Foundation Course in Managerial Economics
Prof. Barnali Nag
Vinod Gupta School of Management
Indian Institute of Technology-Kharagpur

Lecture - 32
Monopolistic Competition - Efficiency and Welfare

Welcome back to our discussion on monopolistic competition. In the earlier 2 modules we have developed the assumptions about monopolistic competition. We have understood what the products look like in a monopolistic competition, how are they differentiated, how are they substitutable and what does the demand curve look like and eventually we developed the profit maximizing condition for monopolistic competition and we saw that saw the profit maximizing output level that the firm chooses to produce and then it basically traces back the output along the demand curve and decides what price to charge in the market.

Then we went on to discuss that the average total cost that the firm has that is going to determine if the firm is making any loss or profit or zero economic profit and if the firm is making profit we saw that lured by that profit other firms are going to enter the market and the firms which bear a loss even in the long run they are going to exit the market.

So this is this was the standard theory about monopolistic competition basically discussing on about how profit maximizing output and price is determined in a monopolistic competitive setup and so like all our previous discussions on perfect competition monopoly etc. where we have looked at the welfare implications of the market outcome so in this module also we are going to discuss about welfare or efficiency implications of the monopolistic competition market outcome.

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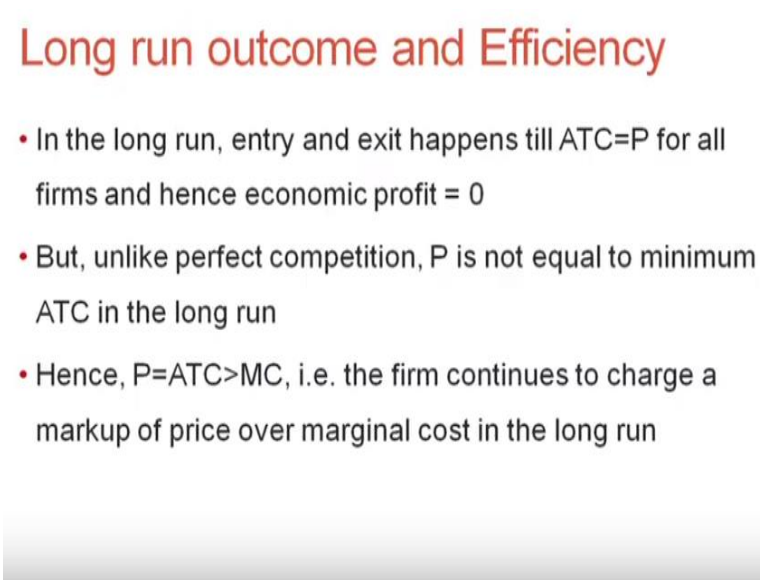

So talking about long run outcome and efficiency, in the long run entry and exit happens till average total cost is equal to price for all firms and hence economic profit is equal to 0. But unlike perfect competition price is not equal to minimum average total cost in the long run. Hence price is equal to average total cost but it is more than the marginal cost that is the firm continues to charge a markup of price over marginal cost in the long run.

So in the long run although price is equal to average total cost and the firm is basically having a economic profit equal to 0 but still the price has a is a markup over the marginal cost of the firm at that level of output. So let me draw the figure again.

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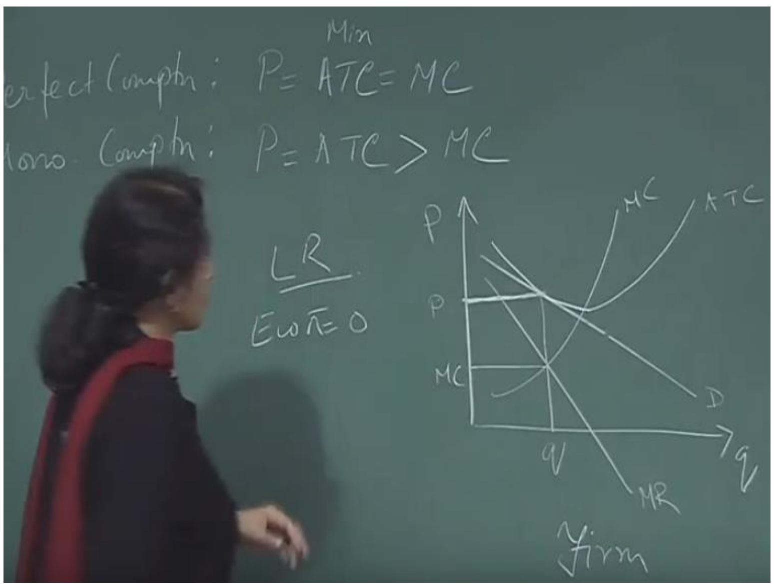

So this is output, this is price. So in the long run this is the q and this is the price. So in the long run the average so in the long run the cost is equal to price for this firm. So economic profit is equal to 0. This is a typical firm that we are talking about and economic profit is equal to 0 in the long run, yet the price is more than the marginal cost, this is the marginal cost.

So price is more than the marginal cost and hence this is a difference that is there between perfect competition and monopolistic competition. In case of perfect competition, in case of perfect competition in the equilibrium, price is equal to average total cost is equal to marginal cost. So average total cost is equal to marginal cost at the minimum average total cost.

So this was the equilibrium, this was the long run equilibrium in case of perfect competition but in case of monopolistic competition price is equal to average total cost but is more than marginal cost. So this is the equilibrium in case of monopolistic competition. So this is not minimum of average total cost but average total cost is falling. Yet it is more than marginal cost.

Hence there is a markup between price and marginal cost in the long run for a monopolistic competitive outcome. Now monopolistic competition is less efficienct than perfect competition. So this is kind of evident from this from the comparison of the 2 outcomes it is the difference in efficiency or difference in welfare is quite apparent from these 2 because in case of perfect competition the price that is charged is minimum of average total cost.

So basically in the market the price that is getting charged is the minimum price that is possible. It is the minimum average cost that the firms are incurring and they are charging that price. But in case of monopolistic competition although the firms are incurring zero economic profit yet the price that they are charging is not the minimum cost at which they can produce.

The average total cost is still higher than the marginal cost and average total cost and marginal cost are the average total cost is basically falling here. So basically that means that the firm is operating at excess capacity. It is possible for the firm to increase output and lower cost yet the firm is producing at a level where average cost is higher than the marginal cost and average cost is falling.

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Monopolistic competition is less efficient than perfect competition

- The monopolistic competitor operates at excess capacity
- It operates at downward sloping part of the cost curve and hence produces less than cost minimizing output
- Production does not happen at minimum cost as in perfect competition
- Since P > MC market quantity is less than socially efficient quantity
- However, government cannot intervene to reduce prices or increase quantity because the firms are already operating a zero economic profit

So the monopolistic competitor operates at excess capacity. It operates at downward sloping path of the cost curve and hence produces less than cost minimizing output. Production does not happen at minimum cost as in perfect competition. Since price is more than marginal cost market quantity is less than socially efficient quantity. However government cannot intervene to reduce prices or increase quantity because the firms are already operating at zero economic profit.

So basically this means coming back to this diagram it basically means that production does not happen here but production happens here where the average cost is falling. So average cost is falling. In case of perfect competition the production happens here, in case of perfect competition but in case of monopolistic competition there is excess capacity.

So it is possible for the firms to increase the output yet its cost is going to keep on decreasing yet the firm does not do that and it produces at a level where the average cost is falling. Hence there is excess capacity at which the firm is operating. Yet the firm is producing zero economic profit since here it is tangent to, the price line is tangent to the average total cost hence there is inefficiency in the market in the sense that the price that is getting charged in the market is more than the marginal cost.

That is the benefit from the product the benefit that the or the willingness to pay for the product by the buyers is higher than the cost at which the additional unit of output can be produced by the seller. So there is clearly a inefficiency existing there because here in this situation it is possible for the firm to keep on increasing output and the buyer will keep on demanding higher output at a lower price and it is possible for the firm to keep on increasing output yet getting a yet incurring a average cost which is yet it is in this region basically in this region it is see this is the perfectly competitive output.

So it is possible for the firm to keep on or it is possible to imagine that the firm will continue to increase its output because till the point where its average cost is minimum. So it is it is possible to imagine the price also to fall to that level where average cost equals marginal cost equals the price charged in the economy. In that case there would be perfect efficiency would be reached but that is not happening here because the firm is charging a price which is higher than the marginal cost.

So however the problem is in case of monopoly also the same thing was happening. In case of monopoly also the although in case of monopoly there was not zero economic profit but in case of monopoly also this inefficiency was there. There was this deadweight loss and in case of monopoly also the firm was charging a price higher than the marginal cost because it has some amount of market power but in that case the government could step in and say that you have to increase your output.

So it could it was possible for the government to actually direct the monopoly to increase its output, lower its price etc. but in case of monopolistic competition that is not possible because in the long run the monopolistic competitive market where there is free entry and exit that ensures that the firm is producing at a level where it earns zero economic profit.

So in such a situation if the government intervenes and tries to reduce the price even further in that case the firms are going to incur negative economic profit or loss. In that case so the firm is going to exit the market. So because of that it is not possible for the government to intervene in such a case because the firms are already earning zero economic profit. So although there is inefficiency in the market yet the government cannot do anything here. So what are the welfare implications?

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Now there are broadly 2 welfare implications of monopolistic competitive market output. The first is the product variety externality of consumers. That is introduction of new products and new entrants in the market raises surplus for consumers. What does this mean? This basically means as I said that whenever the firm is incurring any positive economic profit other firms are going to enter the market.

Now these new firms are going to bring in more differentiated products. Remember that every firm is striving to make its product different in the eyes of the consumers from the existing products. So as that keeps on happening, the consumers are benefited because they have more and more choice and the product could be differentiated on the basis of quality also remember.

So one can imagine that the product differentiation actually makes the consumer better off. The consumer gets a whole variety of choice to choose from and the consumer also gets better quality, better variety of products and because of that the consumer surplus actually increases. The benefit, its willingness to pay for a product that keeps on increasing because it is getting better and better product and so its consumer surplus increases.

Also because as more entrants are there, more entrants are entering the market this demand curve gets split between lot of across different other firms and because of which the individual firms get to charge lower and lower prices. So as they keep on charging lower and lower prices the consumer is better off because on the one hand he is getting better choices, more variety of products, better quality products but also lower prices for products as there are lot of sellers in the market.

But there is a flip side to it because welfare is not only about consumers. A economy consists of both consumers and producers. So welfare is dependent on the welfare of both consumers as well as producers. So although the consumers welfare is increasing what happens to producer's welfare? Now as the second point says the business stealing externality faced by the producers is another welfare implication. When new firms enter the market, existing firms may lose customers, face losses and sometimes may have to leave the market.

So one can imagine that in a monopolistic competitive market setup since it is easy to enter the market it is possible for new firms to enter and bring in new varieties of products and it is possible for the firms to actually steal ideas, steal products, product ideas from the existing firms and make them even better and in the process they steal business from the existing firms who may have to leave the market. So that is also possible.

So such amount of competition in the market because it is free entry and exit. It is possible to imagine that in such kind of market setup there are continuously churning of new producers in the market, new sellers are entering the market and as a result the old sellers are getting wiped out from the market as new and new products are developed and circulated in the market so that is a negative welfare implication on the producers in the market.

The net result of the above are hard to measure and hence there is not much that the policy makers can do. So on the one hand while consumers are better off on the other hand one can imagine a whole lot of insecurity on the parts on the amongst the producers because as new and new entrants enter the market and wipe off the existing profits, wipe away businesses altogether, wipe away products altogether from the market.

So however the it is a natural phenomenon that keeps on happening and there is little that the government or any policy maker can do in such kind of market. So coming back to another so we already saw from the diagram that the firm is operating at excess capacity. It is operating at a level where average cost curve is declining and it is tangent to the price line or the demand curve and hence the firm is operating at zero economic profit.

But one may wonder what is the logic behind it. Why does the firm operate at excess capacity? Why does the firm operate at excess capacity and not at the minimum point? What is the logic or intuition behind it? Now there could be 3 or 4 reasons behind it one could imagine. First is the very obvious which very obvious reason is these are all differentiated products.

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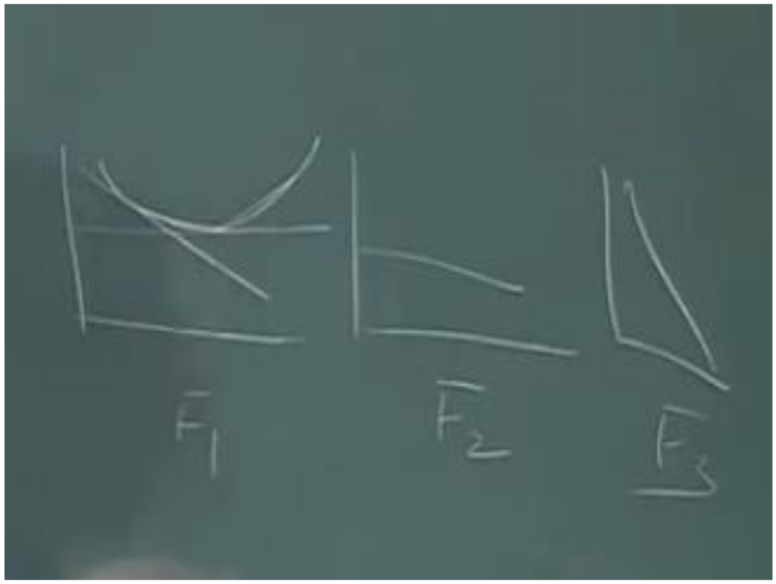

So these are all differentiated products so there are whole lot of products which have a negatively sloping demand curve. So they have negatively sloping demand curve. So these are very highly differentiated products and they have different negatively sloping demand curve and hence there is no way they can be tangent to the minimum point of the average total cost curve for the firm.

So each of these firms, so this is say firm 1, firm 2, firm 3. So each of these firms have a negatively sloping demand curve and negatively sloping demand curve can be tangent only to the declining portion of the average cost curve and hence this is the outcome where it is operating at a level where there is excess capacity because there is there is a negatively sloping demand curve. Had this been a homogenous product then all the firms would be facing a flat demand curve. All the firms will be facing a horizontal demand curve and in that case they would be operating at a minimum of the average cost.

Now the second reason is that if you imagine such a market where there are whole lot of product differentiation and all the firms are existing coexisting in this market and each is trying to behave like a not a monopoly but each firm has some control over its consumers and they are focusing on product differentiation and catering to this demand curve.

What they are not focusing on is that they are not focusing on minimizing cost. They are not focusing on minimizing cost but they are focusing on retaining these consumers and charging them a price which is minimum in the long run that they can charge. So intuitively one could imagine that the firms are coexisting in a live and let live kind of environment where they each of them is focusing on product differentiation and not really focusing on price competition. They are not competing with each other in terms of price but they are competing or they are trying to create their own niche clientele by product differentiation and that is how we have developed this model and hence there is excess capacity at which they have to operate because they each of them is facing a negatively sloping demand curve and another intuition behind excess capacity is when we discussed about the long run when we said that there is a profit to be made and there are firms existing in the periphery who are sitting and watching the market and as soon as there is profit to be made these firms enter the market.

Now what happens in such a scenario? In such a scenario what happens is this demand curve it gets split up into too many firms. So imagine this is a a group of consumers who used to buy from this single seller minty toothpaste and now they know that there are whole lot of other flavours available in the market, different kinds of products, packaging, etc. So now they get as new and new entrants are there in the market this demand curve gets split up between 3, 4 more firms or even more firms.

So in that case the existing firms or the new firms each of these firms are now going to cater to even lesser and lesser number of consumers. So obviously they will be operating at excess capacity because capacity has already been created. It is like having a if you imagine that there is a residential new residential area coming up and initially there was only one, initially there was only one store one grocery store and gradually more and more grocery stores coming up in that area because they know that profit is to made.

This one single store is making a profit. So more and more grocery stores enter the market or enter that in that residential area more and more grocery stores come up. So now instead of the one grocery store now 10 more grocery stores are all going to cater to the existing number of residents who are residing in that area. So basically each of them is now going to operate at excess capacity.

So it is not possible for each of them to operate at marginal average cost instead they are all going to operate at excess capacity and since each of them is product differentiating since the firms each of them is focusing on product differentiation so that also is kind of reason for the firms to operate at excess capacity and come up with more and more ideas for better product differentiation and maybe have different this basically is reason enough for the firms to operate at excess capacity so that they can keep on improving on the product differentiation that they are already doing in the market and because of this for better differentiation of product they probably would like to keep on operating at a excess capacity.

So this these were the welfare implications of a monopolistic competitive market and we have seen that although unlike monopoly the monopolistic competitive firm does not have more than zero economic profit or positive economic profit like perfectly competitive firms the monopolistic competitive firm has zero economic profit in the long run because of entry and exit. But like a monopolist the monopolistic competitive firm has its own unique product in the sense that they keep on product differentiation to make keep their products different from the other products although all these products are kind of substitutable.

So in generally speaking these products are substitutable but yet the firms strive to make their products different or create the perception that the products are better than the other products in the market in the eyes of the consumer. This they do through different either making their products themselves slightly different or through marketing, through advertising, through locational advantages, through packaging.

So this is what the firms strive to they strive to keep on doing and it makes sense for them to operate at excess capacity to keep on differentiating their product from the rest of the market. So in the following module we are going to see the role of advertisement in monopolistic competition and we are going to see that if what are the opinions of people whether advertising is good or bad. This is what we are going to do in the following module and complete our discussion on monopolistic competition. Thank you.