Foundation Course in Managerial Economics
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Lecture - 19
Market Structures

Welcome back to the foundation course in Managerial Economics. In the previous week we studied the production function, we saw the relationship between output and inputs and how that translates into cost. We looked at short run costs, the nature of costs in the short run, the nature of cost in the long run and how it changes how the cost decisions change from short run to long run. We discussed about fixed cost and variable cost and how that relates to long run and short run.

So in in this week what we are going to do is we are going to see how the firm decides having known that the production function having known its own production function that is how much output can be produced through what combinations of inputs and costs. How does the firm basically decide how much output to produce and what price to charge because if you may remember we said that the objective of the firm is to maximize profit and profit is the difference between revenue and cost.

So we have developed our understanding about cost and this week we are going to look at how the revenue is determined by a firm. So revenue consists of 2 parts price and quantity. So the price and quantity gets determined by the firm in different kinds of market structures differently. So this is what we are going to study this week. So let us proceed.

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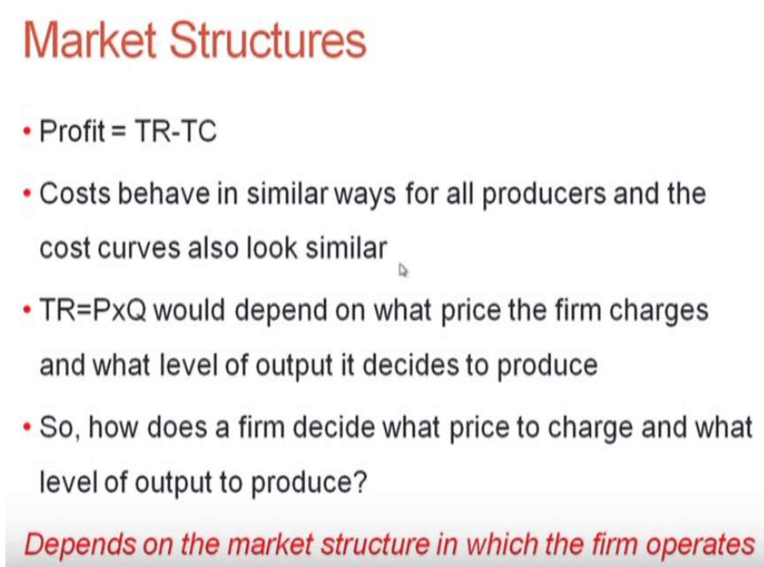

We are going to discuss about various market structures and we are going to assume that the objective of all firms is basically to maximize profit. So profit is total revenue minus total cost and costs behave in similar ways for all producers and the cost curves all also look similar. Basically, in the previous week the cost curves that we developed we looked at the marginal cost, the average cost, how they change overtime, how the average cost is a U shaped cost curve, how the marginal cost when it is decreasing it is below the average cost curve and when it is increasing it is above the average cost curve.

So all these the nature of the cost curves they do not change from firm to firm. So basically the for all the firms whether they are in a competitive market structure or they are in a monopolistic market structure they all have similar kinds of cost curves. So all that we need to understand now is how does price and quantity decision change for different kinds of market structures.

So coming back to the slides, so total revenue is price into quantity and this would depend on what price the firm charges and what level of output it decides to produce. So how does the firm decide what price to charge and what level of output to produce? So all this depends on the market structure in which the firm operates.

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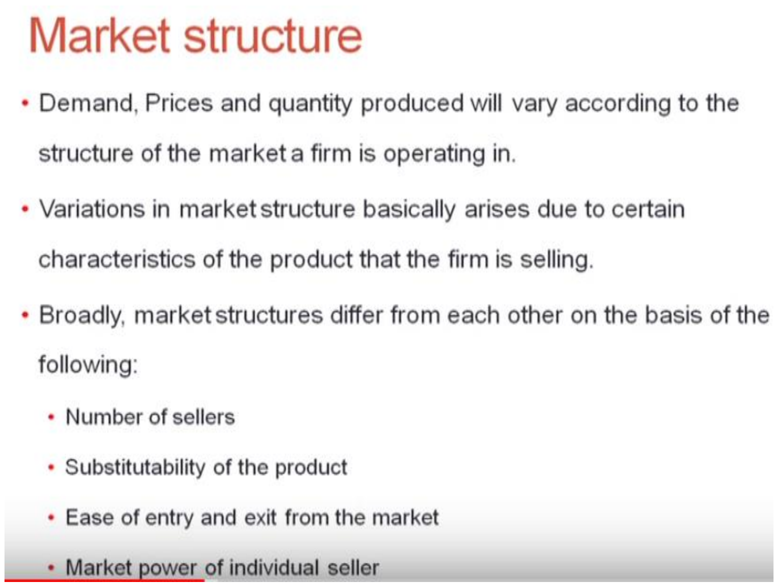

So the demand for different goods the demand, the prices, the quantity produced all these will vary according to the structure of the market a firm is operating in. So variations in market structure basically arises due to certain characteristics of the product that the firm is selling. So we are going to see that the market structures are basically different because of some characteristic of nature of the product. It is inherent in the product itself which decides what kind of market structure the product will be sold in.

So broadly, very broadly we are going to see that market structures differ from each other on the basis of the following. The market structures will be different depending on the number of sellers. They will be different for number of sellers. The substitutability of the product; that is if the if there are alternatives which are available in the market that is going to determine what kind of market structure the product will be available in.

Ease of entry and exit, ease of entry into the market and ease of exit from the market if it is very difficult to enter the market then obviously the number of sellers will be low or if it is very difficult to exit the market. Say for example you are stuck with a very high cost. You incur a very high cost of setting up a business for that product in the market and you are stuck with for a stuck with it for a long time.

In that case we would say that there is a very high exit cost. So in that case also certain firms like the number of firms in the market may be very low. Market power of individual seller. Now market power of individual seller this I am going to elaborate later when I discuss individually the different market structures but as is as you might already have kind of understood what market power of individual seller means.

It basically means how much control the seller has on price. If the seller is able to determine what price to charge in the market so and that is indirectly that is kind of like whether the seller has a market power or not is highly related to the all the other 3 factors that we have listed above that is the number of sellers, substitutability of the product.

So if the number of sellers is low, obviously the market power of the individual seller will be high. If the substitutability of the product, if the product is easily substitutable like if it is possible to have it is possible to have alternatives of the this product in the market then the individual seller cannot have too much power over the market or too much power to control prices in the market.

Ease of entry and exit from the market. Again if it is easy to enter or exit the market so the individual seller will always be faced with a large number of competitor. So in that case the seller will probably not have too much market too much market power in that kind of market structure.

So these are broadly the basis on which the market structures vary from each other and in this course we are going to focus primarily on 4 kinds of market structures which I am going to and how they differ from one another. Let me just elaborate on the board.

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So there can be 4 kinds of market structures. On one extreme so on one extreme we have what we call perfect competition, we have perfect competition. So in perfect competition the all the 4 categories by which we say the market structures differ from each other so in under perfect competition firstly large number of sellers. So this is in case of perfect competition there are large number of sellers in the market and secondly substitutability of the product.

Basically products are homogeneous. When I say products are homogeneous that basically means the products are all very similar to each other. Not only very similar they are exactly similar to each other. When I say exactly similar that does not mean that you know like literally they are exactly similar. What that means is to the consumer they are deemed similar. So whether the product has been purchased from seller number 1 or seller number 2 the to the buyer it does not make any difference.

So it is very difficult to differentiate the products from each other and that is what I mean by mean when I say that the products are homogenous. A very the perfectly competitive market example is not we do not have a exactly perfectly competitive market for any product it is more theoretical concept but something which comes very close to perfectly competitive market is the agricultural products market.

Say for example the vegetables are sold or food grains are sold in the market, the wholesale market. So there all the products are very similar to each other and the price is determined in the market depending on the amount that the sellers have bought the amount that the buyers are willing to purchase. So the demand and supply framework that we discussed in the earlier weeks that kind of setup determines what prices to is going to be charged in the market and basically all the buyers they accept that price and they just sell their products at that price.

So basically the all the products are very homogeneous or they are very similar to each other so the example is agricultural products. So products are homogenous to each other and thirdly ease of entry and exit from the market. So again the example of agricultural products.

So basically farm products. So it is not very difficult to enter this market. If someone wishes to grow vegetables or food grains or do farming it is not something very difficult to do. There is not too much high barrier of entry to it and similarly there is no too high cost of exit from the market. If someone wishes to stop producing agricultural product he may just stop and maybe sell off his land or use it to or put it to some other alternative use. So the barrier to of entry and exit from the market is very low. So basically this is the barrier of entry exit is low.

Fourth is the market power of individual seller. The market power of individual seller as we have already seen that there are large number of sellers, the products are homogenous, there is no barrier to of entry or exit in the market. So basically all the sellers in this market they are all price takers. So basically market power of individual seller is almost nil. So they are all price takers. So they are all price takers.

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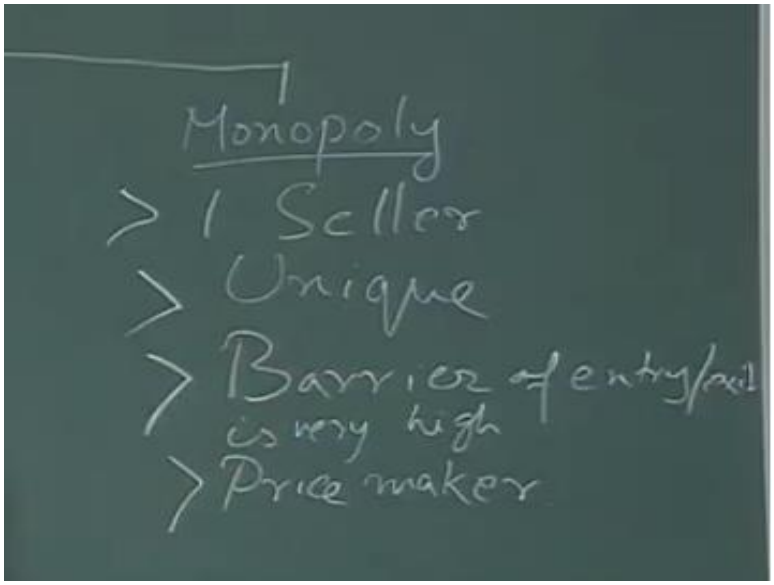

So on the other extreme we have almost the opposite situation of perfect competition which is the monopoly, which is the monopoly which most of know that monopoly is basically there is one single seller in the market. So there is one single seller in the market so we have one seller. Okay one more thing is when I am describing all these market structures I am assuming that the number of buyers is many in all the market structures.

There could be situation where we have something like monopsony where there is one single buyer and many sellers in the market. So we are not going into the buyer side of the market yet. We will be discussing mostly about the seller's perspective if he is the sole supplier in the market or he is one of few or he is one of many or he is one of a huge number of sellers.

So this is what we are doing here substitutability of the product. The product is unique. The product is unique. The product is unique in the sense that there is one seller in the market. So he is the one who is selling this product and this itself that there is one seller in the market itself kind of implies that whatever he is producing no one else is producing that.

So to give an example this situation of monopoly could arise due to a lot of things. It could arise because the fixed cost of setting up this business could be very high. So we are going to go into the details of what causes natural monopoly, in what situation a monopoly arises and all that when we discuss about monopoly in the later weeks but it suffices to give some example here that one example of monopoly is basically patented medicines.

So pharmaceutical company which has patented a particular drug say a lifesaving drug that this particular company can produce and no one else can is a that patent causes a high barrier to entry barrier of entry in this market and he is the this pharmaceutical company is the single seller in the market and the product is unique.

Another example is say for example The Indian Railways. Indian Railways this is the one single organization which is catering to the railway requirement of the entire huge country of India. So barrier of entry is high because it is not easy to setup a railway network, a parallel railway network given that one is already existing. So that would be extremely costly and may not make sense actually.

So again we are going to discuss those in details later. So basically the examples are patents which create barrier to entry and there are natural barriers to entry in case of because of very huge fixed cost say in case of railways or water supply or setting up of power plants etc. So these are situations of monopoly.

So ease of entry. Barrier to entry barrier of entry or exit is very high okay and market power of individual seller. So all these 3 characteristics of the market itself determines that the market power of the individual seller is very high. Basically the individual seller gets to decide at what price he is going to sell the product. So he is basically a price maker. He is not a price taker but he is a price maker.

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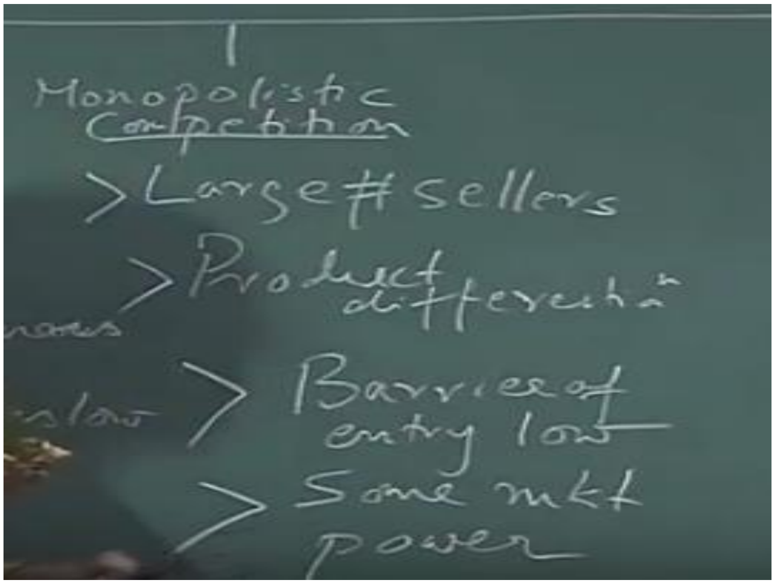

So this is about monopoly. So we have perfect competition in one extreme and we have monopoly in the other extreme and we have 2 more market structures which we are going to discuss later. They fall within these extreme two categories. One is the called the monopolistic competition. One is the monopolistic competition and here like perfect competition there are large number of sellers.

How is it different from competition? Products are not homogeneous. Products are not homogenous although there are large number of sellers who are selling this product, products are not homogenous but they are very similar to each other. So to give an example say for example FMCG products. Say for example toothpaste.

Now there are there can be whole lot of companies who are producing toothpaste. There can be number of brands, different types of products of toothpaste but they are at the end of the day they are all toothpaste. So they are substitutable but there could be minor differences between the toothpaste because of which the people can have preference for one variety over other. So there is some amount of product differentiation here and the products are not exactly homogenous.

So product differentiation happens here, product differentiation is there and the barrier of entry is not very high. It is not too difficult to set up business in this market structure so barrier of entry is not too high and the monopoly in monopolistic competition the firm has some control or some market power that is the firm has some control over setting up of price of the product.

Because the products are differentiated so the firm knows that there is some amount of loyal customers who would probably not shift to other products if the price change is a little bit so but even then since the products are at the end of the day they are substitutable so they cannot change the price too much. So this is the situation where they are they have some amount of market power. So some market power is there for the seller.

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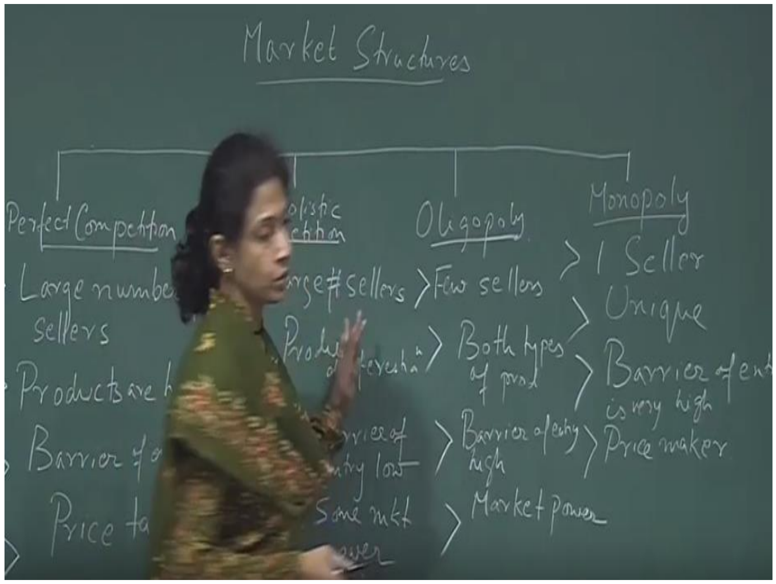

Another and another the last type of market structure that we are going to discuss is the oligopoly. So in case of oligopoly there are few sellers. In case of oligopoly there are few sellers in the market products. Whether the products are homogenous or they are differentiated well in this in oligopoly the products could be homogenous perfectly substitutable or they could be differentiable.

Say for example the OPEC oil producing oil exporting countries. They form a oligopoly of oil producers or oil exporters and there are few of them so in the world market so that is a oligopoly and oil crude oil is perfect substitute if not like not going into technical details but crude oil is kind of homogenous and on the other hand we have the car companies or airlines. So there the airline services differentiated then car companies different kinds of car manufactures different models they are highly differentiated products.

So in oligopoly you can have both types of producer surplus possible. Barrier to entry is kind of high. Barrier to entry is kind of high and that is the reason we have few sellers in the market and the barrier of entry is high we have few sellers in the market. They are catering to the huge population of consumers who are looking for this product and the firms have substantial amount of market power but one thing interesting about oligopoly is in the rest of all kinds of market structures the firms in these market structures they decide how much output to produce what prices to charge and that is not dependent on what other firms are doing.

In none of the market structures the firm is concerned about what other firms or its rivals are doing but in case of oligopoly since there are few sellers in the market every sellers decision is dependent on the decision of its rivals.

So this is a special kind of situation and here different kinds of scenarios could emerge where the sellers could be competing on the basis of the output they produce or they could be competing on the basis of prices that they charge. So these are the different kinds of market structures that we are going to discuss during this week and one more to end the discussion one more interesting thing here is what is the role of advertisement in all of these market structures.

Now in case of perfect competition since products are homogenous since products are homogenous it does not make sense for a firm to advertise its products because they are all similar. So by advertising it is just going to increase its own cost. So it does not make sense. However, in case of perfect competition the industry level advertisement is possible which is going to shift the demand curve to the right.

So to take an example, say for example in we have advertisement for eggs or milk. So you generally want people to increase their consumption of eggs or increase their consumption of milk and it does not matter you do not care who they purchase it from, which of the dairies they purchase it from or which of the poultries they purchase it from. You just want the industry demand curve to shift to the right.

So the role of advertisement is at industry level in this case of perfect competition. Same is the case in monopoly. In monopoly the seller is can advertise to basically increase the consumption to basically to shift the demand curve to the right but obviously it does not have any requirement or any need to attract the consumers to itself because it is the only seller in the market.

In case of monopolistic competition advertisement pays the maximum role. Because in case of monopolistic competition, the products are highly substitutable. The product differentiation that can be created can be created in the minds of the consumers and that is the reason that in case of monopolistic competition the firms are going to spend a lot on advertisement because they can attract the consumers to itself and in case of oligopoly also depending on whether it is a differentiated product if it is a differentiated product they may go for advertisement. If it is a undifferentiated product homogenous product they are not going to go for advertisement.

So this was our broad discussion about market structure and every week we are going to take up each of these market structures and discuss about them. Thank you.