Managerial Economics
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Lecture - 47
Theory of Market - I

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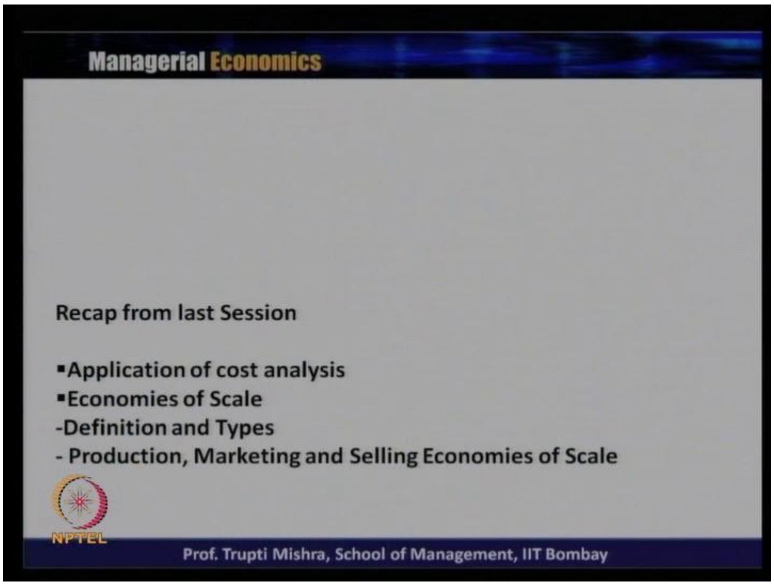

So in today's session, we will continue our discussion on economies of scale and what we were doing in the last session. So, if you remember in the last class we talked about the application of cost analysis specifically optimum to the optimum output level, what is the requirement cost analysis when to identify the optimum output, optimum inventory and optimum scale. And then we discussed about the economies of scale generally what the large point or the large firm gets, in term of the decreasing long run average cost with when the scale of output increases; and in that context we identified or we defined the economies of the scale.

Then we have identified the types of economies of scale like pecuniary economies of scale, and real economies of scale, and if you know the essential different between the pecuniary and real economies of scale is; in case of pecuniary economies of scale, there is a reduction in the price of the raw material or the price of the inputs that brings less cost to the firm. And in case of real economy, it is not a reduced money or the reduced value of the inputs, rather it is the reduce quantity, reduce amount of the input what has to be used in the production process so that the firm gets cost advantage.

In case of real economy, there are four different kind of economy. Here it comes from four different sources; that are production economies, then marketing and selling economy, managerial economies of scale, and finally transport and storage economies of scale. So, in the previous class we discussed about the production and the production economies of scale, which is again subdivided or which comes from the either capital or from the labor or from the inventory and in case of marketing and selling activities, selling economies of scale we discuss about the advertisement, we discuss about the expressive arrangement of producer with the dealer, we discuss about the model change economy, and how all this factor brings economies of scale to the large firm or economies of scale to the large plan.

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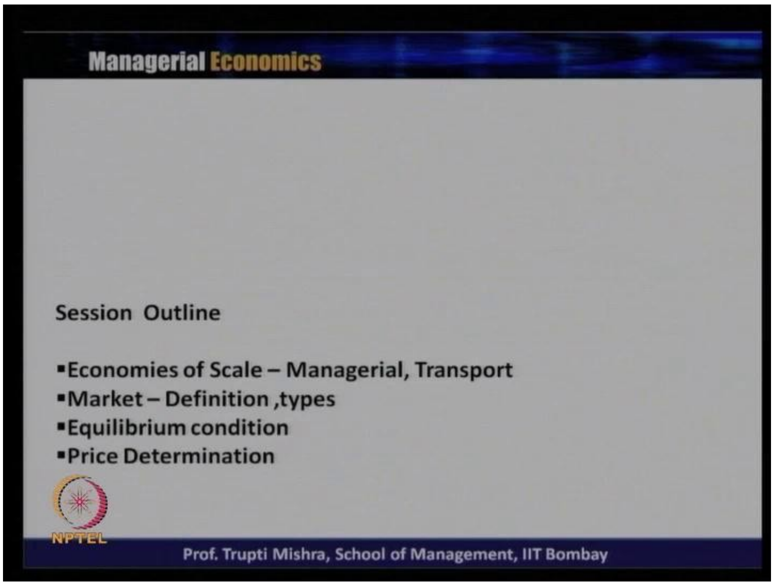

Today we will continue our discussion in the same line with another two types of economies of scale; that is managerial economies of scale and the transport and storage economies of scale. Then we will start a new module; that is the theory of market. We will look for the definition and the types of market, we talk about the equilibrium condition and how the price determination takes place in the different time period.

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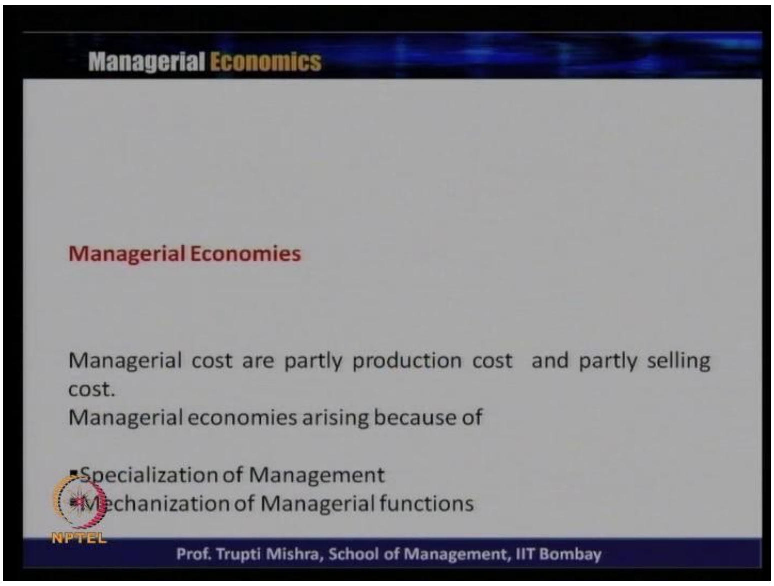

To start the discussion we will talk about the managerial economies of scale and here the point to remember that, managerial cost are partly production cost and partly selling cost, and generally the managerial economics arising, because of specialization of management and mechanization of the managerial function. These are the two factors which contribute most to the managerial economies of scale. So, the cost has two parts; one is the production cost and the second one is the selling cost, and typically the cost advantage comes from the specialization of management and mechanization of the managerial function.

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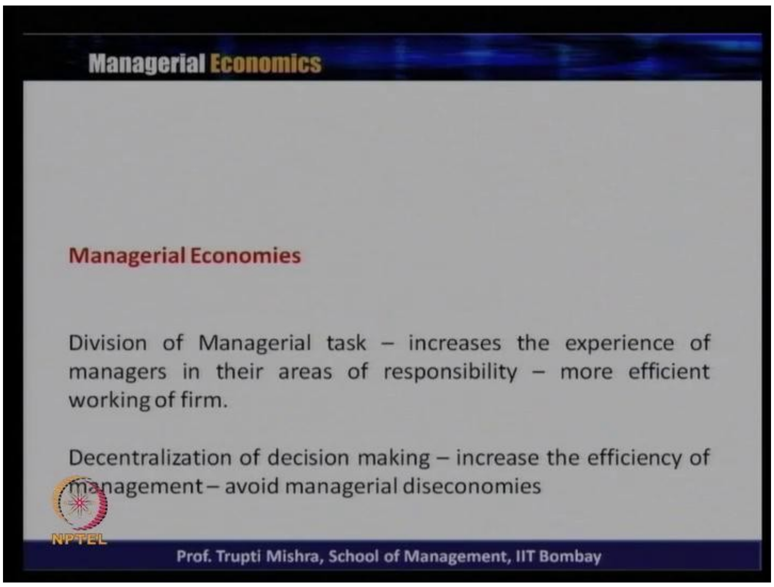

So in case of large scale, if you look at it has happened at there is a division of the managerial task because there is a large full of resources, large full of skilled manpower that leads to the division of the managerial task, and when the division is taking place what is the outcome. It increases the experience of manager in the responsibility leads to more efficient working of the firm. So, the division is on the basis of the scale. The division is on the basis of the experience. So, in one way it increases the productivity. In the other way it also increases the experience of the manager in their area of the responsibility.

As a whole it leads to more efficient working of firms. Since there is a division of the managerial task that leads to the decentralization of the decision making, it increases the efficiency of management and avoids the managerial diseconomy. What is the decision of the decentralization of the decision making? If you are seeing in a small firm, there is one manager who takes decision about the finance, who takes decision of marketing, who takes decision about the human resources, who takes decision about the strategy, who takes decision of the long term goal of the company, the vision of the company, who takes the decision about the operations of the company. But when the same scenario in case of a large company; there is one manager for operation, one manager for hr, one manager for marketing, and one manager for finance.

So the decision making, there is no discussion of information or there is no flow of information goes internally from one person to another person or in a hierarchy level to the boss, the top official, because the decision is taken individually by the domain specialty. If it is hr, then the hr manager has to take a call. If it is marketing activity, the marketing manager has to take a call on it. If it is finance, the finance manager has to take a call. So, since there is a division of labor and for each assignment there is a manager that leads to decentralization of the decision making, and it increases the efficiency of the management, and it also avoids the managerial diseconomy.

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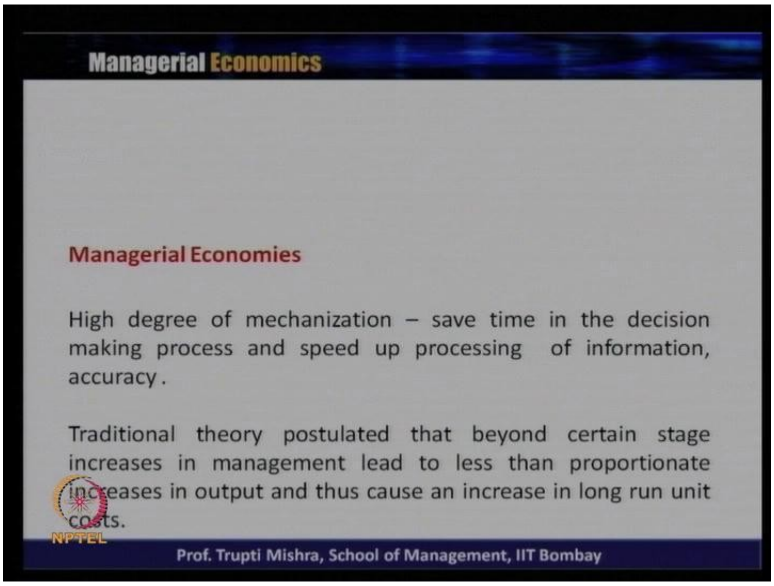

Another point here is the high degree of mechanization. It saves time in the decision making process, they speed up in processing the processing of information and accuracy. So, again there is no discussion of the information, less internal flow, and that is the reason because of mechanization it saves the time of decision making process. Like if you look at if there is no mechanization if the corporate office needs the information from the plant, may be they have to wait from the mail, they have to go through the postal mode to get the information.

But now with the advent of fax, telephone, online like you talk about the Skype, you talk about the different kind of invention of the different kind of contacting each other. Then media to reach each other has so much that generally possible incase of the large scale operation, and the outcome is that it save times in the decision making process, in speed of processing of information and accuracy. So in one way, we have already we have assumed the fact that large plant large firm because of division of the management, because of the disadvantages of decision making process, high degree of mechanization that is good and that brings the economies of scales.

But traditional theory postulated that beyond a certain stage increase in the management leads to less than proportionate increase in output, and thus cause an increase in the long run unit cost. So traditional theory always say that, this economic of scale the advantage of the groups, the advantage of the mechanization, the advantage of the decentralization, it is always up to a point; beyond that even if it is done through the management, even of it is too much control of the management, generally it takes in the adverse direction and that leads to the managerial diseconomies of scale.

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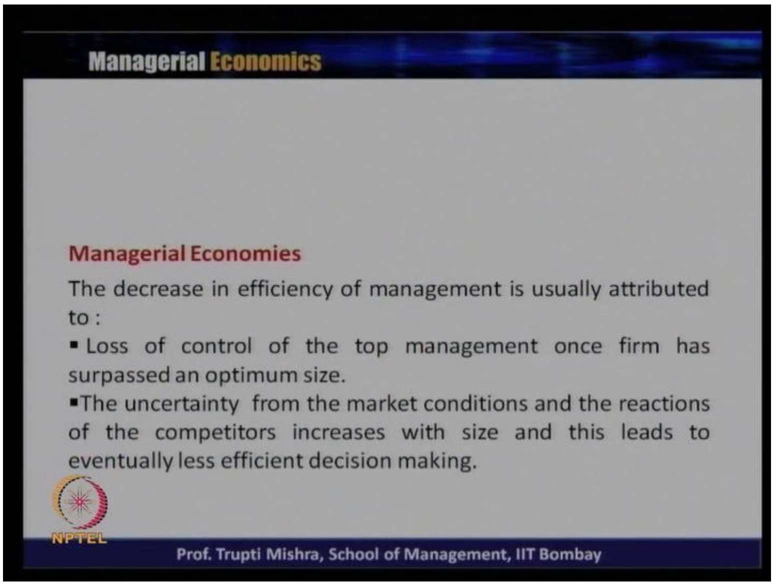

And the decrease in the efficiency of management is usually attributed; generally how why the traditional theory first leads that and what may be the factor when you talk about the managerial diseconomies of scale. The decrease in the efficiency of management is usually attributed due to: loss of control of the top management once the firm has surpassed the optimum size. So till the time the optimum size is there. Till the time firm has not reached the optimum size, the top management has kept everyone is the control and they have given the direction how to work and how to perform.

But once the firm has surpassed the optimum size, generally there is a loss of control from the top management and that may be leads to the one of the factor which decreases the efficiency in the management. The second one is the uncertainty from the market condition and the reaction of the competitor increases with size with this leads to eventually less efficient decision making. So, there is always an uncertainty in the market condition, the reaction from the competitor because if you look at it, it is the same strategy followed by the company. From last 25 years, the competitor knows the strategy and they are going to react accordingly that company A has this strategy, so company B has to follow something else because company A goes in that direction.

So, given that competitor reaction and may be the uncertainty from the market condition, which increases with the increase in the scale of operation leads to the eventually less efficient decision making and that is how may be the traditional theory argue. The traditional theory argues that may be managerial economies scale is up to a level, may be in a very specific point up to the optimum scale and beyond this generally some evidence of the managerial diseconomy, and that leads to increase in the long run average cost curve, and that is why we get the increasing shape of the average long run cost curve after the optimum level of output.

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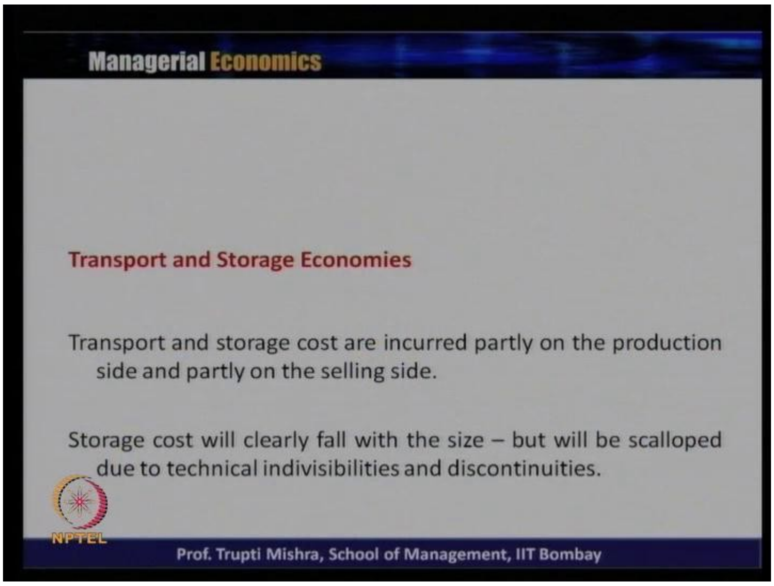

Then we will talk about the last kind of real economy or last type of real economies what we have listed down, that is transport and storage economy. So, transport and storage costs are incurred partly in the production side and partly on the selling side. Because few of the activity of the transport and storage cost comes within the domain of the production and few comes within the domain of the selling. So storage cost will clearly fall with the size, because if you look at if you are taking if you have built a warehouse, then if 100 units if you are keeping as an inventory as a stock, then per unit cost is on a higher side. But you are putting more, then the cost of production generally comes down; the average unit cost generally comes down. So, storage cost will clearly fall with the size, but will be scalloped due to technical indivisibility and discontinuity.

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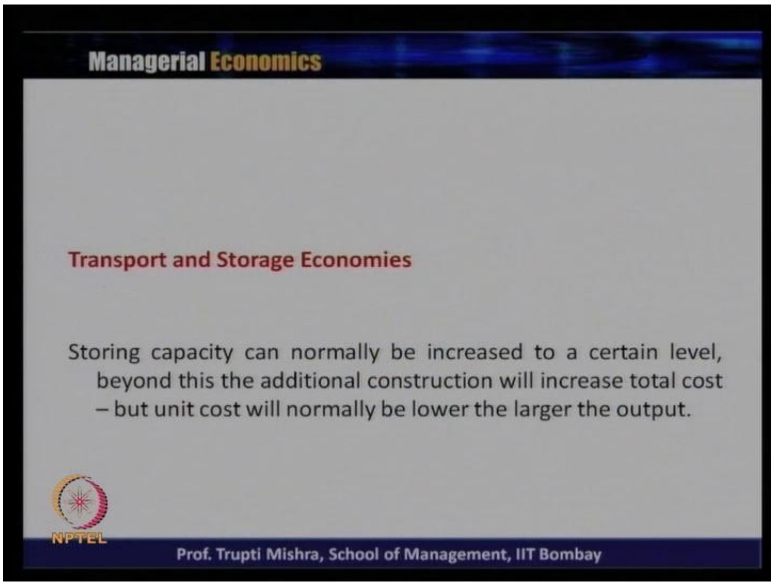

Storing capacity can normally be increased up to a certain level, beyond this additional construction will increase the total cost, but unit cost will normally lower than the larger than the output. Suppose the warehouse is the capacity of 100 units. So up to 100 units, any additional unit of output will always bring down the cost. But once the stock goes beyond 100 units, now it is not in the capacity of that storage, not in the capacity of that warehouse they need to construct the additional storehouse.

Here initially again the cost is in a higher side, till the time there is no larger amount or the larger unit of the output is being kept. Once it is being kept, again as the average cost for all unit of the output generally comes down. So, storing capacity can normally increase up to a level, like according to the capacity of warehouse. Beyond this the additional construction will increase, but the total unit cost will normally lower than the larger than the output.

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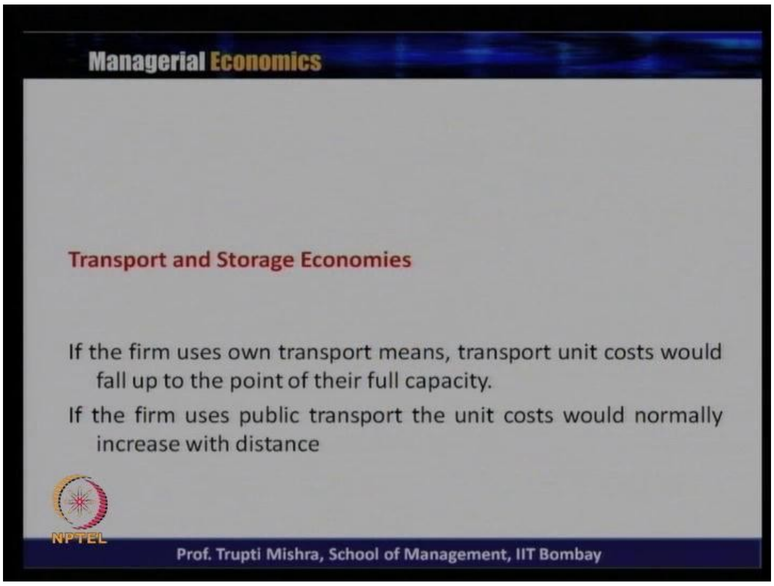

Similarly when it comes to the transport, generally if the firm uses own transport means transport unit cost will fall up to the point of their full capacity. Because its own transport means, its transport unit cost generally decreases because of the full capacity because it is the own transport. If the firm uses public transport, the unit cost will normally increase with the distance, because it is a public transport; more you transport, the unit cost will be more if the distance is more. But if the firm uses own transport means transport unit cost fall up to the point of their full capacity.

Because if 100 units is getting transported by own means, it is better to get transported 1000 units because that will reduce the transport cost per unit as the less. But for the public transport if your 100 unit and if you are paying something, you pay more for the volume and more for the distance when you are transporting 1000 units, and also transporting may be the distance is more when you are doing the transport. So, transport economies of scale generally comes from the large scale larger firm, because they can afford their own transport means to transport their goods and services from one place to another place.

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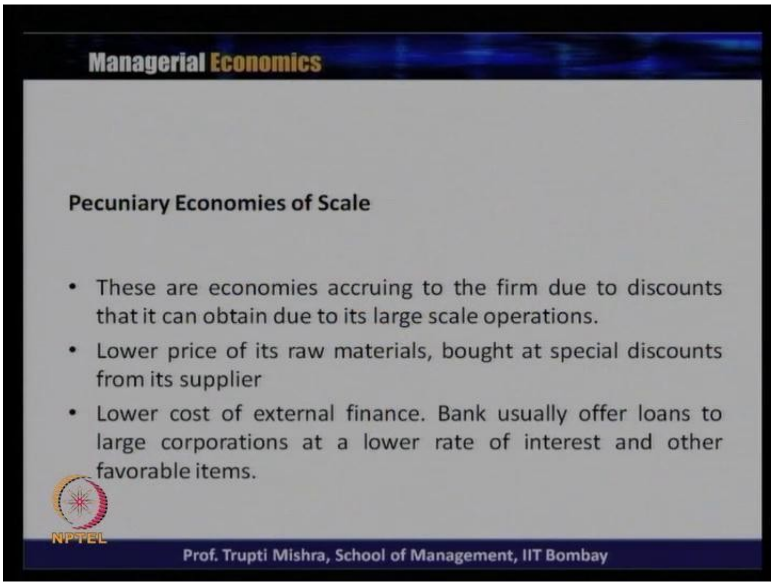

Then we will come to the second type of economics of scale that is main division if you remember the real economics of scale and pecuniary economics of scale. Pecuniary economies of scale is one where there is a reduction in the price of the raw material, there is a reduction in price of the inputs and that leads to the advantage cost advantage of the firm. So pecuniary economies of scale, these are the economies occurring to the firm to discount that it can obtain due to large scale operation.

For example, lower price of its raw material bought at a special discount from its supplier. So if it is a large scale, if you are buying it in bulk; generally you get a discount. That happens in like almost all the cases, when you buy it in bulk you will get it in the lower rate rather than the individual unit. So if someone is doing that operation and the scale of operation is increasing, then they get a special discount from its supplier because they are buying more and they are paying a lower price to the raw material.

Similarly, lower cost of external finance banks usually offer loans to the large of corporation at a low rate of interest and other favorable items, may be the terms and condition also changes if it is large corporation because basically there is no problem with their repayment. They have already built up their trust and they have also kept credential to return it back whatever the money they are giving. So since they are paying, they are getting the higher amount of loan from or they are getting a higher amount of finance from the bank. The bank will not mind also charging the rate which is lower than the adjusting rate and in that way, they get a lower cost of external finance and through that they generate the economies of scale to the firm, and this is also known as the financial economies of scale comes under the pecuniary economic of scale.

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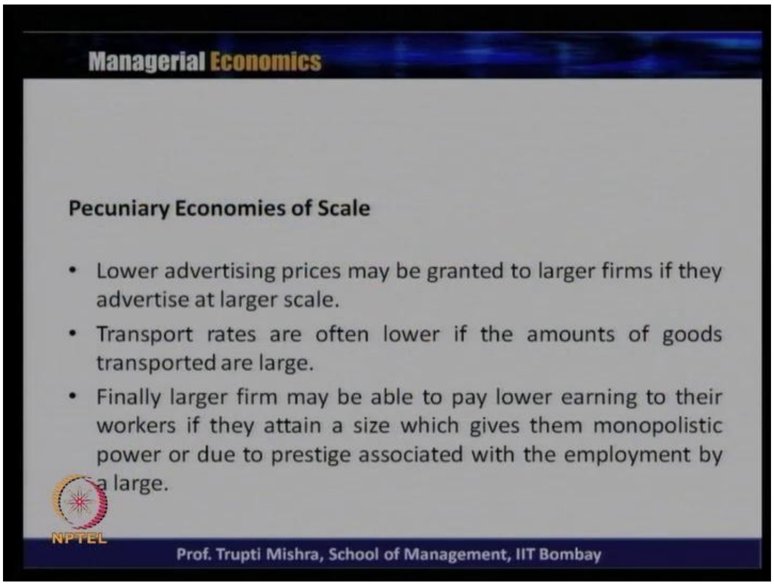

Then sometimes the lower advertising price may be granted to larger firm if they advertise at a larger scale. So, if you look at lot of big corporate house what they do, they pay the money in lump sum to the media houses. Like throughout the year whatever they are going to advertise, the media house will go advertise and they will charge in lump sum. The same thing cannot be done by a small firm because if there are paying a large sum and if there is nothing more to advertise, then generally they will it is not possible for them to pay such the unit cost or the total cost for them in a higher side. But since it is large scale and they do generally on a continuous with the advertising, so if they are paying as bulk rupees generally per unit cost comes down for the advertising expenditure.

So, lower advertising prices may be granted to larger firms if they advertise at a larger scale. Transport rates are often lower, if the amount of good transported are large because they gets discount like; if the firm is getting or if the plant is getting drugs from the third party to transport and if you regularly call the drugs, if you regularly ask the particular vendor to bring the drugs, and also on a higher quantity they can always negotiate and the transport rates can come down to a lower one. Finally larger firm may be able to pay lower earning to their worker, if they attend a size which keeps their monopolistic power due to prestigious associated to employment by a large. So, this generally happens in case of real life that you pay less to the people still they will work for it.

You take the example of typical IT Company. If the company is known for its brands, if the company is well known, qualified personnel will not mind working for the company even if he is getting a salary which is less than the market rate. But this is not possible in case of small scale small industry because they are yet striving to get their name, yet striving to get their brand. So, in that way also the large scale that gets some cost advantage because they get manpower. In a simple way they get the manpower at a lower rate because people they work for them, they generally work for the brand and they feel good associated to be with the brand. So they do not mind if you are getting at a lower salary as compared to the market rate and that is how if you look at; that is one more source of economy the pecuniary economies of scale for the firm.

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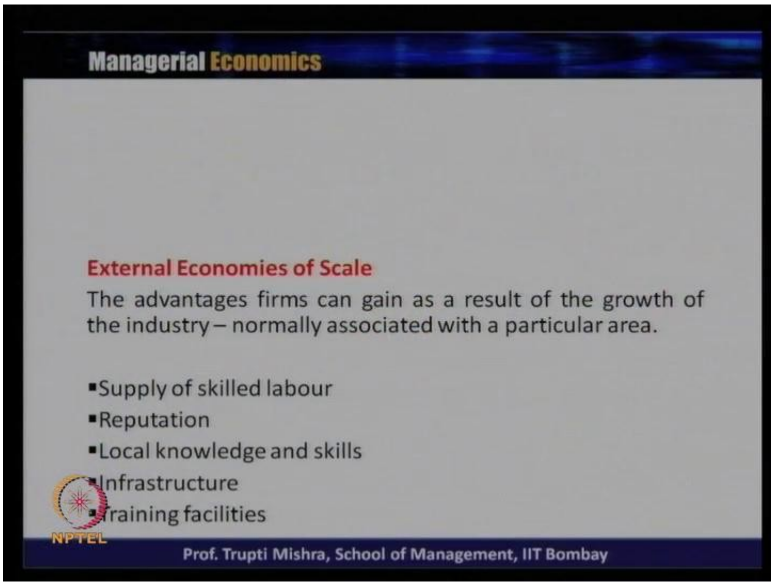

When you talk about that, till the time these are all internal economies of scale. Now there is one more economy of scale; that is external economies of scale and what are the external economies of scale. Here the advantage the firm can gain as a result of growth of the industry normally associated with a particular area. So, if there is a growth of industry in that particular area where the firm is there, the firm gets some advantage because of the growth of the industry and what are the advantage; either they get the advantages in term of supply of skilled labor because anywhere there are skilled labor coming to work for the industry, so that is how they get the supply of skilled level.

They get a reputation because they are near to a good industry, local knowledge and skill they can use, they get good infrastructure and they get good training facility. So these are like, if the industry is built in a remote area if you will find there is some basic necessity, the basic amenity they build for that particular area; like may be a hospital, may be a good concrete road, may be some water supply, whatever is their infrastructure there also they get an excess to it and they get a cost advantage to this and that is how the external economies of scale. But the cost advantage they get it from the third source, not from their either from their real economies or from the pecuniary economies or from the internal source.

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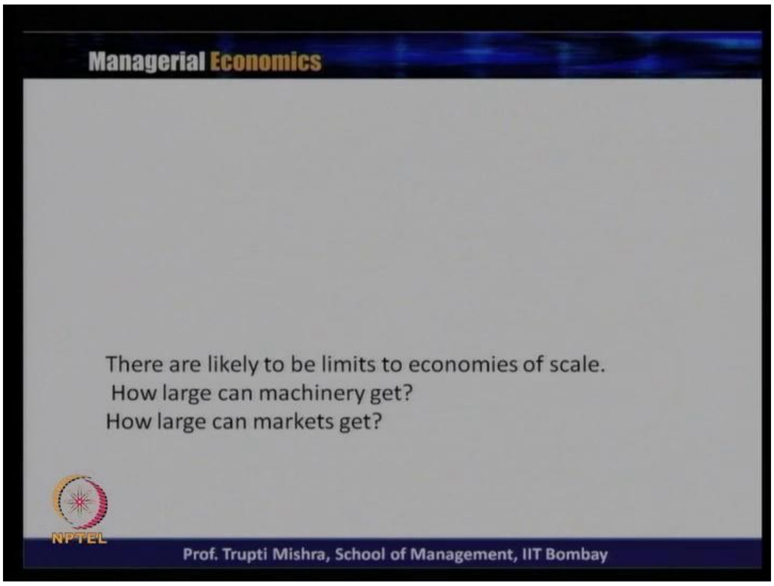

Now we know that the cost advantage is getting by the firm. They are getting at the lower operation cost when the scale of operation is increasing. But what is the limit? Because we know that when the machinery is large, we get economies of scale; we know that the scale of operation is more we get the economies of scale. But how large can the machinery get, how large can market get, that it will increase the scale of operation and that is the reason we know that there is a limit to the size of machinery, there is a limit to the size of market, and that leads to the limit of the economies of scale or the firm where they should stop, they are not getting any other cost advantage beyond that point. So, that brings the limits to economies of scale and they are the diseconomies of scale generally started.

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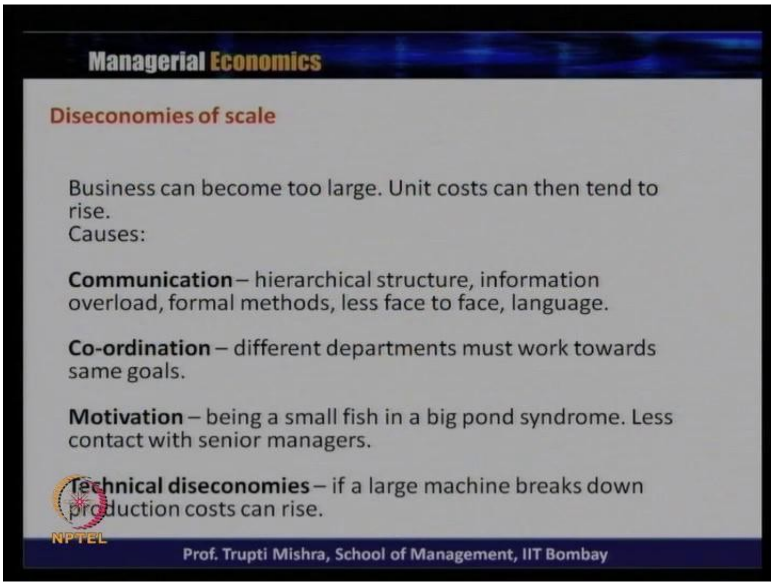

So, business can be too large. But still unit cost can then tend to rise because the causes are communication may be the hierarchical structure, information overload, formal method, less face to face, language. Co-ordination different department must work towards the same goal because it is large. Business is lack of communication because may be of hierarchical structure, because of information overload, because of formal method, because of less face to face meeting, because of language, because of the lack of co-ordination. Ideally different department must work towards the same goal; motivation being a small fish in a big pond syndrome, less contact with the senior manager. Technical diseconomy if the large machines break down production cost can increase. So there is diseconomies of scale once the scale of operation goes on a very higher side the business can be too large.

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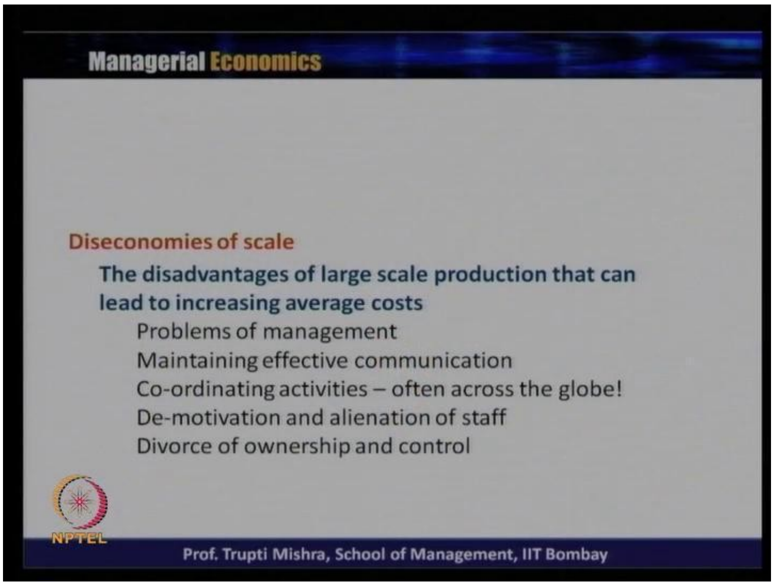

So, the disadvantage of the large scale production that can lead to the increasing average cost can be with the problem of management, maintaining effective communication, coordinating activities often across the globe, de-motivation and alienation to staff, and divorce and ownership and control. So if you will take all these points, all this part is from the management and this is how the traditional theory of economies always say that the diseconomies of scale comes mainly from the management, and that is the reason the average cost of production generally increases.

So if you look at it, if you summarize it, if you try to remember also the discussion we had on economies of scale may be in not in production, may be some part of it in technical, not in selling, not in marketing, not anywhere rather the diseconomies comes mainly from the management because their attitude, their behavior changes, their working style changes when they operate on a larger scale of production or when business goes too large in to the account.

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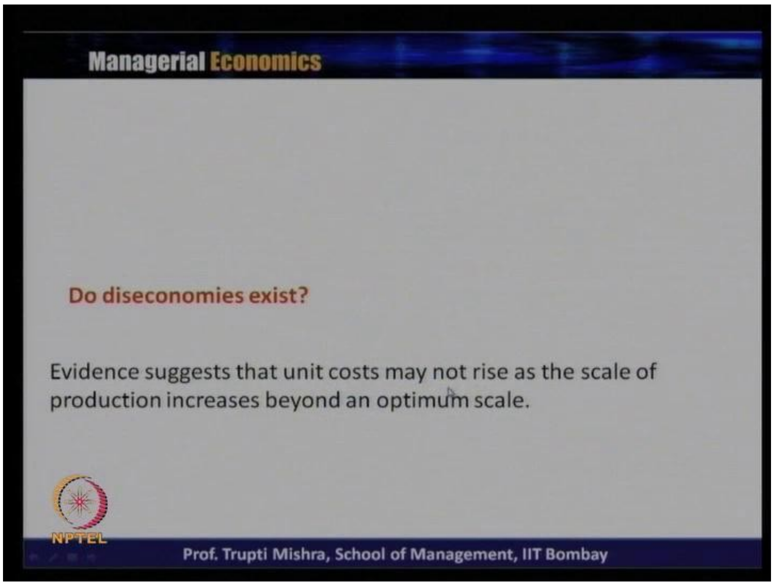

So the question comes here, do diseconomies exist. Evidence suggests that unit cost may not rise as the scale of production increases beyond an optimum scale. So evidence suggests that unit cost rise as the scale of production increase beyond the optimum scale but still there is a limit. It cannot increase more. May be the increase is there but still it is moderate, and it is a kind of fluctuation once it reaches the maximum. Then again it has to come down; again there has to be some economies of scale over there.

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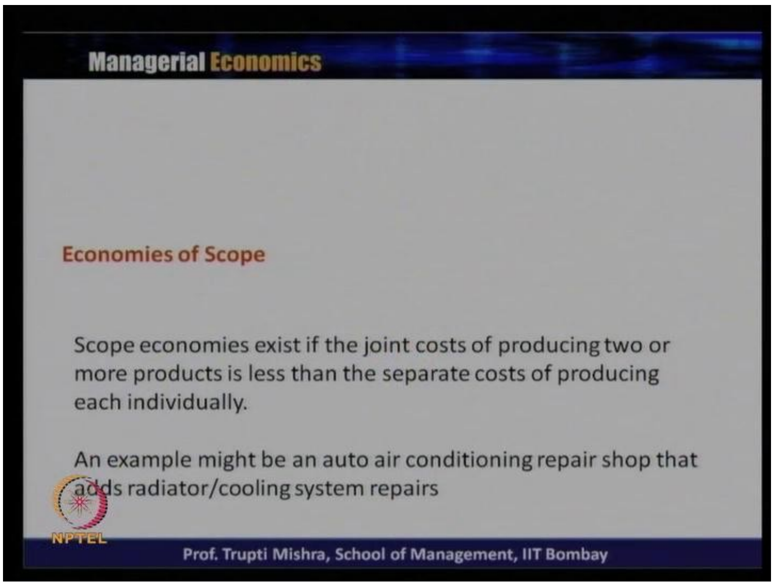

Then there is an interesting concept with respect to economies of scale that is economies of scope. So till the time we are talking about one product, one firm, one industry. But economies of scope deal with the joint cost of producing two or more product. So, scope economies exist if the joint cost of producing two or more product is less than the separate cost of producing each individually. So an example might be an auto air condition repair shop that adds radiator and cooling system repair. So if you look at also, if you go to a mechanic shop you will get the repair at times in different segments.

May be it is a refrigerator, may be it is a television, may be it is a music system, may be it is a grinder, whatever is there he repairs everything. Because he is not skilled for only one product and here if you look at if he is doing separate for refrigerator, separate for television, may be the cost associated with that in a higher side. But when that is getting done jointly, always the cost of production is lower and there we say that, there is an evidence of the economies of scope or scope economies exist over there. No much evidence like; no much example you will find about the economies of scope. But still it is a very important concept when you talk about joint cost of producing two goods, which is always lower than the separate cost of producing it.