Economics of Health and HealthCare
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Lecture - 06
Theory of Demand

Hello everyone. In this session, we will learn the supply and demand for health care market. So when we talk about the healthcare market or supply and demand for healthcare we will basically think of demand or willingness to have a healthcare service or desire for a particular health status.

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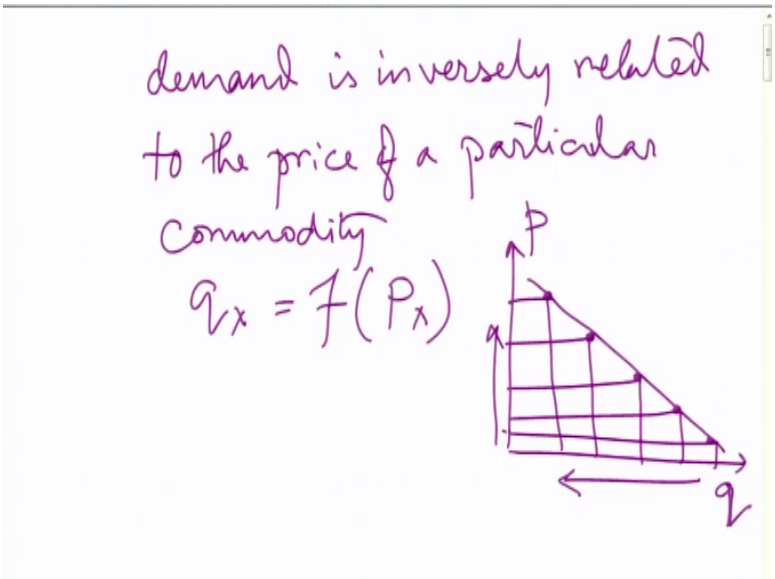

We according to the classical definition of market demand, the demand is inversely related to the price of a particular commodity. That means when price increases demand falls and when price decreases demand increases. So demand for a particular commodity is dependent upon the price of that particular commodity and if I plot them higher the price lower is the demand and when price falls, the demand increases.

And if I can connect them then I can see that price falls, demand increases and price increases, demand falls. Therefore, that demand and price are inversely related and this inverse relation is directly associated with the diminishing marginal utility concept.

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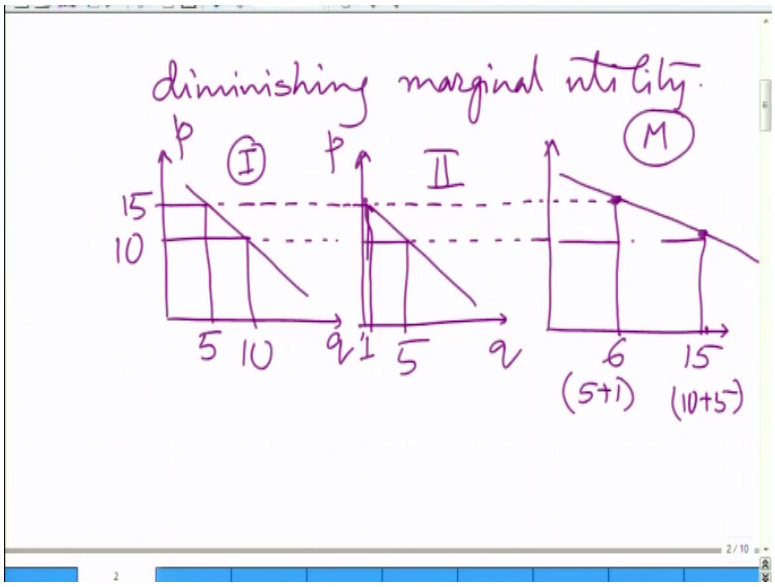

Diminishing marginal utility, now when I am talking about the diminishing marginal utility if we can go back to our previous sessions, marginal utility is the additional satisfaction I gained from one extra unit of consumption of a particular commodity and when I consume more and more the satisfaction level falls down, you know the marginal utility curve falls down and the total utility curve gets flatter.

Therefore, the marginal utility is decreasing over the consumption of every single unit or extra unit of a particular commodity. Therefore, when I have more of a particular commodity, not only my satisfaction is falling or additional satisfaction is falling, it also says that the demand for that commodity is decreasing. Therefore, with the increase in or with the number of commodity with quantity demanded for a particular commodity, the demand for that the satisfaction for that commodity also falls.

And that is how as the satisfaction falls, the demand falls and that the demand curve is downward sloping. Now we have individual demand which means that in a particular price how much is the demand for two individuals if we would considered there are two individuals and then for this price say 10 rupees how much is the demand? Say for individual 1, the demand is 10 units; for individual 2, the demand is for 5 units.

The market demand which is basically the total demand for all the individuals existing in that particular market or summed up demand for all the individuals. Therefore, the market demand for individual the market demand for that particular market will be demand by the summing up of all the individual demand curves.

Therefore, at the same price 10 rupees if I sum these things up so 10+5 15, my demand will be at this here in this market demand curve M, say at the 5 rupees or at the 15 rupees my demand was 5 units for consumer 1 whereas for consumer 2 it may be 1 unit, it may be 1 unit. Therefore, when I am drawing my market demand curve for price 15 rupees, the demand will be at point somewhere here at point 6.

And I can join them say at price 15 my demand is 6 units, at price 10 my demand is 15 units, 10+5 and over here it is 5+1 and this is my new market demand. So I can add up sum up all individual demand curves to get my market demand curve. So when I talk about the downward sloping demand curve, there is always exceptions of our downward sloping you know the classical demand curve.

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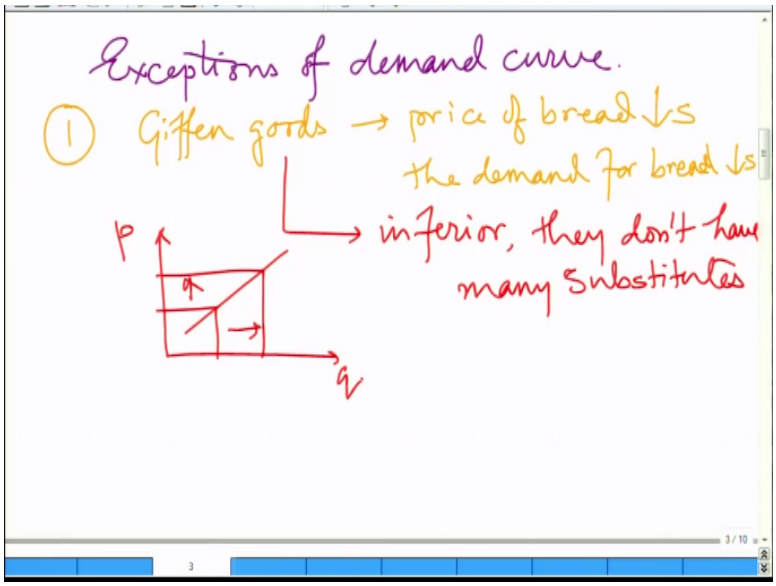

So those exceptions are often found in our even in a traditional market, exceptions of demand curve and it states that the demand curve will not be downward sloping or the relationship between price and quantity will not inverse here, it will eventually be upward sloping and positive. So this kind of phenomena can be observed in number 1 in Giffen goods which are named under Sir Robert Giffen.

He found when the price of bread falls, the demand for bread also falls. That means the price and demand is going into the same direction. It can happen because those who used to take breads because the price decreased their real income increased now they can have larger

amount of breads and as bread is an inferior quality commodity, they could shift to better bread you know or better quality bread.

That is where the demand for that bread has decreased. Giffen goods most important characteristics is they are inferior in nature as well as they do not have many substitutes or only a few substitutes, that means when the price increases you know we have seen it has been found that during famine what happens that say they have two commodities, two food commodities, food items, one is potato, one is meat.

So in case of famine, the budget is a serious constraint, so people do not have income, they do not have much of food. So the price of both the food potato and meat is increasing. What happens with potato even if the price increases? It will not touch the price of the meat because the price of the meat is also increasing.

Having said that so in case of famine, you know they will demand for food, they will not go for meat, they will stick to potato because with potato even if the price is increasing for potato with potato they will consume lesser amount of their savings you know they can save more. Therefore, they will continue consuming potato or the demand for potato will increase eventually those who used to take meat they will not take more of a potato because to save money.

And then the potatoes demand is increasing with the rise in price. Therefore, we can see that the price and demand again is moving towards the same direction and that gives us our positively sloping demand curve which is like this when price increases quantity demanded also increases.

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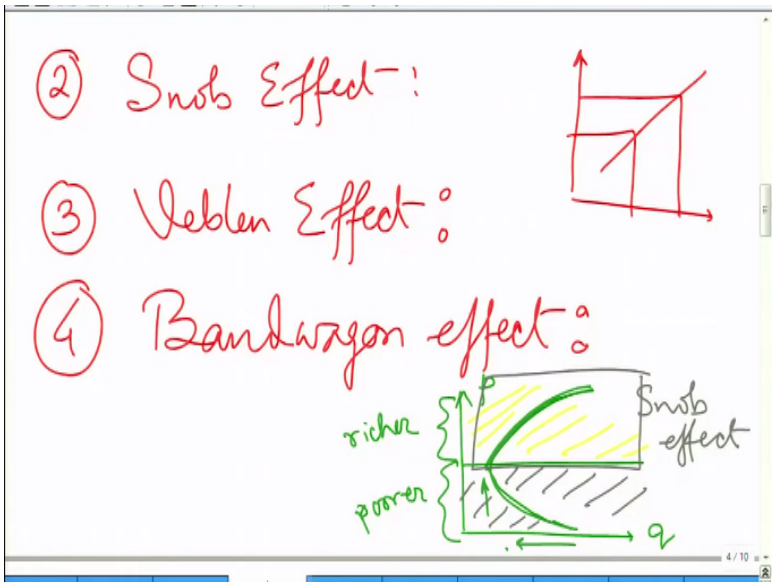

The second can be known as Snob effect or before going to Snob effect if I go back to these Giffen goods, there can be another example connection to this Indian Healthcare scenario say in a remote village they have a quack doctor who is inferior in nature in terms of his service delivery, in terms of his education and all. So once I was visiting a village in Karnataka and it is the village the nearest primary health center is around 20, 25 kilometers from them.

So it was quite far, so in case of an emergency they will go to the quack and there that is the only health care provider they have in that village or nearer to the village. When I was discussing with them, they said that even the primary health center does not have all the facilities we will require for a particular treatment, so they will send us to a district hospital which is 80 kilometers far away.

So they cannot afford that, they do not have any transportation facility. So they will end up going to the quack who eventually gives medicines for all kinds of treatments and he can give medicines for homeopathy, allopathy as well as ayurvedic, fantastic. As he enjoys a kind of monopoly, monopoly means that he is the only service provider in that particular locality, even if he increases price say in a particular scenario if he sees that okay I can make some profit because there is a higher prevalence of a particular fever.

You know more number of people are falling sick, so I can increase my fee from 50 to 70 rupees and I can make more money but with this rising price the demand does not have any impact on that because the demand continues to increase, yes because he is the only service provider who is providing his services. Therefore, it is kind of an example of a Giffen good.

Eventually if he decreases his price, people may think that okay fine now if he has decreased his price then they may be inferior yeah.

Then, comes to this Snob effect, now the Snob effect says with higher the price, higher is the quality or it can also happen that when the price increases, the demand for a particular commodity increases because that commodity that good is a luxurious good, maybe a solitaire diamond. Even if the price is increasing, the demand what happens in auctions basically the demand for that particular good also increase.

So again it shows that the price increases and then the demand also increase, price increase and the demand increase showing a positively sloping demand curve. The next can be Veblen effect, now the Veblen effect is kind of similar to the Giffen goods but very different as they are similar in terms of Veblen goods also enjoys that they do not have many substitutes but the contrary to the Giffen goods, the Veblen goods are not the inferior commodities.

Eventually Veblen commodities or Veblen goods are kind of you know luxurious or valued highly. So for an example, if a painter a famous painter, he dies then the price of his paintings increases. The demand for those paintings also increase that is because nobody can substitute that particular you know can replicate those paintings. That is the end you know there is no close substitute and he is not going to paint anymore.

So his all paintings if he is famous his paintings are really, really valuable you know. So it does not have substitutes but at the same time because it is worthy, so they will keep it. So all these are you know very close to each other. So it is connected with the Snob effect again and fourth is the Bandwagon effect. In Bandwagon effect, it is like I do because she does. That means if my friends go to an expensive hospital, I will go to that expensive hospital.

Because it can be my status, it can be because they are going and you know if they are going that means they know it is well, it is good so I can also go. It can also work the other way such as I once had a discussion with a lady, she was from London School of Economics and then she was studying in community in a village for Ph. D in a village in Madhya Pradesh. So we met in a conference in Korea.

And then she was saying that what she found quite interesting is not very interesting in fact or not very unobvious, so she met a lady who was very thin, having 3 or 4 small children, going to the field actually if I remember correctly she was taking her cattles to the field. So she said that you are undernourished, you are weak, so what kind of diet you take and all this. Then she replied that who said I am weak or I am undernourished, I am absolutely fine, I am healthy.

Look at that lady, she points out to another lady who looks elder than her and she is equally thin and she was walking so she says that she is walking hard, she also has many children and she is thin, so she is doing all these things and she also takes the same kind of food I take, so there is nothing wrong.

So this is the Bandwagon effect and the other thing in terms of Snob effect if I can connect it with the healthcare scenario is that say a particular hospital, a tertiary care hospital which provides five-star facilities, amazing you know facilities, a beautiful building, best medical technologies, so if I think that I am paying more and that means the quality of the treatment is also better or the best you know.

And then the demand for that particular hospital increases. So in such case, we eventually observe that for a certain section if this section shows the poorer communities and this section shows the richer section of the society then with the price if the price increases, the quantity demanded increases and for the poorer section if the price increases, the quantity demanded falls.

That means for a certain section here we see that there is a positively sloping demand curve and for a certain section here we see there is a negatively sloping demand curve so and this can happen because of this Snob effect, yes where we can see an exception to the demand curve. Now as we mentioned that this demand curve is directly associated or determined by the utility or the satisfaction, so my utility is different from many other.

And hence my demand curve will be different from many other. So given a price of a particular checkup, I may go to a hospital, I may not go to a hospital where the others may you know act differently than me, that is primarily because of the preferences, the utility, the

satisfaction I get out of that particular service and as we mentioned that this is basically when we talk about this demand curve slope.

Then, this lower the satisfaction lowers the demand, higher the satisfaction higher the demand and then this demand curve goes down primarily because of this diminishing marginal utility. Now this diminishing marginal utility or when I plot them or the demand associated with the satisfaction or marginal utility when I plot them against a price, I get a downward sloping demand curve. Is this only price which determines the demand? No. There are several other factors which changes the demand pattern.

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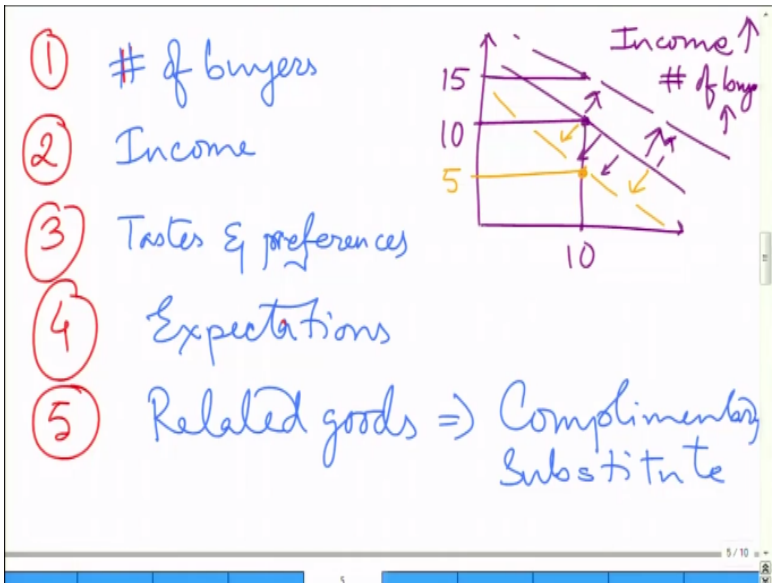

Number 1, number of buyers; number 2, income; so what happens in terms of number of buyers that given the price when my number of buyers increase, the price remaining same, my number of buyers increases, then the demand for that particular commodity increases, the price remains same. Similarly, the price remains same, my income increases, the demand for the commodity may increase right.

So what we can observe is that price remaining same, if my income increases I can afford if at 10 rupees of price I used to take 10 units of a particular commodity say 10 apples in a month, now with my increase in income I can probably afford 15 apples. Therefore, my demand curve will shift outwards parallelly. My demand curve will shift parallelly outwards. At the same time, if my income falls, then I may have only 5 of apples and then my demand curve will shift parallelly leftwards.

Yes, it can be because of income, it can be because of number of buyers, so number of buyers increases, my curve shifts rightwards. My number of buyers decrease my curve shifts leftwards. The third is tastes and preferences. Now it can be connected with say rituals, it can be connected with the rituals where people may not take a non-vegetarian food during a period of time or some religious function or something.

So during that period of time even if income the price remains same, the demand for that particular commodity will go down or during a festival period, the demand for a particular commodity say new clothes go up. Yeah, so that is because of the tastes and preferences that I prefer to buy new clothes during this period of time, I prefer not to you know not to take more of non-vegetarian items during the particular of a period of time.

So that is how keeping the price same, my demand may change, increase and it goes demand curve shifts rightwards, decrease and that the demand curve shifts leftwards. Next is expectations. Now what does this expectation mean? This expectation says that okay this year I can expect there will be a cooler winter or longer monsoon or a heavy monsoon that can cause several viral fever or higher prevalence rate of viral fevers.

So expecting that scenario, the medical stores may stock more of this demand, more of these paracetamols or pediatric medicines. Yes, because the demand they think that the demand will increase, demand will increase expecting the demand for paracetamol or I think that okay I have a baby at home, so I will just keep some paracetamol for the pediatric medicines expecting that there can be a bad weather this year.

So the future expectations determine my demand. The next one or if I expect that the price may go up you know in the next quarter say price of gold or price of a certain commodity or say a new tax is going to be imposed upon a certain medical device, so I will try to get that medical device this month or readily because and then if everybody every individual thinks on that line so the total market demand increases.

And the fifth one is the related goods. So these related goods are basically, the goods are basically complements and substitutes, complementary goods and substitute commodities, substitute goods. Now what is substitute goods or complementary goods? Substitute goods

are if I have a commodity or if there is another commodity which is close or with the same kind of use to what I use now.

That means X as a commodity has a similar substitute, similar kind of commodity in Y. If I do not use X, I can use Y. Complementary goods are if I need to X, Y, I also must use Y that can be you know the contact lens and contact lens solution, your right shoe and left shoe, specs and then the glasses you know. So these are the complementary goods where the substitute goods can be two similar medicines from two different companies right.

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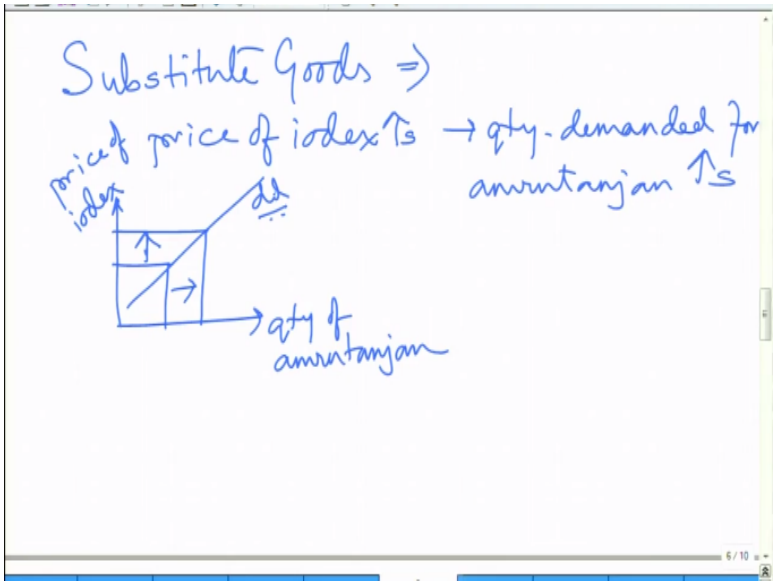

See if I take this example now for complementary goods and substitute goods, say first let us take these substitute goods. Let us understand this taking an example, when price of Iodex rises, quantity demanded for Amrutanjan also increases. That is because when price of Iodex increases, the demand for Iodex will decrease and then that will shift to the next substitute goods.

And the demand for Amrutanjan will also increase if they move from Iodex to Amrutanjan or say Dolo to Crocin or something like that yeah. If I plot them then I can see price of Iodex and quantity Amrutanjan and I can see an upward sloping curve because price of Iodex increases, quantity of Amrutanjan also increase, an upward sloping demand curve for substitute goods, not for the same commodity, we have to remember this. So this is not the exception to the demand curve right.

Even if it shows the positively sloping demand curve, this is not the exceptional, this is not the exception. This is the relationship between two commodities.

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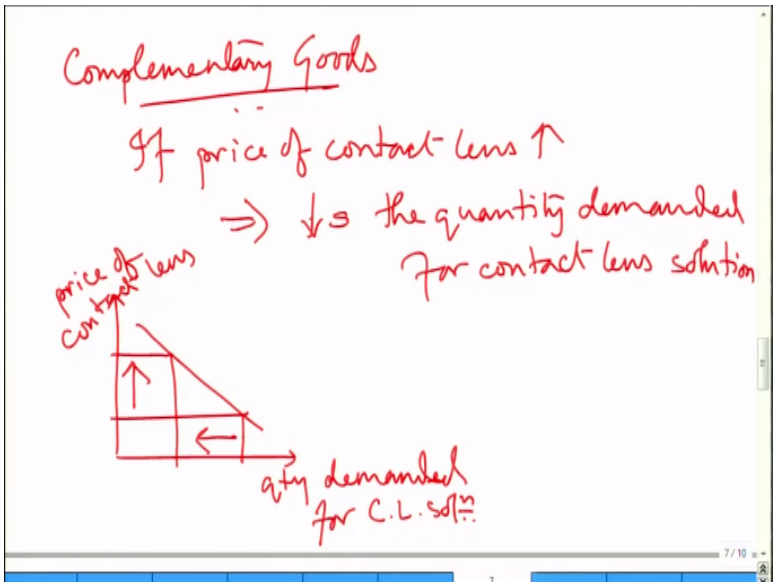

Similarly, if we look at the complementary goods, then we can see that if the price of contact lens increase, it eventually decreases the quantity demanded for the solution. It eventually decreases the quantity demanded for the contact lens solution. Now why so? Because if the price of the contact lens increase, the demand for the contact lens decrease and if the demand for contact lens decreases what people will do with having contact lens solution.

So the demand for contact lens solution will also decrease because they are complementary to each other. The best example can be when you know the price of petrol increases, the demand for car decreases because no petrol, no car right or the demand for petrol car decreases or if the price of diesel increases, the demand for diesel car decreases. So if I can plot them, it shows a downward sloping demand curve.

Because over here, I have price of contact lens and over here I have quantity demanded for contact lens solution. So when price of contact lens increases, the quantity demanded for contact lens solution decreases. So it shows an inverse relationship between price and then the contact lens solution. Thank you.