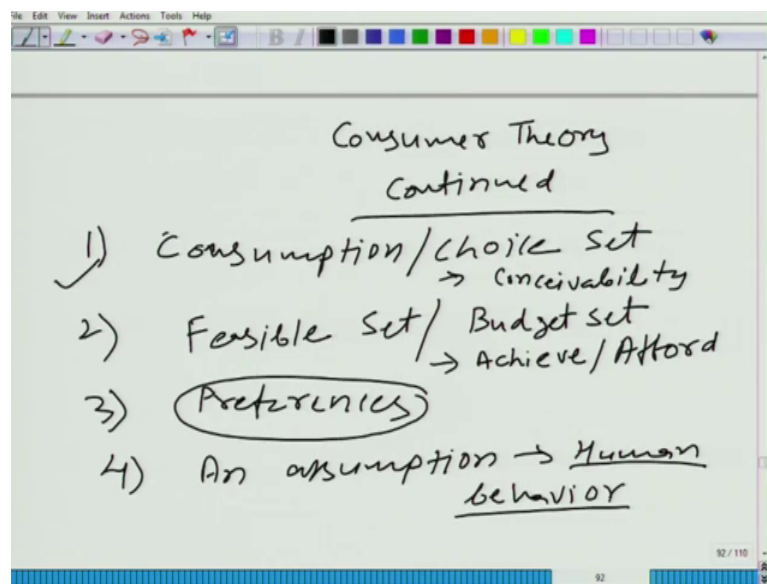


**An Introduction to Microeconomics**  
**Prof. Vimal Kumar**  
**Department of Economic Sciences**  
**Indian Institute of Technology, Kanpur**

**Lecture - 37**  
**Consumption Set**

Ok. So, we have been talking about consumer theory, continued and we have talked about 4 building blocks, let me just revise those blocks.

(Refer Slide Time: 00:30)



The first block is consumption set ok, the first block is consumption set or choice set fine. The second building block is feasible set and when we have just the monetary constraint then feasible set can be given the other name that is the budget set and third building block that we are going to focus our lecture today although I will talk about little bit about consumption and choice set, but mainly I will focus about preferences.

And the fourth block is an assumption about human behavior just as recap here the focus is on conceiving, can you think about a bundle. If you think about a bundle consumption bundle then that bundle should be a part of your consumption set. So, the idea is that you should be able to conceive, how about here the idea is that you can you should be able to achieve or you should be able to afford and preferences I am not going to talk about now, right now. Because the focus will be on preferences and how about this assumption,

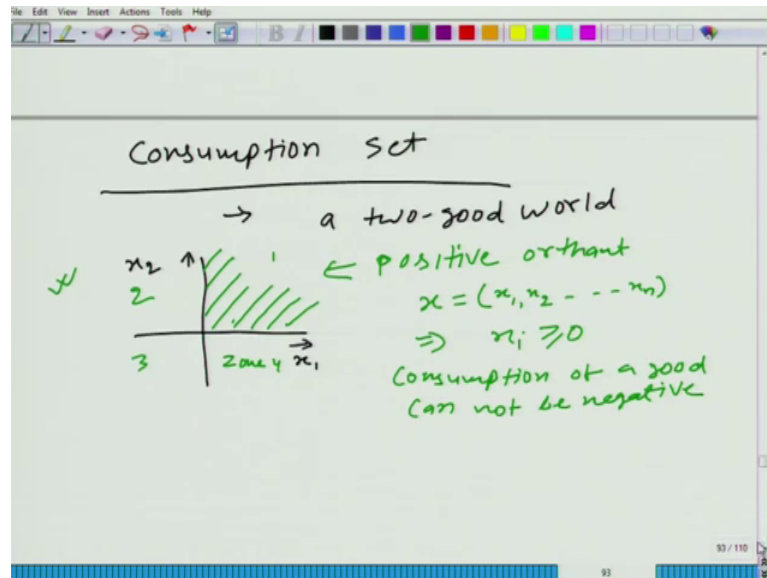
human behavior it is the human behavior that are individual given a chance pick the highest ranked bundle, highest ranked affordable bundle.

So, what is so special about this assumption one can very well say that another assumption can be. Let us say for your father that he does not pick the bundle that he prefers most. He picks up a bundle that his son prefers or his daughter prefers that can be another assumption should, but we are making a very very explicit, that individual picks up a bundle that is affordable and ranked highest among all the affordable bundle according to his own choice, his own preferences although we have not talked about preferences, not because someone else has ranked it in this way.

So, how can we take your, but you see in real life we experience and we observe where a father does something for his son that may not be, you know that may not be most preferred for himself, but still he does it. So, how can we explain this, we will be able to take care of such problem using that father has a special kind of preference that father gives weightage fathers preference gives weightage to some preference. But, we will not tinker with this assumption we will go with this assumption that a person picks up highest ranked bundle among the most among the affordable bundles.

But we will not tinker with this assumption, but it is not limiting as I told you it is not limiting that if you know other problems most of the time can be accommodated using changing preferences, but even before we start talking about preferences little bit of time I want to devote on consumption bundle.

(Refer Slide Time: 04:13)



And here what did we say that any bundle that you can conceive would be an element in this consumption set let me write it here consumption set rather than consumption bundle. Any bundle that you can conceive should be an element in your consumption set that is the basic thing.

So, now just to understand I am not saying that a consumption set should be only two dimensional, it will be 2 dimensional when you are talking about only 2 goods. When you are talking about n goods you will have n dimensional consumption set. So, few things I want to talk about this consumption set and I will start with a two good world.

So, of course, we can describe it in on this paper, let us say on x axis we give amount of good 1 and on y axis we give amount of good 2. Can we have this zone, let me can we have this is a zone 4, this is 1, this is 2, this is 3 can we have zone 2, 3 and 4 in our consumption bundle.

Student: No sir.

Why? Consumption cannot be negative very good point consumption cannot be negative. So, the consumption set if in the 2 dimensional world should contain only Zone 1.

Student: 1, zone 1.

Or this is what positive orthant positive part when we are talking about  $n$  dimensional world then we have to say positive orthant and what does it mean that  $x_i$  and  $x_i$  is what  $i$ th good. Let us say let me just spend few moment with the notation, let us say now we are talking about  $n$  dimensional consumption set, it means we have  $n$  goods available in the market and we are talking about the bundle that we can conceive in  $n$  dimensional world.

So, let us say there is a bundle  $x$  what does it mean a bundle of course, would contain amount of all the available goods and. So, it is denoted by let us say  $x_1, x_2$  and 2 up to  $x_n$ , in this special case  $n$  is equal to 2, but here I am talking about the general case. So, positive orthant means that any  $x_i$  has to be greater than or equal to 0, consumption of a good cannot be negative.

Sometimes people erroneously say how about when one of the goods is pollution, then I want to remind you that pollution by look at the definition that we describe right in the beginning of these lectures that pollution according to those definitions pollution is not a good it is a bad, negative of a pollution is good. So, you can always transform a problem, if you have to deal with pollution what you will define as a good negative of pollution fine is it clear. So, it is not very limiting that is one point.