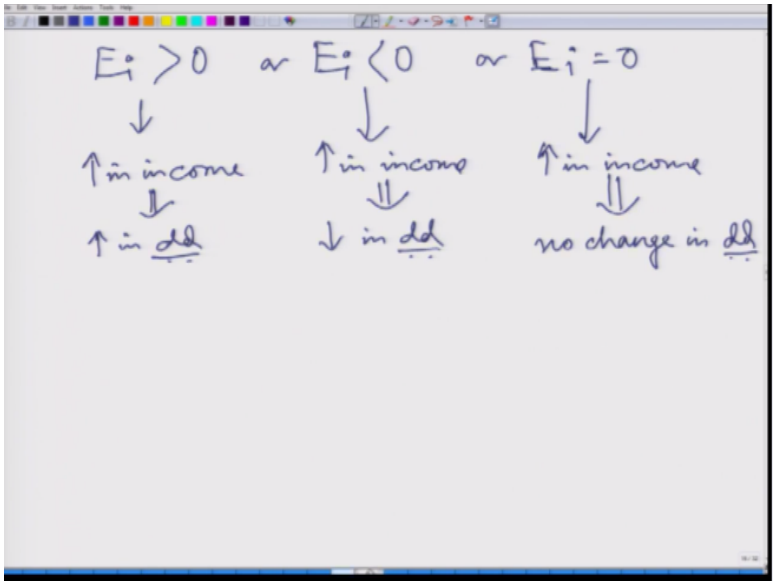

Ei income elasticity of demand can either>0 or Ei can be<0 or Ei can eventually be=0 as well. So what does this greater than zero means? Greater than zero means when that you know with the change in income the change in demand percentage change in demand

increases or the demand increases with the income, then the income elasticity is>0. When with the rise in income, there is no change in the demand. Then, this is 0.

When the rise in income declines the demand for a particular commodity, when with the rise in income, the demand for a particular commodity which is generally happens with the inferior commodities right with the rise in income we move to the better commodities. So the demand for a particular commodity declines. So when the rise in income declines the demand for the commodity, then our income elasticity is<0.

So over here rise in income leads to rise in demand, rise in income leads to fall in demand, rise in income leads to no change in demand yes. Now price elasticity of supply is the same thing when we talk about the price elasticity of supply, this is the responsiveness of quantity supplied with the change in price.

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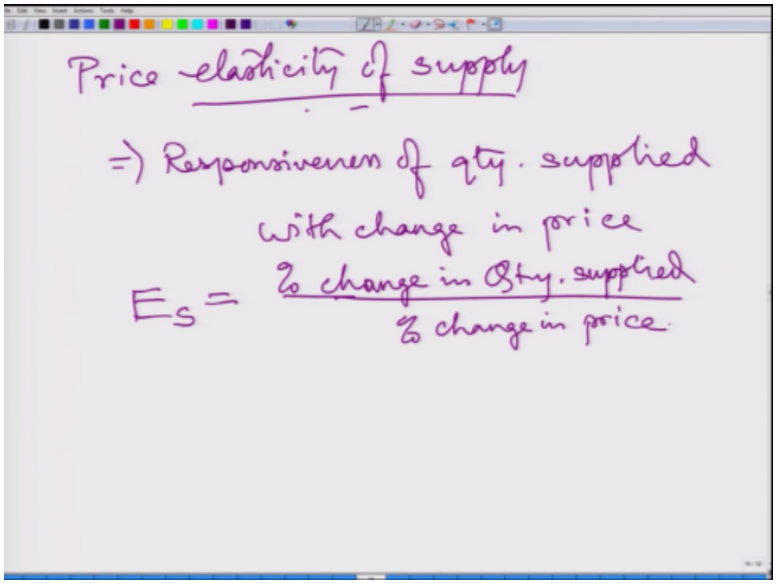

So price elasticity of supply is the responsiveness of quantity supplied with change in price or with the rise in price. So that shows that when we have a price elasticity of supply, we can keep it as E small s and then this is the percentage change similar to the demand in quantity supplied/the percentage change in price yes.

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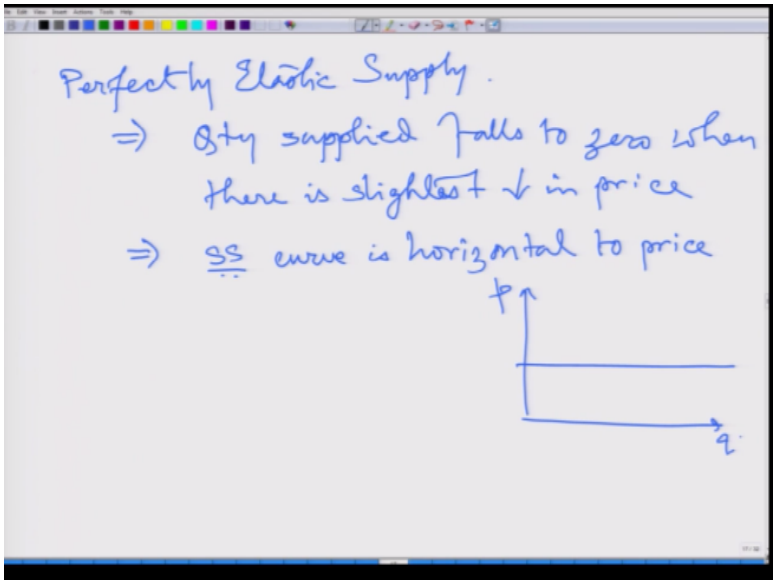

So in case of perfect elasticity of supply, in case of perfect elasticity of supply or perfectly elastic supply whichever way, in case of perfectly elasticity is supplied, this quantity supplied falls to zero when there is slightest fall or decline in price. That means if the price is falling, the supplier is no more interested in supplying that commodity anymore. So this is a perfectly elastic supply.

So even if slighter change in price the you know the quantity supplied is falling down to zero and then the supply curve is horizontal you know I can write it like supply curve is horizontal to price yes. Next is classifying perfectly inelastic supply.

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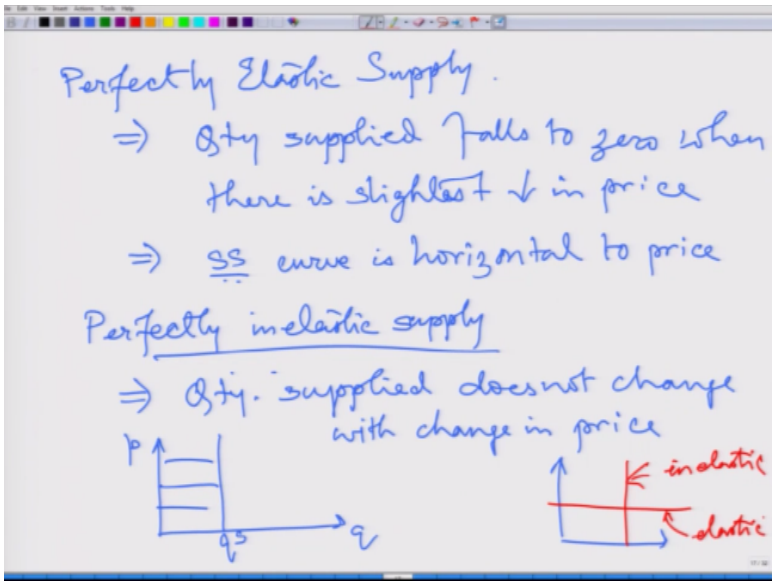

In perfectly inelastic supply, quantity supplied does not have any impact, quantity supplied does not change with change in price and it is a vertical to price. That means the quantity

supplied remains same even if the price is changing, this is vertical, the quantity supplied remains same you know it is vertical to given a price. So these are the two extremes you know where this is a perfectly inelastic and this is a perfectly elastic, inelastic and this is elastic, two extremes.

And generally the price elasticity of supply can be adjusted again given the time.

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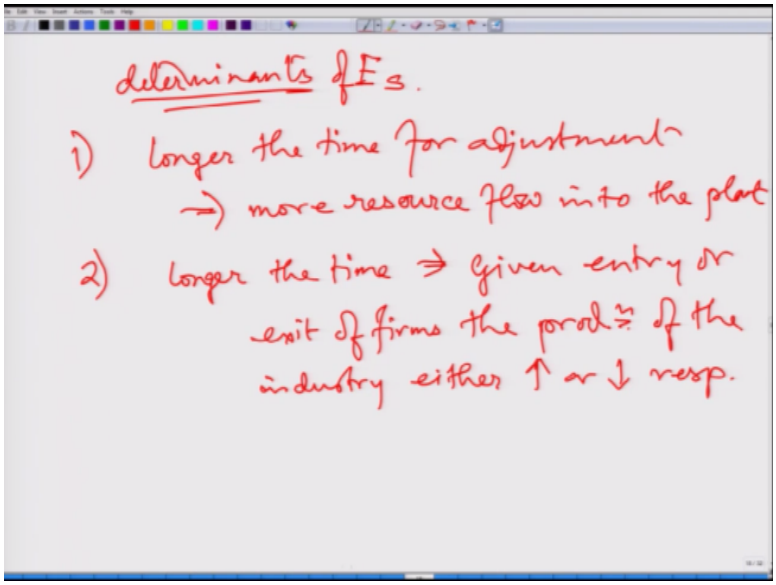

So that in terms of the determinants of price elasticity of supply, determinants of Es price elasticity of supply, one is longer the time for adjustment, it can lead to more resource flow into that industry or the plant and hence the industry expands with the existing number of existing firms you know. So with the longer of the time the inelasticity generally comes down.

The second is the longer the time allowed the entry of firms increases or decreases depending upon the firm's you know the condition or the scenario of that market in a particular industry. It may enter, it may exit. On the other hand, given the time you know so longer the time, the given entry or exit of firms, thus production of the industry either increase or decrease respectively yes. What happens when we have short-run and long-run price elasticity of supply?

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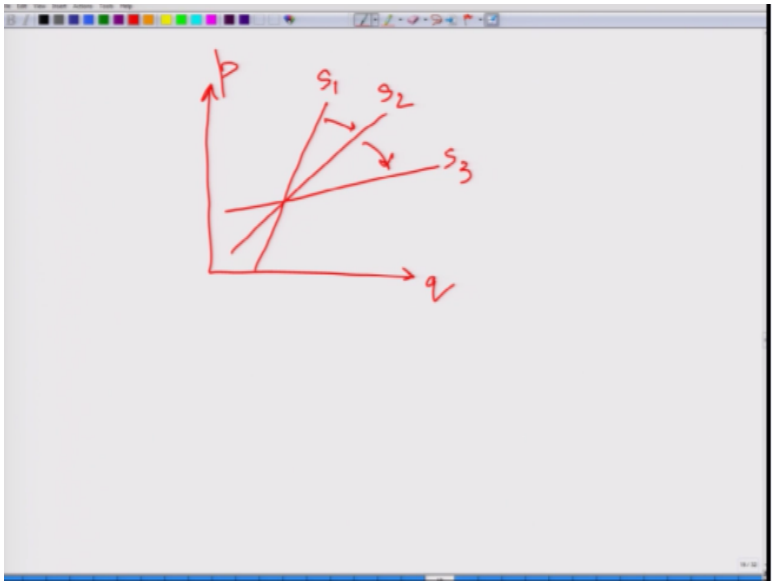

Just contrary to the demand curve in case of you know in case of short-run to long-run, the price elasticity of supply it moves this way yes. So it becomes more inelastic to more elastic, so from this from say this is my s1, s2 and s3. If this is my quantity and this is my price, so with the given price there was inelasticity in s1 and when time increases it becomes elastic and moves towards the more flatter elasticity and hence the supply curve is flat as compared to the short-run in a long-run phenomena. Thank you.