Economics of Health and Healthcare

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Lecture – 23
Market Imperfection

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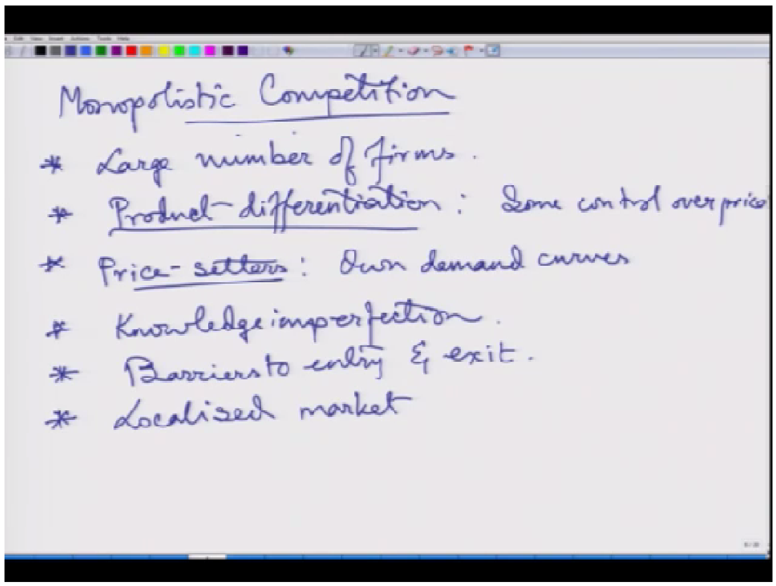

In the monopolistic competition, we are moving further away from the perfect market structure. This is the first step towards the imperfection. So monopolistic competition you can see still competition but monopolistic and the market imperfection starts here and the various degrees of imperfection can happen in a monopolistic competition. It can be extremely, like it can be very close to perfect competition with relaxation of certain assumptions.

But it can also be close towards duopoly or oligopoly but not of course a monopoly, yes. Because has only one firm and here the first condition is here also there is a large number of firms. So in monopolistic competition also, every time we talk about, see that every time we talk about the characteristics of a particular market structure. We start with the number of firms. So here also we are talking about the large number of firms.

Yes, in monopolistic competition, similar to the perfect competition, right. So the second thing which the first shift probably from a strong shift, probably from perfect competition is that there is a product differentiation. So these firms may have some control over the price because they can now some control over the price. Because here they can now fix separate prices for separate commodities, separate kinds of products.

That was not possible because the first thing was there in perfect competition that homogeneous product. Here first deviation is product differentiation and every product cannot be priced similarly. So there is a differential in the price and who decides the price? Here the firms decide the price because they know the characteristics of their products, how they are differencing, how much they are differing and all this.

So the third one will be now slowly that we are moving towards price setters from price takers. So some control over the price will take you to over here. But here product differentiation, they may be close substitutes but not perfect. Everything is not similar. So this I can use probably one soap. In the case of others, the soaps may be the colours are different, blue and white but they are from the same company.

So I can just chose a white Dettol soap or orange Dettol soap I can just chose. Probably they are different in terms of as a product but the variation is, the difference is so low that they are close substitutes but not the perfect substitutes, number 1. Number 2, in terms of other say if I just want to go to get an injection, maybe tetanus, a TT injection, then probably I will. It does not matter really that whether I will go to a doctor or I will go to a simple diagnostic center or I will go to a lab technician who is certified because everybody can serve me the same way.

So and or maybe if I know a nurse or a midwife, may not be midwife, so the nurse, maybe they can also solve my problem. So there can be substitutes but not perfect substitute. So now slowly with the product differentiation, they are moving towards the price setters and as they are price setters, they have their own demand curves. For each product, differentiated product, they have their own different curves because for each demand curve, we have a separate price.

May not be but mostly because we are saying, we are claiming that the products are different.

My Colgate paste has salt or that Colgate paste has Neem or something like that and they are different because your teeth may need salt and your teeth may need Neem. I do not know how it matters but they say and this shows that doctor has recommended, so I am going for that. Yes, and that will have differential prices.

I do not know whether the price is different because the price of salt or price of Neem are different or the effectiveness is different, we have no idea. So when we have no idea, then the knowledge imperfection arise. So the knowledge imperfection. Yes, and also when they are trying to create their own customized product, niche product, there is always barriers towards entry and exit, mostly entry.

That is primarily because if a new firm, new provider wants to enter, they may not have something very customized, something very unique. It can be difficult for them to survive. Yes, so there is a barrier to entry and exit and then maybe with the product differentiation, they want to bring a new product then there can be several regulations, certifications, this and that which may slowly with more the market is imperfect, more these barriers get stronger.

And then there is a barrier to entry and exit. How it matters when they are exiting? That is primarily because maybe their 1 product is not doing well, the other product is doing well. So they can find difficultly in exiting. So even if a loss making product is there, so they really do not want to pull them or they probably will re-launch that. So it is really, is a tricky game. The next one is the market may indeed be relatively localized.

Why the market is localized? That is because when they are differentiating their product, they are differentiating based on the market demand. That okay this market may demand this type of product, so I will keep this type of product for this particular market. You will not see a toothpaste with Neem or salt anywhere in, probably in a western country, right. So again, so similarly you will not probably see a popular food which has a beef or pork across India or even other meats.

So it is very very different in comparison, it is important that they keep this market segmented or separated from population to population. So whenever there is a monopolistic market or whenever there is a differential product be it a restaurant, be it a cosmetics, be it a FMCG, it can be anything. Be it a health club or be it some or this thing, diagnostic center, for health checkup and then these are often very much customized.

And every particular or even an insurance scheme, every insurance scheme appears to give something different or something more. So they are kind of an, and then if there are plenty of market players, suppliers, producers, providers, then of course it is a kind of a monopolistic competition.

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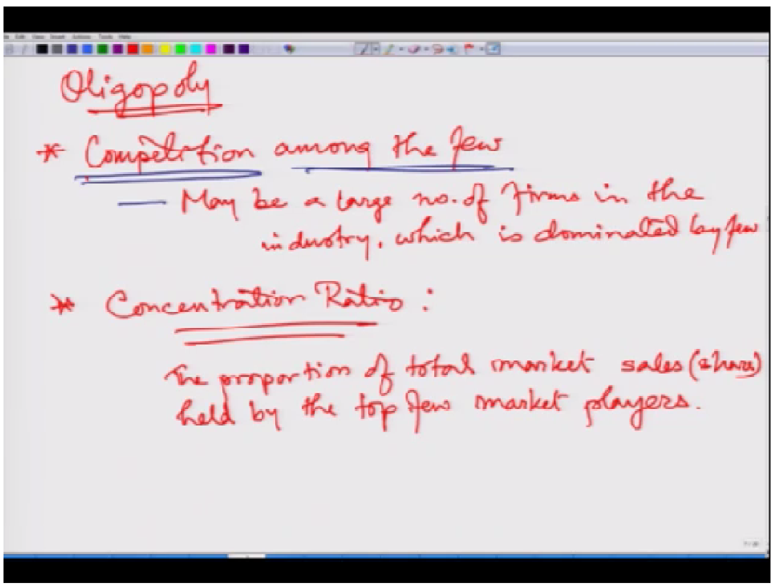

The next is oligopoly. What does that mean, this oligopoly? So now from competition among a large, empty number of people with no product differentiation, perfect knowledge, free entry, exit to some barrier on entry exit imperfect knowledge, price setters with product differentiation, monopolistic competition but with a large number of suppliers. But here in oligopoly, we have decreased our number of suppliers.

So only is the competition among the few. So the number of market players have reduced. But even if there is a large number, so what happens? We are saying that the total number of firms have not really decreased. The total number of firms, even if they may, they may not. So even if they have not decreased but the competition is only among the few. So which basically states that there may be a large number of firms in the industry which is dominated by few.

Yes, so even if there are say 20 firms but it can be dominated by 4. So the competition is only among 4. The rest 20 is not, it can be seen very well in the automobile market. So there are plenty of cars roaming around. But the competition is basically between Maruti Suzuki, maybe the Hyundai, maybe the Tata may not be but still. Similarly, for the 2-wheeler market, it maybe only between say Honda and, or Hero and Bajaj and to some extent Honda or it is TVS, yes.

So it is, even if there are plenty of firms, the competition is slowly reducing. Yes? The next one is the how we define this lower concentration rate, a lower competition rate? Is through concentration ratio. What this concentration ratio say is? This is the proportion of total market sales or share held by the top few market players or sellers or suppliers or providers. Yes. If there are only 4, then if there is out of 20 the total market sales is 100 crore Rupees and what is the share of 4.

And then they may have a share of 75 crore Rupees of the 100 crore Rupees and if that is the 75% of all the or all the firms or (()) (12:04) industry are being held by these top 4 market players, yes. So this is actually the concentration ratio and then more the concentration ratio, the oligopolistic market moves towards the monopolistic market. Again if it is ruled out of 4 again by 1. Yes.

Because monopoly is finally 1. So if 4 is having more and more and more, then it is going towards the stronger oligopoly or towards may be duopoly and slowly monopoly. But if 4 have an equal distribution, 4 have an equal, almost equal distribution and rest 16 have very small share, maybe less than 5% share, then everybody together maybe only 20% or 25%, then we have a very strong oligopoly.

In German automobile market you can see it is very very fragmented. In Germany, we can see only BMW, Audi, Volkswagen and Mercedes Benz and they have clear identification that which kind of population will buy what and what will be, which kind of car whether it is a sedan or it is a say between Mercedes and maybe BMW, they decide that whether they are specializing a sedan or a crossover and a hatchback.

Otherwise, the Volkswagen is a people's car, general costing lower as compared to Audi which is extremely costly. So they have a clear market segregation and this oligopoly, in that case, opens up a chance of collusion. So we are slowly moving to that that how these oligopoly market works, what are their characteristics, as the first feature of an oligopolistic market or oligopoly market.

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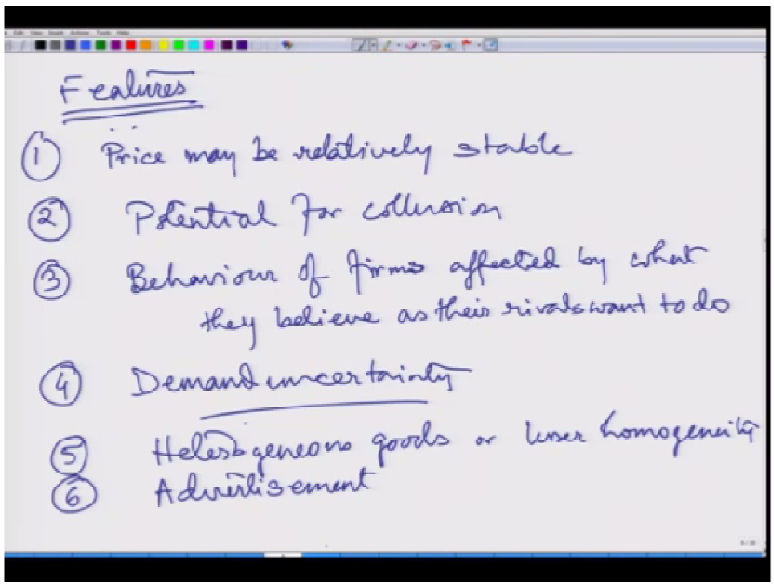

The first feature of an oligopoly market, this number 1 price maybe relatively stable across the industry. Yes, nobody wants to lose the industry. Nobody wants to lose because 4 may have the authority or they are enjoying the majority of the authority. So whatever they will decide, the entire market will follow that. If some particular say in the mobile market, there are plenty of mobile companies who gives you mobile at a very cheap rate.

But people still buy either maybe Motorola or maybe Apple or maybe Nokia or maybe Samsung or maybe now days, I do not know, Redme, Oppo, several are there, I really do not know. But then the market is dominated by only few and it is dynamic because it is dynamic based on the product, based on the product differentiation, how the customer is keeping them. Say at one point of time, Nokia really had a strong strong market, nobody close customers.

One point of time Micromax really came up very fast and then slowly these Chinese mobiles picked up as well as Apple targeting a particular section of the population. And over here you can see that there is a collusive oligopoly. There is a chance of collusion. Collusion is just opposite to collision that they can decide among themselves that okay fine, let us segregate the market, let us decide that what will be our niche areas, what will be our uniqueness.

And then we will try to tap the market accordingly, we will try to allure our customers based on our capability or based on our uniqueness, yes, so that we do not actually fight amongst ourselves and we enjoy the largest share of the market and can enjoy the whatever we want to do the product differentiation, the advertisement benefits, the several other negotiations with the government, everything.

And it happens very well even in the hair hospital industry. Some hospitals may specialize, say N specializes on cardiology, some hospital may specialize on oncology, some hospitals may specialize on maybe gastroenterology or maybe say plastic surgery or something else, so orthopaedic surgeries. And then they have, even if they are a multispecialty or super speciality hospital.

But they know that they have created or they have tried to create their own market which the other big market players have decided not to venture in in that way. They will still have a small unit but they will probably not try to overshadow that other market, other hospital. So there is a collusion. So there is always a potential for collusion. Third is the behaviour of firms affected by what they believe as their rival is going to do.

That means they have an idea or they try to presume that the rival's next strategy will be like this even if they may have a collusion, right. So they will always try to get themselves ready parallelly. So believe as their rival or rivals want to do, what the rival's next strategy. The another one is there is a demand uncertainty. That there is too much of mutuality interdependence across all these firms.

So and that leads to an uncertainty in terms of the demand because nobody knows that what others will do, whether they are decreasing the price or increasing the price, what is the quantity demanded, whether they are really changing their strategies. So there is always a demand uncertainty and then nobody will and that create a price stickiness. Nobody will actually change the price.

And the next is heterogeneous goods of course. Goods or lesser homogeneity, product differentiation, yes. Next advertisement, they rely a lot on the advertisement to continue their, enjoy their market share or the edge over the other big market players slightly, who does not want. Even if there is a collusion, they want that I will still try to dominate or I will move ahead, I will move towards the duopoly or monopoly.

So they want that and then the next one is nonprice competition based on the freebees, based on the health camps, free eye checkups, free health checkups connecting the corporate organizations, multinational organizations connecting their employer base, employee base, so all this.

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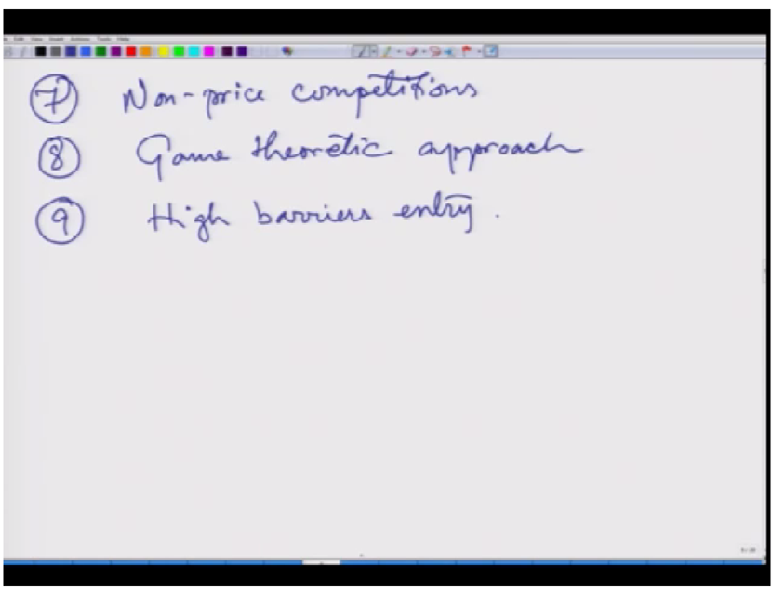

The edge is of course the game theoretic approach to understand that what is happening among them, what others are doing and based on that their rhetoric, their decision making ability will determine that whether they are sticking to the market or they will slowly lose their market share or they will improve on that and then the next one is high barriers to entry because they already enjoy the market power and the risks 16 are struggling.

So what the new firms are going to do. They will eventually lose out. So they will not find a profit making market very easily. So slowly if a particular, out of those 4, a particular firm really can, intelligently can pursue their business in such a way that they eventually have a hold over the rest 3 as well. So they have moved towards the monopoly.

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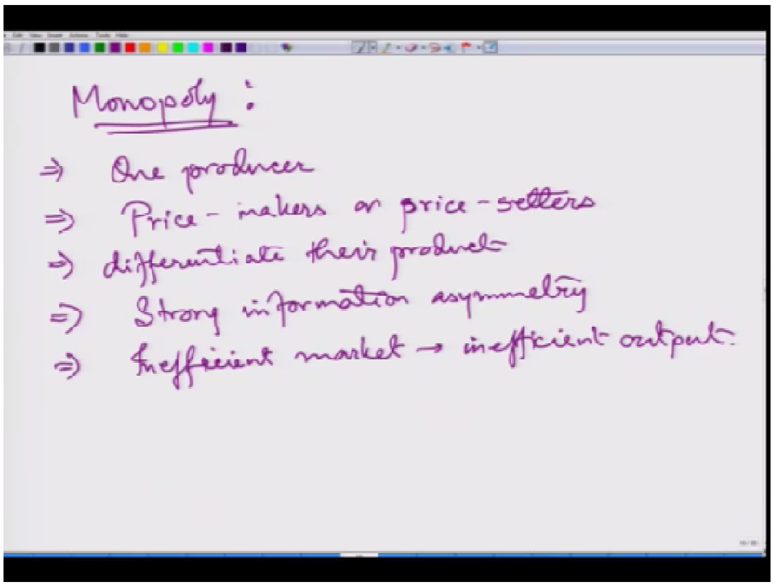

And monopoly is if there is only 1 firm and duopoly if there are 2 firms, we are straight away going to the monopoly where there is only 1 firm, 1 producer, 1 supplier, yes. So it is a pure monopoly where there is only 1 producer. So by the name, it is mono, mono means 1, only 1 producer. In reality, it really exists but the best monopoly can be a power supplier in a particular city.

They supply the power because they have the infrastructure, the railways in India. The other best monopoly example in terms of healthcare maybe in a small town only 1 particular diagnostic center has MRI machine. So they enjoy MRI, they enjoy monopoly in terms of MRI or there is only 1 doctor, only 1 dentist in a particular small town. So they enjoy the monopoly. So and whenever there is a monopoly exists, that 1 firm dominates the market and they can decided the price.

So they are the price makers or price setters. They can differentiate the product, differentiate their own product because they are the only producer or supplier or provider and so generally in a monopoly market, people really there is a strong information asymmetry. People really do not have much idea about what is the cost, what is the quality. Whether there is any changes going to happen in near future.

So there is a strong information asymmetry and people are always kept, are always at the receiving end, the customers. So it is not basically a very inefficient market. So inefficient market and often inefficient output, yes. So it is of course a market failure but in some cases say the government wants to become a monopoly because they want to have a strong regulation over the market.

So it is absolutely fine. So it matters that how and when and in which condition the monopoly is being ensured or whether it is, because it is a product of market imperfection, is the forceful or it is the decision which towards the efficient, towards the equitable distribution of a particular product or production where the wastage of resources or the sub-optimality does not exist.

In terms of healthcare, it is very very important or when if there is a regulation required in terms of the best of the quality, best of the distribution, best of the implementations, then the government can pitch in. But it is often a very difficult decision even by the government because healthcare is a huge market. So the origins of monopoly can be through the expansion of the firm, through the amalgamation of different firms from one to another and another to another.

So it is amalgamation of different firms taking over of different firms and if they get a licence or a patent that the government says they have innovated something and then the government say it okay fine, this can be a, this software can really change the primary health centers working condition or a networking between the, or the referral system between the rural patients and urban care providers.

So I am giving you the patent and then you can enjoy the monopoly for next 10 years. Whoever wants to use that software, you are the only supplier. So that is governments decision encouraging that innovation and otherwise, if it is a completely certified, given by the government. So again in terms of this price and efficiency, there has always been a question.

But however, the collusion through oligopoly may not actually culminate to the perfect monopoly but it may. So we, like it is very difficult to say that whether from a particular market, it is coming up to be a, it is moving towards the monopoly or not and then it is basically the government's decision that whether they are going to entertain a monopoly or not. Or how they are going to have a check on that.

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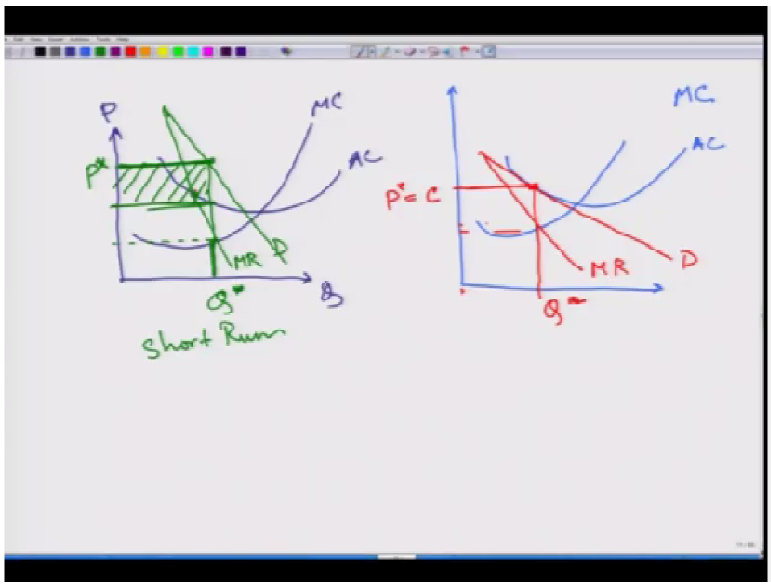

So if in a particular monopoly condition, what we see generally that over here it is quantity, over here it is price and of course the average cost curve and then the marginal cost curve passes through the average cost curve. What we see that they enjoy a profit and then there is a demand curve which is downwards sloping and over here marginal revenue curve is also downward sloping, not a straight line.

That is because diminishing returns to scale and then this can be the marginal revenue. So this is demand. This is marginal revenue and then you can see, over here if I draw a straight line and over here if I draw a straight line, where my marginal revenue and marginal cost meets, this is my Q*. This is my optimal output, what I am going to produce. But at the same time over here, they will set the price where the, yes.

They are going to set the price where the demand meets the quantity and based on the demand curve, they will set the price because at the demand curve, it is equilibrium. So P* and Q* but they will make a profit where they are getting this through the average cost curve and in this average cost curve, they are getting this profit. Because this is their cost and this is the demand, based on the demand curve, this is the price and this is the cost and this is the profit.

But what eventually, so this is the short run framework but what eventually happens in a long run framework is my average cost curve, marginal cost curve, I will have a demand curve now which is tangential to the average cost curve and my marginal revenue curve will be something like this. And then my demand and average cost, my price will come from here and this is my demand and average cost curve intersection point. So this is my cost, see.

And I will set the price over here as well. So actually they are not making any profit in a long run. So and then it is basically should be like this, yes. So here no profit no cost condition in the long run. So this is how the monopolistic competition move towards monopoly. This market imperfection where the price is not stable walks out. Thank you. So this is all about our market structure and we will talk about why market structure does not really, why it is not really perfect or move towards imperfection in a healthcare market. Thank you.