

**Managerial Economics**  
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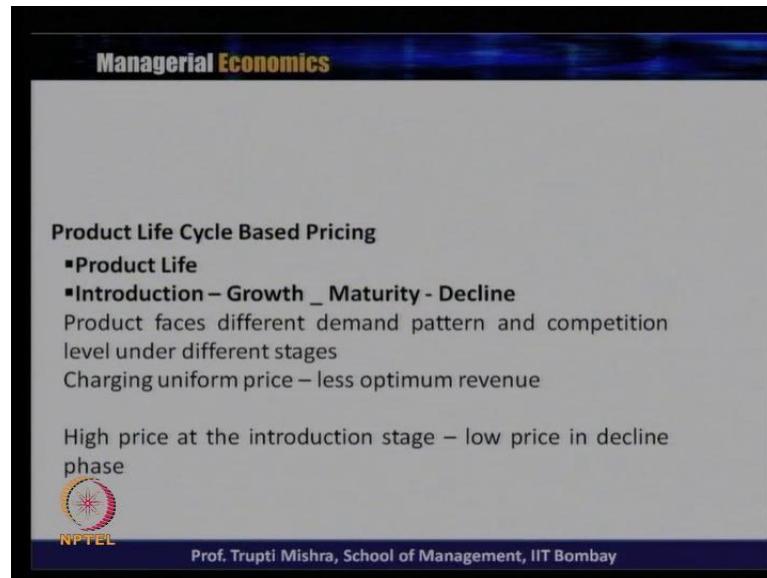
**Lecture - 39**  
**Product Pricing (Contd...)**

We will continue our discussion on product pricing in this session also. So, if you remember, last time, last session we discussed about the product pricing and what is the need of product pricing; when the firm generally go for a pricing strategy altogether; whether about launching a new product, whether there is improvement in the improvement in the existing product and also getting into a strategy where getting into a different market altogether or different market segment.

So, in that context, we discussed about the cost based pricing, typically the cost based pricing and the markup pricing. Then on that, the basis of the cost what is the whether it is a full cost, whether it is the variable cost. Then, we discussed about the target price; then, we discussed about the pricing on the base of competition; then, we discussed it is on the basis of the firm's objective; if the firm's objective is profit maximization, what strategy to be followed, and if the firm's objective is for the sales maximization, what strategy to be followed.

So, on that basis, we discussed three types of product pricing in the last session: one on the basis of the goal of the firm or the objective of the firm, second is on the basis of the competition, and third is on the basis of the cost.

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**Product Life Cycle Based Pricing**

- **Product Life**
- **Introduction – Growth \_ Maturity - Decline**

Product faces different demand pattern and competition level under different stages  
Charging uniform price – less optimum revenue

High price at the introduction stage – low price in decline phase

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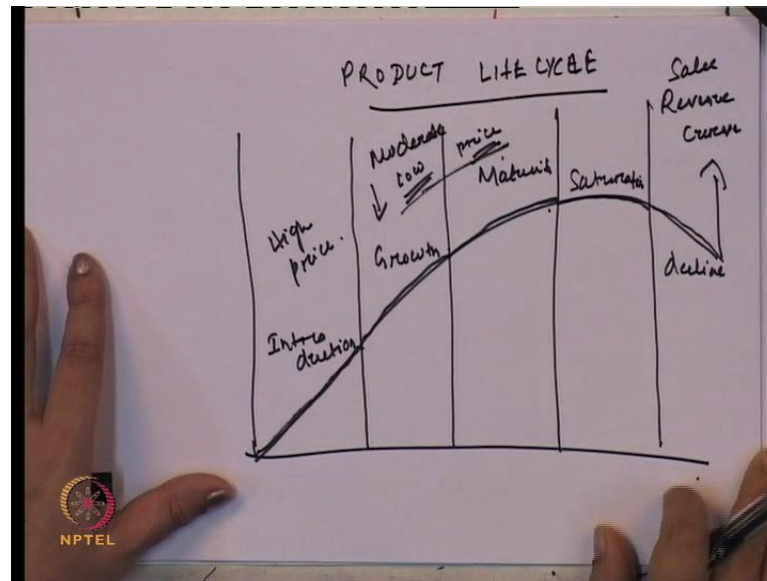
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So, today we will continue our discussion on product pricing and the first type of product pricing we are going to discuss today is product lifecycle based pricing. Here, the pricing is based on the product life. So, typically, if you look at, the product life is divided into four stages: The first stage is introduction, second stage is growth, third stage is maturity and fourth stage is decline.

And generally, the product faces different demand pattern and the competition level under the different stages. So, charging uniform price at the different stages generally gives less optimum revenue to the firm because each stages, they have a different demand pattern and the different kind of competition under the different stages. So, that is the reason, if you are charging or if the firm is charging the uniform price, the possibility is that that it will give us less optimum revenue.

So, it is preferable or it is advisable that there should be high price at the introduction stage and low price in the decline phase. So, before going into the different techniques of the product life or different strategy on the product life based pricing, we will understand what is the nature of all these four stages of the product life, like starting from introduction, to the growth, to the maturity, to the decline.

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So, we will first understand these four stages of the product lifecycle and then we will see how the sales generally increases or decreases in all these four stages of production. So, to start with, we will just draw a graph to understand these four stages of production. So, this is our sales revenue curve; this is the sales revenue curve. This is the introduction stage; this is the introduction stage, then we will get the growth stage; then we will get the maturity stage and then we will get the maturity; then we will get the saturation, and finally, we will get the decline.

So, when it comes to a product lifecycle, so it when it comes to a product lifecycle the first stage is introduction. And if you look at, here generally the product is introduced and the sales increases, because this is a new product in the market. Then the sales pickup because consumer, they were aware of this product. And finally, the growth happens in this stage. Then the the product become generic in the case of, in the case of maturity stage and still there is an increase in the sales force because this is considered to be the generic. Then people, they become saturated at this stage and after this decline continue.

So, if you look at, generally, always the high price is charged in case of introduction stage. And why high price is charged because the product is new and people are ready to pay for it, and here the sales force, here the priority is to it is reaching to the consumer and there they have to increase the sales with the high price or increase the sales revenue

with the high price. But in the case of growth and maturity, generally they charge a low price because the product has already reached to a stage, where people, they, know about this product and that is why this low price is being charged in case of the growth and maturity, and also that continues in case of the saturation and decline stage. So, rather than saying low, we can say this is the value for maybe this is the moderate moderate price. This is the value for this product in case of growth and maturity.

So, generally, if you take an example of suppose the television, when this LED, LCD television came, initially it was such a high price and who who are the customer segment or who are the group of consumer they are going to buy the LCD TV? who attach high value to it, who consider this is a status symbol, and they are less bothered about that whatever the price is being charged because they are in that customer segment whatever is new in the market, they should use it, and they are not responsive to the price, whatever, whether it is high price or whether it is low price.

So, in that case, generally high price is charged in the introduction stage, but later on if you look at, now the price has come down for LCD TV. Now, it is in the growth and if you look at, it is also matured because it is now from LCD we are moving to the LED TV. And now, at this stage, the typical that color TV television or may be the so called flat television, that has already reached maturity or the saturation, or we can say, the typical black and white, they have already reached the saturation or they are in the decline phase. But in this case, that flat TV or the color TV is still in the maturity. Those who cannot afford the LCD, LED TV, they are just taking that flat screen TV because it is in the maturity stage and the price is moderate.

So, if you look at, now you can bring the LED TV here, which is high price; LCD TV here which has already reached the growth stage, that is the moderate price. Maturity, again it is the price considered to be these two products; it is low price and then again to the saturation typically and decline for the black and white TV. So, practically where the price is? Almost in the bottom side.

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**Product Life Cycle Based Pricing**

- Price Skimming
- Under price skimming producer charges a very high price in the beginning to skim the market and earn super margin on sales.
- Markup cost is normally high.
- First degree price discrimination.

High price at the time of introduction – low price at the time of maturity.

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So, on that basis, on the product life cycle based pricing, there are three kind of pricing technique; the first one is price skimming. And what is price skimming? Under this price skimming, producer charges a very high price in the beginning to skim the market and earn super margin on sale.

So, if you remember your first degree price discrimination, the monopolists try to identify the consumer group who is ready to pay more and generally charge a higher price to them. So, in this case also, the producer tries to skim the market and earn the super margin on the sales and here the markup cost is normally high; the margin whatever, that is normally high. This is the typical example of a first degree price discrimination; high price at the time of it introduction and low price at the time of the maturity.

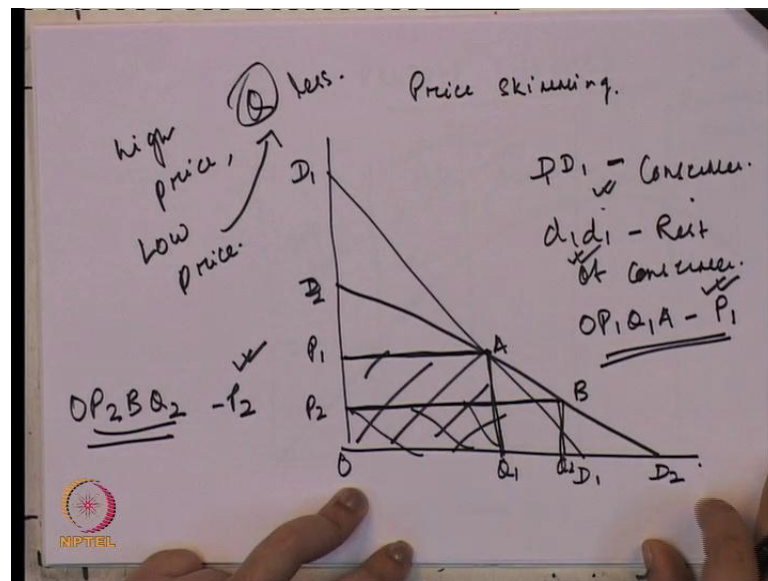
Now, here, we can take the example of, may be here we can take the example of, suppose every Friday we get a new movie get released. And to the consumer group, now those who watches the movie on the first day first show, they pay a higher price and those who are watching that movie at a later time, when the demand is saturated, then they give a they generally they generally pay a lower price. So, the first day first show when you are trying to watch a movie, your focus is not on the price; you focus is that because you want to watch the movie, and here the producer tries to skim the market and they exercise the first degree price discrimination and they charge us a higher price

because here the consumers, they are not ready for or they are not responsive for the price rather they are responsive for the product.

So, in this case the producer will charge a higher price and in this case there will be a price differential who on the basis of the time period; who is watching the movie and the first instance the first day first show and who is watching the movie at a later stage because the first day first show consumer group, they are paying a higher price as compared to the people those who are watching out a later day.

So, we will just take a graphical explanation to understand both the cases; this first day first show and watching the movie at a later stage, and we will see how on the basis of the demand curve, the consumer is paying a higher price in the first case and they are paying a lower price in the second case.

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So, we have two demand curves:  $D_1$  and  $D_2$ . This is the  $P_1$   $P_2$ . So, the demand curve  $D_1$  is demand curve for those consumers who must watch the show on the first day irrespective of the price and  $d_1$  is the demand curve for the rest of the consumer who generally watches the movie after the craze is gone or may be after the demand comes to a moderate level.

So, on that basis, we get two demand curves: the first demand curve is  $D_1$  that is for those of group of consumer who must watch the movie on the very first day.  $d_1$  is

for the demand curve for the rest of the consumer. So,  $P_1$  will be charged for consumer who is watching the movie on the first day and  $P_2$  will be charged for this group of consumer who are watching the movie at a later day. So, in the first case, this is the revenue and second case this is the revenue. So, revenue in the first case is  $OP_1$ ,  $OP_1$  or  $P_1 OQ_1 A$ . This is the revenue when the price is  $P_1$  and in the second case when the price is  $P_2$ , this is the revenue that is  $OP_2 BQ_2$  (Refer Slide Time: 12:20).

So, now if you analyze this from the producer point of view, in both these cases, the producer is getting the revenue; whether the price is  $P_1$  or whether the price is  $P_2$ , but when he is charging the the revenue model is different in both these cases. In the first case, it is high price and second case it is low price. If he alter the pricing technique, may be he is not maximizing revenue because initially the group of consumer who will be watching on the first day, the  $Q$  is less; if  $Q$  is less and if he is charging a low price, he is not maximizing the revenue.


And second case, if he is going to charge higher price at a later date also, if the movie is released and after may be two weeks, three weeks, still he is charging a high price, still the queue is going to be less, and in this case, again the maximization of revenue is not possible. So, the point here is - when consumer is not responsive to price, that time generally the higher price is charged from the by the producer and if the responsive to price generally the lower price is being charged, and that is the reason. This is the strategy under the price skimming. In the time of introduction, generally, high price is being followed and in the later date, generally, the low price is being followed; that is typically in the maturity saturation or the decline phase of the product. So, here, the basis is product lifecycle. On the basis of the different stage, the prices are going to be charged.

(Refer Slide Time: 14:46)

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**Product Life Cycle Based Pricing**

- **Product Bundling**
  - Two or more products bundled together for a single price.
  - Strategy is used to propagating new product as well as selling a product during decline phase.
  - Packaged trip – hotel stay, sight seeing
  - Travel package –bedding, food part of train fare
  - Breakfast as part of room tariff

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Then, the second category here is product bundling. And here, if you look at, two or more products are bundled together for a single price. So, here, what is the strategy? The strategy is used to propagate new product as well as selling a product during the decline phase. So, when you buy something, you find there is another product free with that product. So, this is the typical example of the product bundling. And why the other product is free? Either the other product is new; that is why, it should reach to the consumer and that is why that comes as free with the other product, or the product has already reached the decline phase. And if the product has already reached the decline phase, then in order to again revive the sales of the product, that generally comes as a free so that people again get back to the product and they buy the product also in the individual sense.

So, in this case, product bundling, generally two or more product is bundled together for a single price. And in this case, the motivation is to either to do marketing for a new product or to help in reviving a product, who is at the decline phase. The typical example is here. If you will find this package trip, they will say, in this ticket price, we will take care of your stay, we will take care of your sightseeing, and also it is a part of your travel expenses; Or typically, the travel package if you look at, now, there is a option that if you want food during your travel, that is added and they will charge a price. Like initially, when this AC class was introduced in the train, if you you have to pay a



price to get the bedding, but later on if you look at, price has increased many fold, but at least this bedding part is included in the ticket fare.

Similarly, if you are travelling by Rajdhani, generally the food is free because that food price is added in your ticket fare in case of the Rajdhani express. Similarly, suppose if you are travelling, if you are staying in a hotel, many of this hotel they give the breakfast as free as complimentary, but it is not complimentary and it is not entirely free; the charges for the breakfast is considered under the tariff charges for the room and you get this as the free.

So, in this case, the product is bundled together. So, if you are staying in a hotel, you are not going anywhere out for the breakfast. You are taking generally breakfast in that hotel itself because it is added together to your room tariff. So, product bundling is generally a strategy used to either to launch a new product or to revive a product which is already in the decline phase, and here we get two products in one single price. So, that generally gives us a feel good factor also for the product, for the consumer because they are getting two products in one single price.


Then, the third kind of product lifecycle based pricing is perceived value pricing. Now, what is perceived value? Perceived value is the consumer, the different consumer group, they assign the value to the product on the basis that what kind of what kind of perceived benefit they are getting out of it. So, the value of the good for different consumer depends upon their perception of utility of that good.

(Refer Slide Time: 18:10)

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**Product Life Cycle Based Pricing**

- **Perceived Value Pricing**
  - Value of goods for different consumers depends upon their perception of utility of the good.
- **Psychological pricing**
  - Small sellers identify the perceived value on the basis of knowledge of market forces and charge a price which aims at taking away consumer surplus.

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So, if it is for one consumer group, maybe they typically product if it is a higher value, so, they usually give a higher value to the product, but for the other consumer group maybe the perception of utility is less and that is why they give a low value to the product.

So, if you look at, here in this case, this is a psychological pricing because here the producer identifies what is the psychology of the consumer with respect to the value of the product or the utility of the product, and then on that basis they have to charge a price. So, small sellers identify the perceived value on the basis of the knowledge of the market forces and change in the price which aims taking away the consumer surplus.

So, here, they try to analyze how much this consumer is ready to pay for this specific product. And on that basis, they generally try to charge a higher price so that they can take away the consumer surplus because if the consumer is considering that this is a high value product or the perceived benefit is many, he is ready to pay a higher price. So, they will charge a higher price from that typical consumer and again they will analyze what is the for the same product, what is the perceived value from the other consumer. And on that basis, generally, they again charge a price on the basis of the perceived value of that typical consumer. So, here also the basic aim is to take away the consumer surplus.

(Refer Slide Time: 19:44)

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**Product Life Cycle Based Pricing**

- **Perceived Value Pricing**
- Consumer surplus – understanding of the perceived value of consumers.
- Sellers may try to influence perceived value through brand awareness and emphasis on quality.
- Example- Economy and premium segment
- Tanishq, Philips, Parker – creating hype of high quality.

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Now, to now to take the consumer surplus from the consumer, what is needed? The seller has to understand the perceived value of the consumer. So, if the knowledge about that, what the consumer perceive about the value of the product, that is the prerequisite to charge the price which will give us the which will give give the consumer surplus to the seller.

So, here if you look at, the difficulty is also to understand what is the perceived value of consumer regarding a specific product? Sellers may try to influence perceived value through the brand awareness and also they emphasize on the quality. So, sometimes, sellers they try to influence the people. This is the product; it is very high value product, and there, generally they create a brand awareness because the consumer in that way the consumer will try to give a high value for it. And if they are giving a high value for it, generally they can charge a higher price for it.

Typically if you look at the example or economy and premium segment for different product, if you will find one comes under the economy segment and other comes under the premium segment. So, always the high value, if it is a premium segment, high value is being charged and if it comes under the economy segment, generally the low price is being charged. So, if you can take the example of typically Tanishq, they are known as they are they are from the Tata group; they are known as their their quality of the gold what they give or their specific design, what is not being offered in the general market.

So, they create a brand that they are different from the others, and on that way, if you find if you talk to the people, they will always say that it is Tanishq; they charge a high making charges, but their product is good; their design is good. So, they endorse for the making charge with that, that their design is good or their product is good.


Similarly, it is Philips or you take the Parker pen. Generally, they create the hype in the quality and that quality, the hype in the quality may be through the creating a brand awareness through the celebrity, through the quality or through the different media, generally they create a hype about it. And when it comes to buying that product, the perceived value is very high from this for this product and that is why they charge a higher price. When you go for shopping, whether it is Tanishq, whether it is Philips, whether it is Parker, if high price is being charged, you say the product has to be good because this is from Philips; the design has to be good because this is from Tanishq or this pen has to be good because this is Parker, and that is why the consumer is ready to pay higher price. And this is how, typically the seller, they take away the consumer surplus from the consumers by charging a high price.

(Refer Slide Time: 22:52)

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**Product Life Cycle Based Pricing**

- **Value Pricing**
  - Seller try to create a high value of the product but keep the price low.
  - Seller allow some consumer surplus to buyers.
  - Seller creates a high value of the product and charge a low price.

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Then the other category in case of product lifecycle base pricing is value pricing and what is value pricing? Value pricing, Here, sellers try to create a high value of the product, but keep the price low. They will say - this is the high value product, but

generally keeps the price low and here seller allows some consumer surplus to the buyers. It creates a high value of the product; it charges a low price.

So, if you look at, there are few stores in the market and throughout the year, you have some discount on it; whether it is a second shop, it is a it is a factory outlet or in general also, few brands if you look at every Wednesday, you get some discount; every Friday you get some discount; every festive season you get the discount. So, that is that is typically the value pricing. The consumer knows that the product is of high value, but he is getting a discount. So, the pricing is generally given at a higher note, but every time some discount is given, keeping it is not that the margin is not got by the sellers; they are getting the margin, but after giving discount also. They are giving a profit margin whatever the price they are charging during the discount.

So, generally, here seller creates a high value of product and charges a low price. So, typically, if you go to the garments, some of the garment shop, every time you find some offer is going on. So, they create a hype that this is a very high value product, but they are giving you some discount and typically this is known as the value pricing.

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**Product Life Cycle Based Pricing**

- **Loss Leader Pricing**
- Multi product firm sell one product at a low price and compensate the loss by other products.
- HP – Printer is at low price, Cartridge is specific and highly priced.
- Success of this strategy largely depends on a combination of goods which are complementary in nature.

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Then one more category is loss leader pricing and what is loss leader pricing? Here the multiproduct firms sell one product at a low price and compensate the loss by the other product. So, combining together whatever the prices of the two products that has to be

same, but when they are offering it, they always charge us a lower price, but they compensate the loss by charging the prices of the other product.

Typically, it happens in case of the complementary product, and how it happens? If you have seen, typically HP does that. And what HP does? Through this loss leader pricing, they offer the printer at a lower price. And for all of their printers, the cartridge is very specific and the cartridge is very highly priced. So, in this case, even if they are offering the printer at a lower price, since the cartridge is high value, the value of the printer and the cartridge is covered through combining combining the price of the printer and the cartridge.

So, generally, they are offering the product at a low price, but whatever the requirement the complementary products that is on a high price and that is very specific, and the consumer cannot try to substitute whatever the complementary product. And in that case, the prices of the high value and the low value product both get covered in the combined price.


However, the success of these strategies always depends on the combination of an output which are complementary in nature or the company has to produce also the complementary goods. Then only they can do practice this loss leader pricing.

(Refer Slide Time: 26:14)

**Managerial Economics**

**Cyclical Pricing**

- The instability is economic condition ,like expansion, contraction are referred as business cycle.
- Firms need to consider economic condition in formulating policies.
- Whether the firm should continue the same pricing strategies irrespective of phases of business cycle or they should adopt a different strategies across the phases?

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Then, we will talk about the cyclical pricing and what is cyclical pricing? Cyclical pricing related to the fact that there is always the instability in the economic condition. It is not constant; there may be expansion; there may be contraction in the economic activity, which is typically known as the business cycles. And we also get different phases of the business cycle, like starting from whether it is recession, whether it is boom, whether it is revival or whether it is the growth; in all this cases, we get different stages of the business cycle and in all this phases either there is expansion of economic activity or there is contraction of economic activity.

So, the seller has to be very careful in deciding the pricing at the different phases of the business cycle; when the economic activity, they are contracted or when the economic activities are expanded. So, firms need to consider the economic condition in formulating the policy; so, whether firm should continue the same pricing strategy irrespective of the phases of business cycle or they should adopt a different strategy across the phases. So, the challenges for the seller is to know whether they can do the same pricing in all these phases of the business cycle or they have to follow the different pricing strategy in the different phases of the business cycle.

(Refer Slide Time: 27:42)

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**Cyclical Pricing**

- **Rigid Pricing**  
Company should follow a stable pricing policy irrespective of the phase of economic cycle.

Whether it is a recession or expansion, if consumer can postpone their purchase they would not be affected by a fall or rise in price.

If a firm reduces its price to attract demand, consumer can wait for more decrease in price.

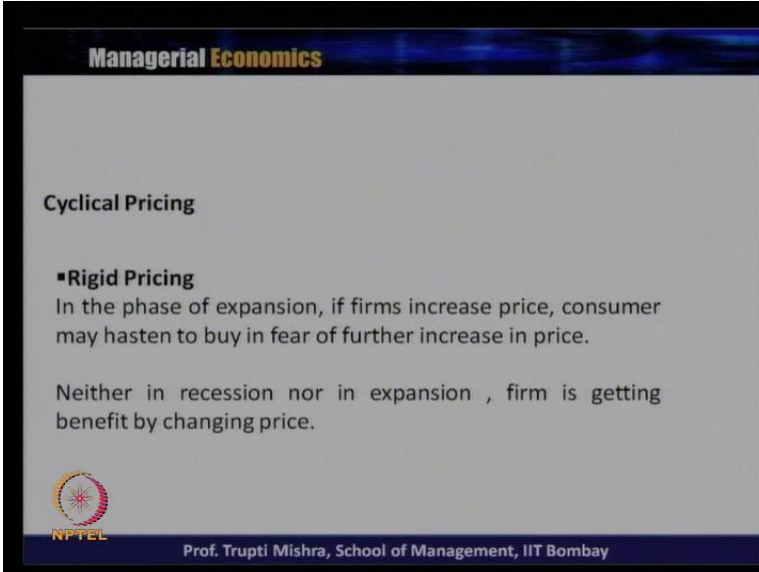
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There are two kinds of pricing: one - rigid pricing, where the same pricing is being followed in all the stages and second is the flexible pricing. So, coming to the rigid pricing, company should follow a stable pricing policy irrespective of the phases of the

economic cycle. So, whether it is a recession or expansion, if the consumer can postpone their purchase, they would not be affected by a fall or the increase in the price.

So, company in this case of rigid pricing, company generally follows a fixed pricing policy in all these phases of the economic cycle. And whether it is a recession phase, whether it is a expansion phase, consumer cannot postpone their purchase; they would not be affected by the fall or the decrease in the price. So, if the firm reduces its price to attract demand, consumer can wait for more decrease in price and in that way it generally reduces the price because once the consumer knows that there is there is a reduction in the price because of this economic activity, they will anticipate that again there is going to be decrease in the price, and if they are going to wait for the decrease in the price there is a going to be effect on the quantity demanded.

(Refer Slide Time: 26:58)




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**Cyclical Pricing**

- **Rigid Pricing**  
In the phase of expansion, if firms increase price, consumer may hasten to buy in fear of further increase in price.

Neither in recession nor in expansion , firm is getting benefit by changing price.

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Similarly, in the phase of expansion, if firm increase the price, consumer may hasten to buy in fear of the further increase in price. So, even there is a increase in the price, still people they will consume more because they are going to anticipate that this is the phase of expansion or it may happen that again the price can increase and that is why they increase their consumption with a high price also. So, neither in recession recession nor in expansion, firm is getting benefited by changing the price.




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**Cyclical Pricing**

- **Flexible Pricing**  
Under this, firms keep their prices flexible to meet the challenges in demand.

FMCG and Agricultural products

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Then we have flexible pricing and under this flexible pricing, firm keeps their prices flexible to meet the change in the demand or the typically the challenges in the demand, and generally the flexible pricing is more relevant in case of the FMCG goods and the agricultural products because they are generally they change with respect to the different phases of the business cycle.

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**Cyclical Pricing**

- **Flexible Pricing**  
During recession prices should be reduced in view of declining income of consumers, where as when income rises prices can also be raised to take advantages of higher demand, especially where the supply is less elastic.

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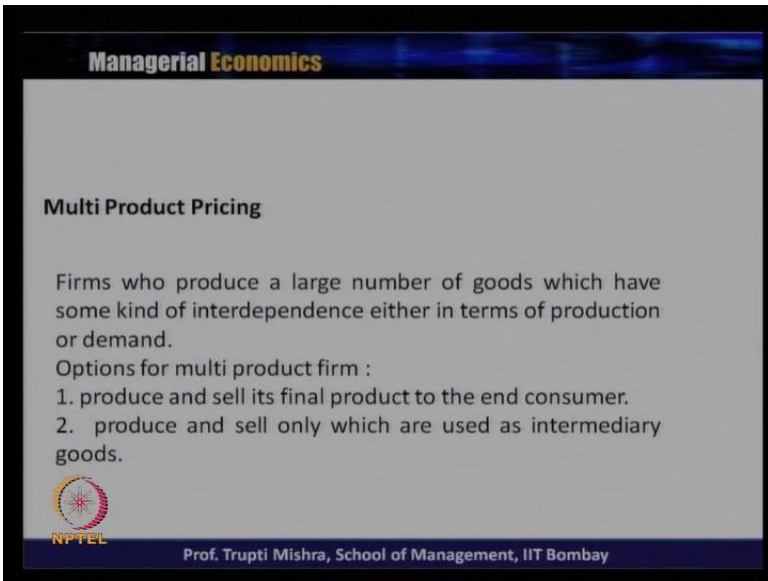
So, in case of flexible pricing, if you look at, during the recession prices should be reduced in view of declining income of the consumer because there is a recession, in

general, the market is going on a lower side and income decreases. So, during recession, price should be reduced in view of declining income of the consumer. Whereas, when income rises price can also be raised to take advantages of higher demand, especially when the supply is less elastic.

So, in one case, if there is a recession price to be reduced because there is a decline in the income, but when there is a increase in the income, there should be increase in the price to take advantage of the higher demand. There is a increase in the price; people they demand more. And since that they demand more, prices can be increased because if the consumer is not responsive to change in the price, still they will continue the same amount of the demand and there is one more backdrop over here is also; income is going on on a increasing side. So, in that case, if they are increasing the price, still the quantity demanded is going to be maintained and there whatever the high price they are charging, that is accepted to the consumer.

Here, one more one more point to notice is that, if the quantity is increased in a higher price the supplies also has to be less elastic because if the high price again supply more, it is not going to give the benefit; if supply is more than the demand the price has to come down again; so, supply has to be less elastic. High price can be charged if the income is increasing.

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**Multi Product Pricing**

Firms who produce a large number of goods which have some kind of interdependence either in terms of production or demand.

Options for multi product firm :

1. produce and sell its final product to the end consumer.
2. produce and sell only which are used as intermediary goods.

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Then, we will talk about the multiproduct pricing and multiproduct pricing here is specifically relevant to those firm who produce large number of goods which have some kind of interdependence, either in term of production or in term of the demand. Now, what is a multiproduct pricing? Multiproduct pricing is relevant to the firm where they are producing more than one product and they are interdependent in term of production of the goods or in term of the demand for the goods.

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**Multi Product Pricing**

A firm which produce intermediary products-

- Use these goods internally for final goods production
- Sell part of it to other firms
- Sell to other firms

Pricing strategies would be different in different cases.

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What are the options for multiproduct firm? Either they produce and sell its final products to the end consumer or they produce and sell only which are used as the intermediary goods. So, either they will produce or sell the final products to the end user that is option one for the multiproduct firm or they will produce or sell only the intermediary goods which will be by the other firms to produce it as a final product. If the only firm only produce the intermediary products, they use these goods internally for the final goods of production, sell part of it to the other firms and sell it to the other firms.


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**Managerial Economics**

**Multi Product Pricing**

Interdependence between the products:

- Demand Interdependence
- Supply Interdependence
- Input output Relationship

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So, when they are producing the intermediary products, what are the options for them? They use these goods internally for final goods of production. It is not going to the outside market or they will sell part of it to the other firms or they will sell all these products into the other firm. The pricing strategy has to be different in all these three cases; whether it is getting used for the final products, whether part of it is being sold or entire intermediary intermediary goods is getting sold in the market. And this pricing is dependent on the fact that what is the interdependence between the products when they are interdependent on the basis of the demand, when there is interdependence on the basis of the supply, and when it is input and output kind of relationship.

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**Managerial Economics**

**Multi Product Pricing**

- **Demand Interdependence**
  - **Substitutes**
    - Optimal output of each good will be less than when there was no demand interdependence – as these goods compete with each other in the same market and sales of one product can not be enhanced at the expenses of others, hence firm cannot sell maximum of either of these products.

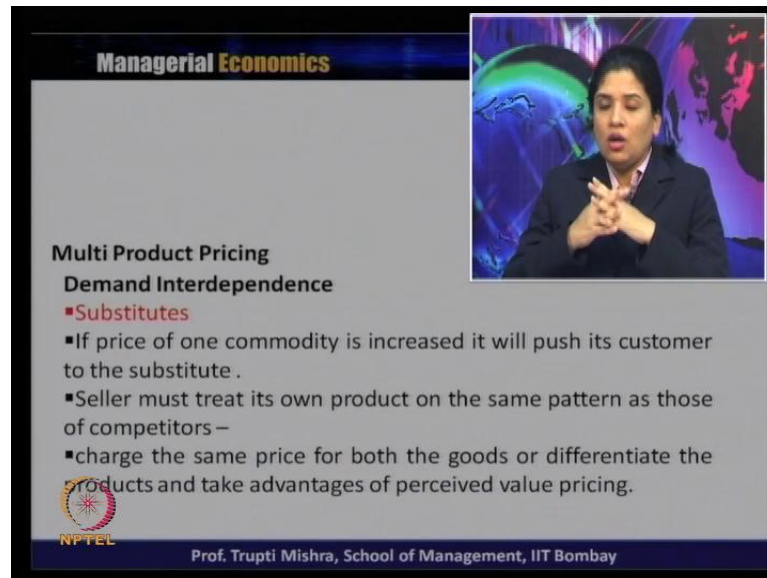
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So, we will start with the demand interdependence and here we will talk about two kinds of goods: one is substitute goods and second one is the complementary goods. So, if it is demand interdependence, then substitute good is one where both the goods they are related to each other and that is why there is a demand interdependence interdependence.

Now, what happens in case of substitute goods? Optimal output of each goods will be less when there is no demand interdependence. So, if there is no demand interdependence, generally the optimal output for each good will be less as these good compete with each other in the same market and sale of one product cannot be enhanced at the expenses of the others. So, the firm cannot sell maximum of either of this product; both the goods, they goe from one firm.

So, generally the optimal output for each good will be less because there is no interdependence and they are operating in the market independently and they competing with each other in the same market, and sales of one cannot be enhanced at the expenses of the others because they are independent. So, firm cannot sell maximum of either of these products, if there is no interdependence.

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**Managerial Economics**

**Multi Product Pricing**  
**Demand Interdependence**

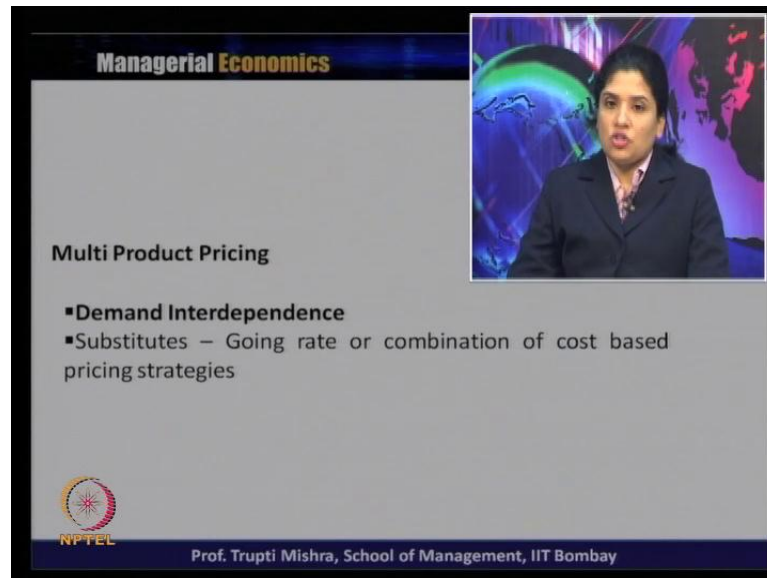
- **Substitutes**
- If price of one commodity is increased it will push its customer to the substitute.
- Seller must treat its own product on the same pattern as those of competitors –
- charge the same price for both the goods or differentiate the products and take advantages of perceived value pricing.

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If the price of one commodity is increased, it will push its customer to the substitute; that generally happens in case of a market. Seller must treat his own product on the same pattern as those of competitor. Generally they have to charge the same price for both the goods or differentiate the product and take advantage of the perceived value pricing. So, if it is both the products are substitutes, either they have to charge a price which is same or they will differentiate the product either on the basis of the content or in the basis of the service associated with it or with the basis of the packaging or with the basis of the quality and they will say this two products are different. And on that basis, they will give a perceived value if the consumer is perceiving a higher value product for a product, they will charge a higher price, and if they are perceiving a lower value for a product, they will charge a low price.


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**Managerial Economics**

**Multi Product Pricing**

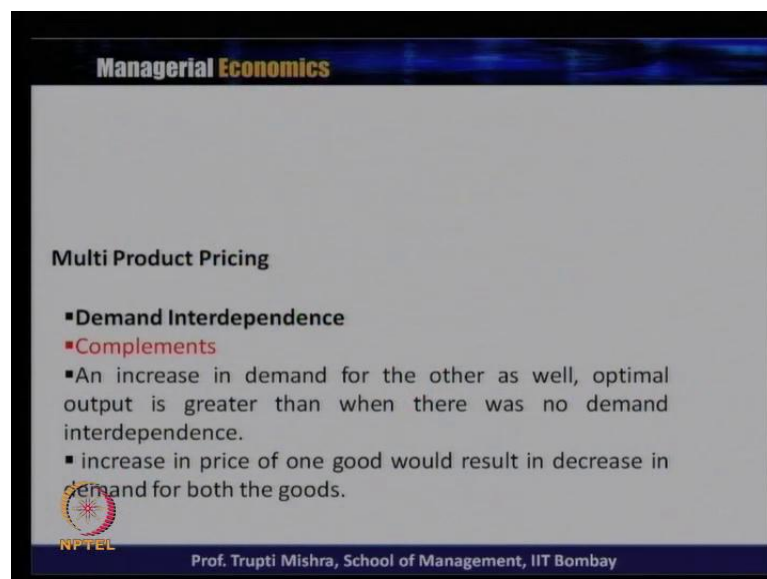
- **Demand Interdependence**
- Substitutes – Going rate or combination of cost based pricing strategies

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So, both the products seller trade at their own product; either, they he will produce the product in the same level and charge a same price or he will differentiate it and the take the advantage of the perceived value pricing. And in this case, generally the pricing is followed as the going rate pricing or the combination of the cost based pricing strategy. So, if you remember, the going rate pricing is the same pricing for the all the substitute products in order to avoid the price war or in order to avoid the uncertainty associated with the different market, different price being charged for the different firms.


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**Managerial Economics**

**Multi Product Pricing**

- **Demand Interdependence**
- **Complements**
- An increase in demand for the other as well, optimal output is greater than when there was no demand interdependence.
- increase in price of one good would result in decrease in demand for both the goods.

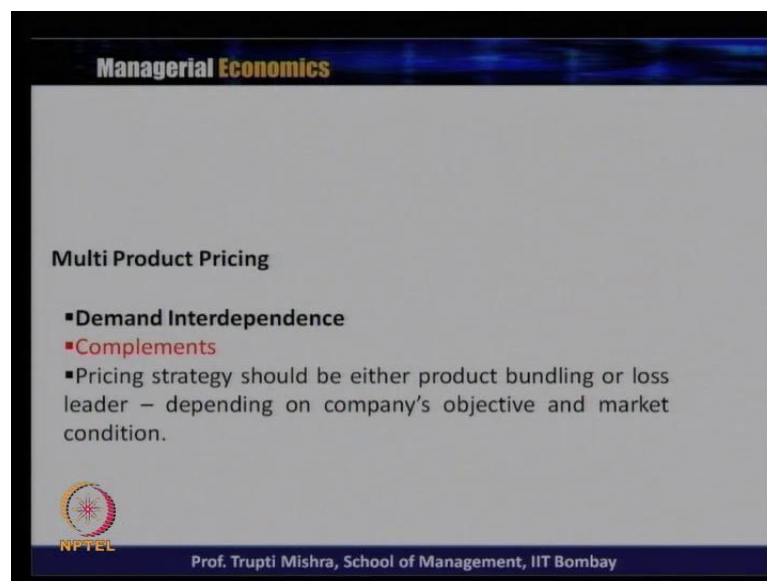
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Then, we will see the demand interdependence in case of the complementary goods. And what are the complementary goods? When one goods cannot be consumed without the consuming the other goods; so, in case of complement goods, an increase in the demand for the other as well and optimal output is greater than when there is no demand interdependence. So, optimal output is greater when there is no demand interdependence and increase in demand of one will be always leads to increase in the demand for the others.

So, increase in price of one good would result in the decrease in the demand for both the goods because both that, both the goods they are complementary in nature. So, if the increase in the price of one goods that lead leads to decrease in the demand for that goods and that simultaneously leads to decrease in the demand for the other goods also because both of them, they are complementary in nature.

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**Multi Product Pricing**

- **Demand Interdependence**
- **Complements**
- Pricing strategy should be either product bundling or loss leader – depending on company's objective and market condition.

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Now, what is the pricing strategy that has to be in case of complementary good? Pricing strategy should be either product bundling because it is a complementary product product, or loss leader where the price of the product can be taken can be taken from the combined value of the product by charging low price to one product, but the complementary product is on a higher price. So, the pricing strategy in case of the complementary goods, when it is a multiproduct pricing, either it has to be the product bundling pricing strategy or it has to be to the loss leader pricing strategy.



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**Managerial Economics**

**Multi Product Pricing**

- **Supply Interdependence**
  - Firm has to first decide whether it would further process both products or
    - Would dispose of the joint product and process and sell only the primary product.
  - **First option – Full costing of the primary product**
  - **Second option – Marginal costing for the joint product**

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Then, we will come to the second category of multiproduct pricing where there is a supply interdependence between the products. So, here, the firm has to first decide whether it would further process both the products or would dispose of the joint product joint dispose of the joint product, and process and sell only the primary product.

So, since the product, since the firm is producing the multiproduct, it has to choose one of these options. They have to further process both the products which is in the intermediary in nature or they would dispose of this joint products, or they process or sell only the primary product. If the option taken is the first option, then the pricing method should be the cost plus where the full costing has to be taken, which consider both the variable cost and the fixed cost.

And second option is the marginal costing of the joint product, and in this case, the marginal costing has to be taken marginal costing where we only consider the variable cost, not the full cost which is consist of the fixed cost and the variable cost. So, when they are disposing off, then in this case they are following a marginal cost pricing method and when they are non-disposing off, they are doing it and processing further. Generally, they do the full cost pricing method or the cost plus pricing method.

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**Managerial Economics**

**Multi Product Pricing**

- **Input Output Relationship**
- Large firms producing multi products bearing input output relationship.
- Soft drink manufacture – bottling plant
- Tata sons – iron and steel, trucks and cars

Pricing – Transfer Pricing

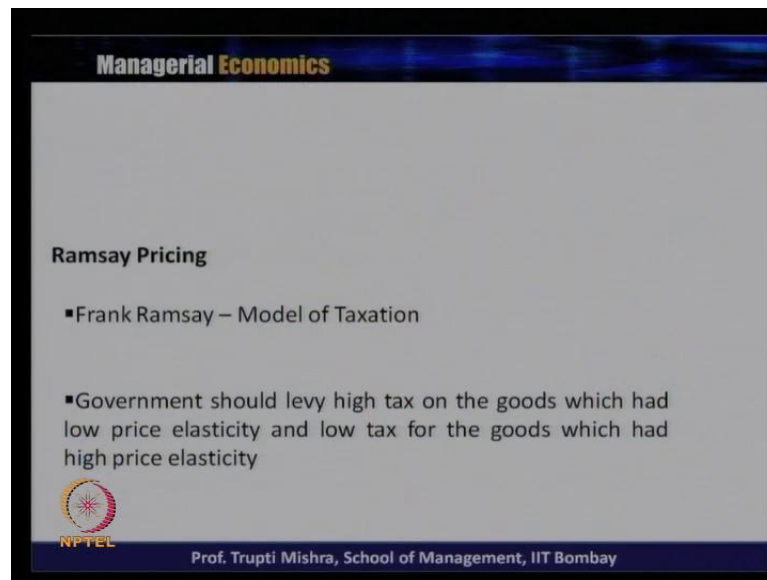
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Then the third category is input output relationship in case of a multiproduct pricing. And what is input output relationship? Large firm producing multiproduct bearing an input output relationship. And what is the input output relationship? Suppose, if soft drink manufacturer also producing in a bottling plant or if you take the example of Tata sons, they produce iron and steel in one setup; they produce a they produce trucks and car in the other setup. But when it comes to the relationship between both these products produced by the same company, iron and steel is being used to produce the truck and car, and similarly, when it comes to the final product by the soft drink manufacturer, the bottling plant is always the complementary product because the final product of the bottling plant has to be taken to the soft drink manufacturer; then on soft drink manufacturer then only it can be the final product

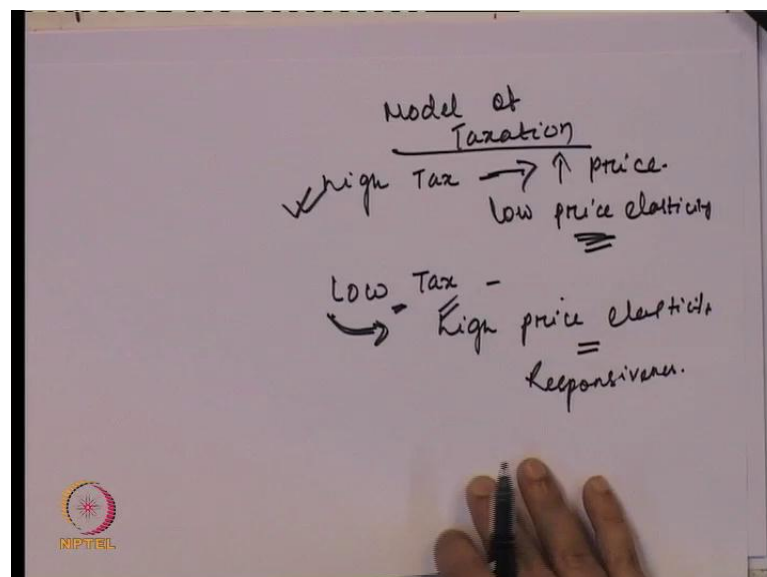
And in this case, generally the pricing strategy is followed as the transfer pricing, about which we will discuss bit later that what is transfer pricing and how the pricing has to be determined in case of the transfer pricing methods. So, in this case, in case of input output relationship, if the one product is the input and the other product is the output because large firm produce the multiproduct, in this case, generally the transfer pricing method has to be followed.

(Refer Slide Time: 41:20)



Then we will talk about a pricing strategy known as Ramsay pricing and what is Ramsay pricing? This is developed by Frank Ramsay and the initial contribution of Frank Ramsay is the model of taxation. According to this model of taxation, Government should levy high tax on the goods which had low price elasticity and low tax for the good which has high price which had high price elasticity.

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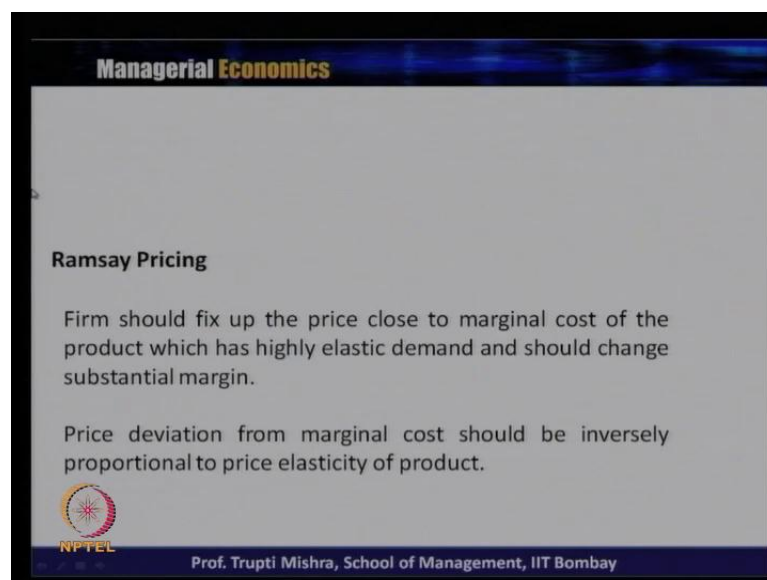


Why this has to be followed because if you look at what is higher? If you are giving a high tax, on the basis of this model of taxation, if you are giving high tax, your levying

high tax on low price elasticity and low tax on high price elasticity because if it is low tax on high price elasticity, because if tax is low, this is the market where the responsiveness is more. So, if it is low tax, it cannot if you are combining with the market, still since the market is elastic, at least there is a responsiveness is more, but rather than low tax, if it is going to be high tax, it is going to have more effect on the quantity demanded if the seller is trying to charge it to the or trying to transfer it to the buyers. That is why the low tax is given in case of the high price elasticity. And why high tax on the low price elasticity because here the consumer is not very sensitive to the change in the price.

So, in this case, if the high tax is being charged which further leads to increase in the price, this can be followed because there is less responsive to the change in the price. So, the basis is again, how the consumer is going to react in case of the change in the price and the change in the price has to be on the basis of the whatever the imposition of the tax. So, on that basis, the model of taxation says that Government should always levy a low tax in case of the high price elasticity and high price elasticity product, and high tax on the goods which has the low price elasticity.

(Refer Slide Time: 43:54)



**Managerial Economics**

**Ramsay Pricing**

Firm should fix up the price close to marginal cost of the product which has highly elastic demand and should change substantial margin.

Price deviation from marginal cost should be inversely proportional to price elasticity of product.

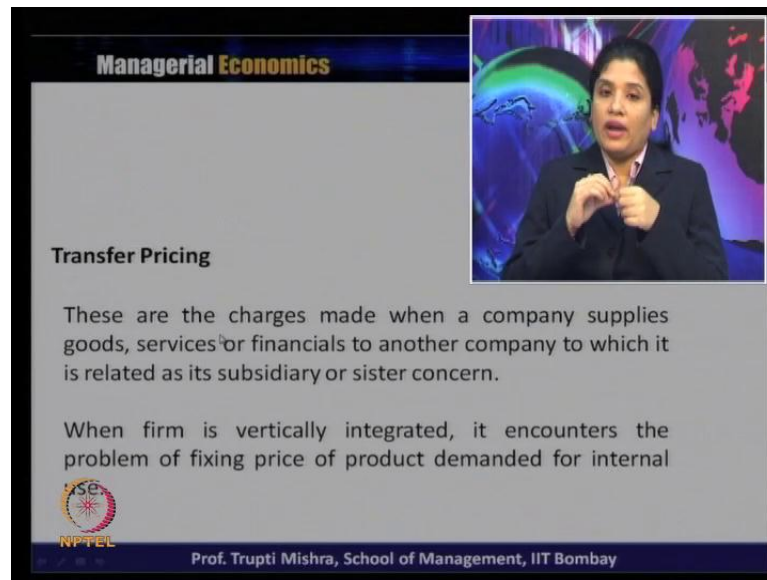
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Firm should fix up the price close to the marginal cost of the product which has highly elastic demand and should change the substantial margin. And according to this Ramsay pricing, the price deviation from the marginal cost should marginal cost should be

inversely proportional to the price elasticity of the product. So, whatever the deviation for the marginal cost, if it is more, then it is - the price elasticity is less and if the deviation is less, then the price elasticity has to be more.

(Refer Slide Time: 44:28)



**Managerial Economics**

**Transfer Pricing**

These are the charges made when a company supplies goods, services or financials to another company to which it is related as its subsidiary or sister concern.

When firm is vertically integrated, it encounters the problem of fixing price of product demanded for internal

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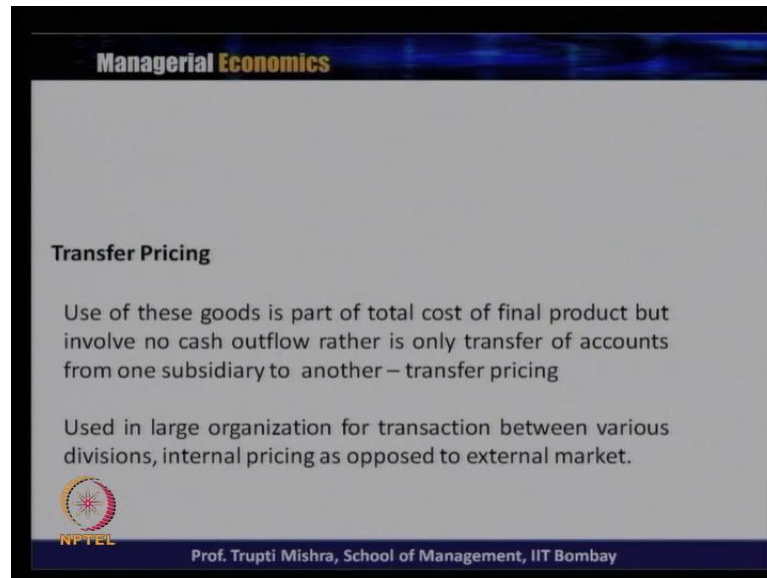
Then we will talk about one more kind of pricing that is transfer pricing and transfer pricing are the charges made when the company supplies goods, services or the financials to another company to which it is related as its subsidiary or the sister concern.

So, generally, this kind of pricing are... it is more also in the internal manner because this is the pricing to that company which is related as the subsidiary or the sister sister concern. So, charge is made when a company supplies goods services or financial to another company and another company is either as a subsidiary or a sister concern. And when a firm is vertically integrated, it encounters the problem of fixing up the price of the product demanded and also for the internal use.

Now, here what pricing has to be, what pricing strategy has to be followed? Because here the pricing if you are related, it is related to the subsidiary sister concern and there it is going to like Tata group and just now we are taking the example of one group, they produce iron and steel and the other group they produce truck and cars. So, the final product of iron and steel is used as the input in the truck and car industry. So, in this case, both of them, they are subsidiary; both of them, they are the sister concern. In this case, the pricing generally followed is the transfer pricing. And here if you look at, the

firm is particularly integrated and that is why there is a problem that for how to fix up the price for this kind of the situation.

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So, if in case of transfer pricing, use of these goods, typically the goods from the another another industry of this typical group; use of these good is the part of the total cost of final product, but involve no cash outflow; rather, it is only the transfer of account from one subsidiary to another. So, since this is the transfer of account from one subsidiary to another, this is generally known as the transfer pricing because there is no cash outflow. It is in the same group; it is just transfer of account from the one industry to another industry for a typical business house. This is generally used in the large organization for transaction between the various divisions internal internal pricing as opposed to the external market.

So, when there is a large group of industries are there, this is this transfer pricing is generally used when the transaction between the various division takes place; so, there is no cash outflow. Basically, it is the transfer of account from one division to another division.

(Refer Slide Time: 47:36)

**Managerial Economics**

**Transfer Pricing**  
It gained importance with the growth of MNCs.

It is often misused to evade taxes on net profit – government keeps strict check on transfer pricing so that corporate may not evade tax payments.

It helps related entities to reduce global incidence of tax by transferring high income to low tax jurisdiction or greater expenditure to those jurisdiction where tax is high.

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It gained more importance when the MNC started; when we started the multinational corporation after the liberalization. This, typically this pricing technique gained more popularity after this introduction of MNC and this is also often misused to evade tax on the net profit. And that is because this is basically transferring account from one division to another division and that is why it is often misused to evade the taxes on the net profit. Government keeps strict check on the transfer pricing so that the corporate may not evade the tax payment.


It helps related entities to reduce the global incidence of tax by transferring high income to the low tax jurisdiction and greater expenditure to those jurisdictions where tax is high. So, generally, if they are working in a group, this incidence of tax can be planned according to the transfer pricing. They generally transfer the high income to the low tax jurisdiction so that they pay lower tax and greater expenditure to those jurisdiction where tax is high; and in that way, generally, as a whole, as a large organization they can reduce that whatever the imposition of tax or the what is the effect of the incidence of tax.

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**Managerial Economics**

**Transfer Pricing**

All regulatory authorities agree that transfer price should be at arm's length price – same price should be charged whether the product is transacted between related parties or with third party.

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So, all regulatory authorities generally they agree that transfer price should be at the arm's length price; the basis of the transfer price should be the arm's length price and what is arm's length price, that the same price should be charged whether the product is transacted between the related parties or with the third party.

So, arm length is one whether the transaction is between two parties of the same industry or also between the related parties, or also with the third party. And all regulatory authorities, they agree that the basis of the transfer pricing should be at the arm's length price.



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**Managerial Economics**

**Transfer Pricing**

Problem arise when the product is transacted only between related parties – there are various option for determining the arm's length price -

- Comparable uncontrolled price method
- Resale price method
- Cost plus method
- Transactional net margin method

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There is some potential problem if the product is transacted only between the related parties. There are various options for determining the arm length price. And what are the options for determining the arm length price? The comparable uncontrolled price methods, resale price method, cost plus method, and transactional net margin method. So, these are the options to decide the arm length price and any of this method can be followed to decide the arm length price, when the transaction is essentially taking place between the two related parties.


The transfer pricing law requires company should submit details of its own transaction with others. So, whatever the what is the requirement for this transfer pricing? The requirement for this transfer pricing is that, this law requires, because this is given by the regulatory authority and this law requires, that company should submit details of its own transaction with others; major problem is non availability of the comfortable information in the public domain.

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**Managerial Economics**

**Transfer Pricing**

The transfer pricing law require that a company should submit details of its own transaction with others – major problem is non availability of comparable information in public domain.

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So, what is the problem here in case of transfer pricing? The regulatory authority requires that the company should submit details of their own transaction with others, but it is difficult to know the transaction. You can at least give the details of the firm's own transaction with others, but what is the other transaction with the third party, that information is not available in the public domain and that is generally the challenge or what it comes when it is about the applicability of the transfer pricing.

Then, we will discuss few more types of pricing like peak load pricing and also this seal bid pricing strategy, retail pricing, and administer pricing, in the next session. And after that, we can do a comparative assessment that what is more applicable in the real world, which kind of pricing is being followed more, in case of the real world.