Lecture – 136
Introduction to Oligopoly

So, let us begin the last topic and it is Oligopoly. It is the continuation of our studies of market environment.

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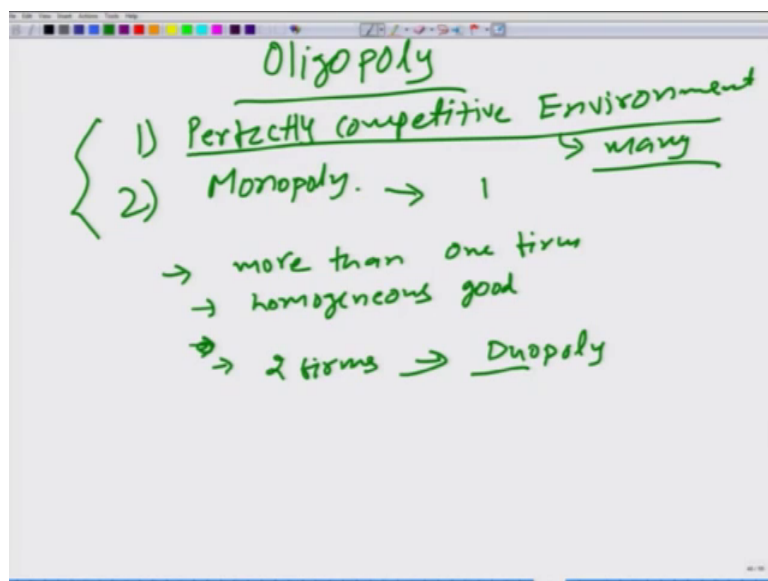
Remember that we have already discussed two market environments, the first we discussed perfectly competitive competitive environment, and second we discussed monopoly one thing is quite common in both the environment. Remember in perfectly competitive environment we had many firms and all the firms faced linear demand function, so they did not had to worry about any competitor while monopoly if there is a monopolist in the market what it means that there is only one supplier. So, of course, there is no competitor. So, monopoly does not have to worry about any competitor. In result in both the environment we had that the firms did not had to worry about competitor.

And even if you we look at the number in perfectly competitive environment we get many many sellers selling the same product, in monopoly we take that there is only one, so many versus one. In realistically if we think about it we find that there are few forms

in the market and all the forms have to worry about the pricing strategies of all other form, and here I am using a word strategy that would become clear.

What we have to understand that in oligopoly first we have more than one form and here we take that they are selling homogeneous good. So, they are selling exactly the same product. The third thing that we have to understand that if their pricing decision or the quantity decision would be affected by the pricing or quantity production decision made by all other form. So, their profit would be interdependent.

So, let us take one example and we will mostly in this chapter we are going to talk about scenario in which we have only two forms operating in the market. If we have more than two forms we need to generalize what we say here, but qualitatively things would not change much. So, let us say we have two forms and such oligopoly is called duopoly duo means two, ok. So, what we have, let us say let us take an example the two form and the two forms are making one of these two decisions. Price high or price low, these are one of the two things they would do for both the firms.

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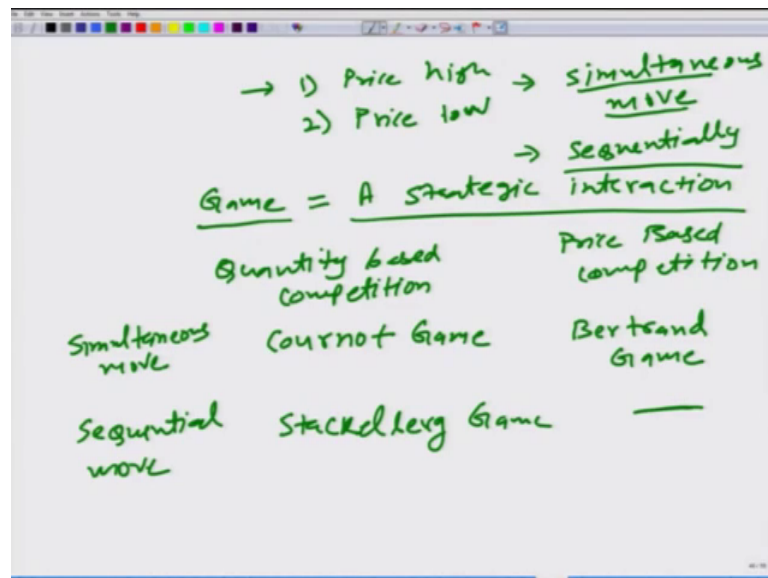
So, let us say if one firm prices its product prices its product low and other firm prices its product high then there is a possibility the firm whose price is less would capture all the market, and the other firm would get absolutely no customer. So, when they are making this decision should they price their product high or should they price their product low they have to think about what other firm would be doing.

And we can think of conger of two different scenario one when firms are making this decision they do not know what the other firm is doing, thus we can say simultaneous simultaneous move scenario. And there is also a possibility that a firm knows what the other firm has done and in both the scenario the end result should be different and we would see how. So, it is also possible that they are deciding sequentially. This tragic interaction has a name in economics we call it game. Game is nothing, but a strategic interaction. And we have another MOOC course I have it with a faculty member in Electrical Engineering, Aditya Jaganathan, there we have a MOOC lecture on a strategy and introduction to game theory where we get into details of game. But here we are going to talk about very basic just so that we are able to complete our discussion on oligopoly.

So, we can also this in that case this simultaneous move scenarios when we model it as a game we call it simultaneous move game and when we do it sequential move then we talk about sequential games.

Forms also decide about one of these two things not only they can decide about whether they price their product high or low, but there is another possibility that they make decision about how much quantity to produce. So, they can have either quantity based competition, quantity based competition or they can have price based competition. And we have a specific names for these competition here let me write simultaneous move let me write here sequential move. Let me also emphasize that simultaneous move does not mean that firms are deciding simultaneously how much to produce or what should be the price of their product simultaneous move only means that when a firm decides make from mix this decision it does not know about what the other form is doing in that sense the move is called simultaneous move.

So, when forms are indulged in quantity based competition and it is in it is they decide simultaneously then we call the game as Cournot game ok. And when it is price based decision and, but they are doing it simultaneously or better to say that when they are making this decision they do not know about what is the price that other firm has decided we call this game as Bertrand game. Here again when we have quantity based competition, but when there exists a firm when a firm knows what the other firm has decided and the competition is quantity based then we call it Stackelberg game and here we do not have any specific name.

So, what we are going to do? We are going to talk about these three cases and that is it for this course. We are going to study these cases one by one ok.

Thank you.