

Organizational Behaviour - II
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Lecture –14
Models on Competition and Cooperation

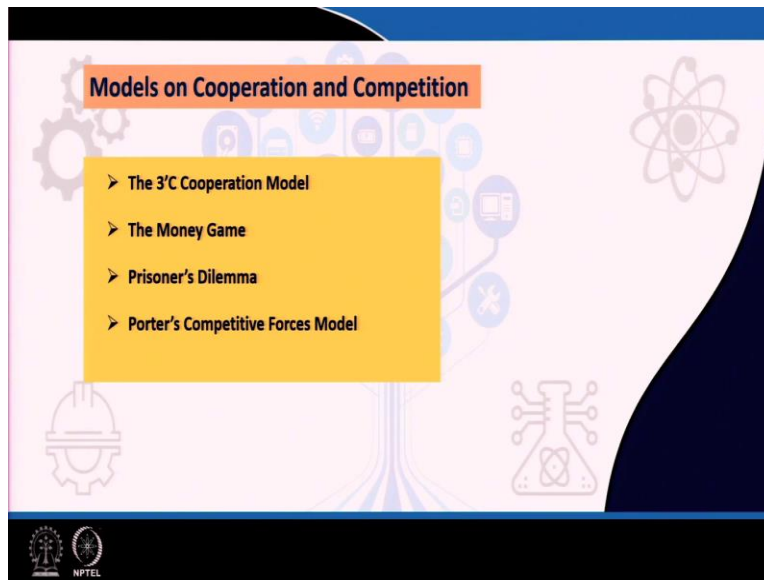
Welcome back to the session on competition and cooperation. We have learnt in the previous sessions on competition and cooperation about the relationship of competition and cooperation. Also, the meaning of competition and cooperation we have understood the factors which affect competition cooperation we have learnt about the various functions of competition and cooperation also. Today we are going to visit some of the models which are there on competition and cooperation.

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The slide features a dark blue header with the text 'ORGANIZATIONAL BEHAVIOUR- II' in orange. Below the header is a white box with an orange border containing the word 'Models'. A yellow box below that contains the text: 'We have learnt about various functions of competition and cooperation from previous lecture sessions. Now we will be discussing on various models of cooperation and competition in this lecture session.' At the bottom left, there are logos for IIT Kharagpur and NPTEL.

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So, the important models on cooperation and competition are the three C model of cooperation The Money Game, The Prisoner's Dilemma and the Porter's Competitive Forces Model. The way the models are arranged are like whenever we are talking will be discussing on the 3C model it is a model based on when you are in the pure cooperative situations what are the factors which are expected wait will be discussing Porter's Competitive Forces Model.

So, these are the forces which are present like outside the organization in the environment like which may act as a barrier in a firm's progress. So, that is how you see like what are the competitive forces how the organization perceives what are the competitive forces around which they may see to be as blocks as a part of their profitability or like making their positions in the business field.

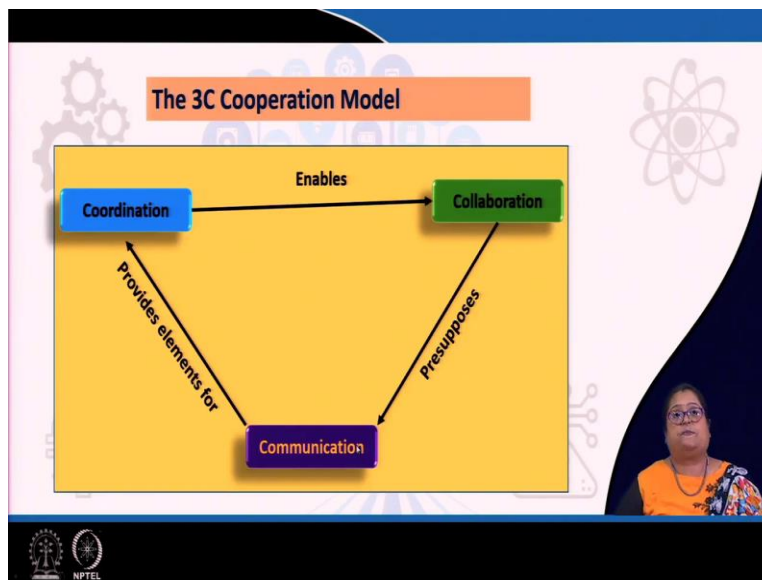
The in between the two models that you see the Money Game Model and the prisoner's dilemma model these are situations where you are in a dilemma to understand like whether to like keep the benefits with you or share the benefits with others. And also, whether to maintain the trust or to like not to maintain the trust and agreement that you have had with the other party and you think of your own self-interest.

So, these are two; the in between the money game and the Prisoner's Dilemma these are situations which help you to like go either for cooperation or for competition based on how what

you decide to be the best outcome and whether you are concerned about only your own benefit or you are thinking of a joint outcome and beneficial for both the parties involved and whether you choose to cooperate based on that or you choose to compete.

So, these are the models in between so we will be discussing progressively from 3 C's cooperative model Money Game, Model Prisoners Dilemma and Porter's Competitive Forces Model in this lecture.

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So, let us begin the 3 C cooperation model as you can see it talks of 3 C's. The first C is that of communication which provides elements for coordination where the members align their work processes with each other and try to coordinate like how to do things and then they decide to collaborate; which helps them to collaborate for a common goal. And if collaboration has to be there it starts with the premise that the individuals or the groups who are involved in the collaboration are of course communicating with each other. So, let us see this in some details.

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The 3C Cooperation Model

The 3C cooperation model used in this research comes from article Ellis, Gibbs and Rein (1991) and is supported by the conception that to cooperate, members of a group (C) communicate, (C), coordinate and (C) collaborate (3Cs). As we can see the diagram in previous slide, there is a cycle indicating that people must communicate to coordinate their working efforts and collaborate for one single objective.

The 3C cooperation model used in this research comes from the article Ellis, Gibbs and Rein given by Ellis Gibbs and Rein in 1991 and is supported by the conception that to cooperate members of a group C need to communicate coordinate and collaborate. So, communicate then coordinate and collaborate at the three C's. So, as we can see in the diagram in the previous slide this is a there is a cycle indicating that people must communicate to coordinate their working efforts and collaborate for a single objective.

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The Money Game Model

Two players with envelopes receive 1 coin each. They can either:

1. Keep it and return the envelope empty (1 point)
2. Put it in the envelope for the other player, and the facilitator will add another coin to the contribution.
 - Facilitator hands the envelopes to each player.
 - The game repeats until all the coins are gone.

Goal: to accumulate as many coins as you can.

Note: The number of coins the other player gets will not affect your own performance.

Now we will be discussing the Money Game Model. So, in this what we have to understand this is again your choice the choice of the people two persons involved like whether to like think of their own specific outcome their own self-interest or to think of like and to keep resources with

oneself or to share the resources because if you are to communicate if you have to communicate if you have to cooperate with each other.

So, the cooperation comes with the feeling of giving also. So, if you are not ready to give some of the things which belong to you and try to be empathetic with the other person then cooperation cannot happen collaboration cannot start. So, the money game model deals with like your decision whether to keep the money with yourself only or you decide to give also money is taken as a motivator which is the outcome of like bringing benefits to oneself.

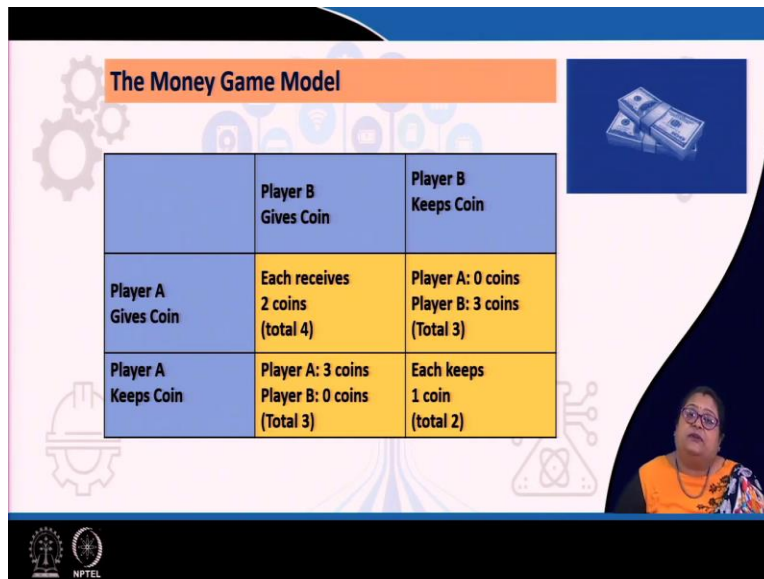
So, the game goes like the two players will envelopes will receive one coin each. So, they can have two decisions they can either keep it and return the envelope empty. So, they can keep the coin with themselves and return the envelope empty for which they will receive one point put it in the envelope for the other player. So, they can put it in the envelope for the other player and the facilitator will add another coin to that contribution.

So, they can contribute it for the cause. So, they are ready to give up their own personal self-interest or personal benefits for the interest of the other and for this benevolent act the facilitator of the game will give one more coin and that is added to the contribution. As a part of the game what is done the facilitator hands the envelopes to each player the game repeats until all the coins are gone from the facilitator.

The goal is to accumulate as many coins as you can it is to be noted the number of coins that the other person gets is not going to affect one's own performance. So, like if the other person is getting more coin. Then your performance will be deteriorated or not. So, that condition is not there so as a part of this what we are trying to see whether people are ready to cooperate with each other or not because whether they are coming out of their boundaries of their own self-interest only thinking of only their own better outcome.

Or they are ready to share with others also the benefits that whether some degree of benevolence is there where they are going to share it with some degree of benevolence is there where they are going to share the benefits with others also.

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The Money Game Model

	Player B Gives Coin	Player B Keeps Coin
Player A Gives Coin	Each receives 2 coins (total 4)	Player A: 0 coins Player B: 3 coins (Total 3)
Player A Keeps Coin	Player A: 3 coins Player B: 0 coins (Total 3)	Each keeps 1 coin (total 2)

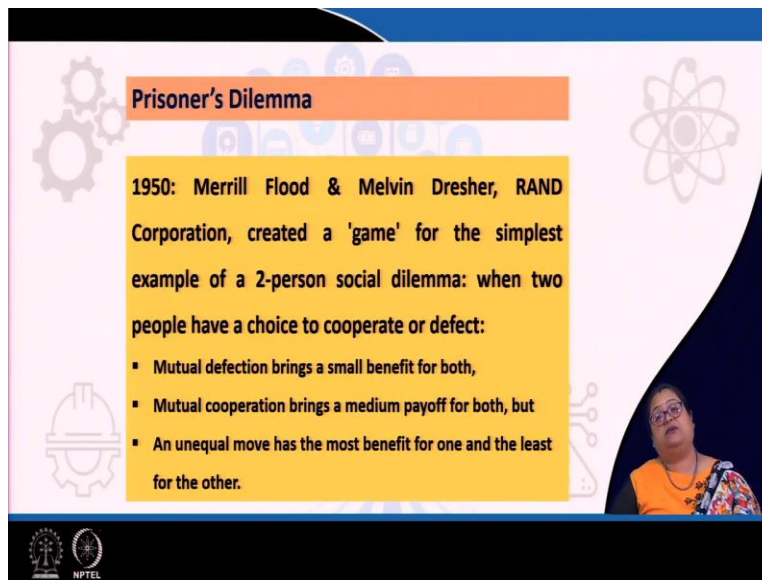
So, this can be illustrated as like the player A gives a coin the player B also decides to give the coin then each receives two coins and the total is four. But if player A gives the coin and player B keeps the coin then what happens player A get zero coins and player b get three coins and the total outcome is three. If the player A keeps the coin but player B gives the coin then what happens player A get three coins and player B get zero coins and the total outcome is three but if each decides to keep one coin then the total outcome is 2.

So, what we can interpret from here is like is the fact that if each of the players involved in the process of decision making or who are moving towards a common goal if they decide to come out of their own specific self interests. And try to think of the betterment of the other person also help the other person in reaching the outcomes if both are deciding to do it in the same way both decide to do it in the same way then the total outcome is the best like total is four.

But even if one is not sharing but the other is sharing one person is keeping the coin to oneself. But the other person decides to give the coin it can be anyone person A or person B but still then the total outcome is more than when both decides of their own specific self interest and own specific benefit of keeping one coin each to themselves and not sharing or thinking of the benefit of the others or the progress of the others.

In which the total coins that is received which we take which we can take to be the synergy of the outcome that we get on the end results that we get is only two. But even if one decides to give and the other decides to keep but still the outcome is three which is more than two. And the best outcome comes when both decides to give and cooperate and collaborate with each other which is the total outcome is four, the four coins that is the total benefit that we get.

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The slide is titled "Prisoner's Dilemma" in an orange box. Below the title, it states: "1950: Merrill Flood & Melvin Dresher, RAND Corporation, created a 'game' for the simplest example of a 2-person social dilemma: when two people have a choice to cooperate or defect:". This is followed by a bulleted list: "▪ Mutual defection brings a small benefit for both," "▪ Mutual cooperation brings a medium payoff for both, but" and "▪ An unequal move has the most benefit for one and the least for the other." The slide features decorative icons of gears, a hard hat, and an atom. A small inset video shows a woman in an orange top speaking. The NPTEL logo is in the bottom left corner.

Next, we will decide about the next we will see about the Prisoners Dilemma. Now what is this prisoner's dilemma it is the social dilemma situation in which like again the people have a choice either to cooperate or to defect. Defect here means like breaking the trust and like both may have had some agreement. So, you are defecting that you are not keeping your words you are not keeping your promises that you have made to your collaborator.

So, in that case what happens? It is a social dilemma and why this social dilemma happens because if there is a sense of mistrust if there is a sense of understanding maybe I keep my words but I do not know what the other person is going to do whether the other person will similarly respect the initial like promises that we have made or under pressure the person is going to succumb or the person may change colors and start thinking of the self-interest only.

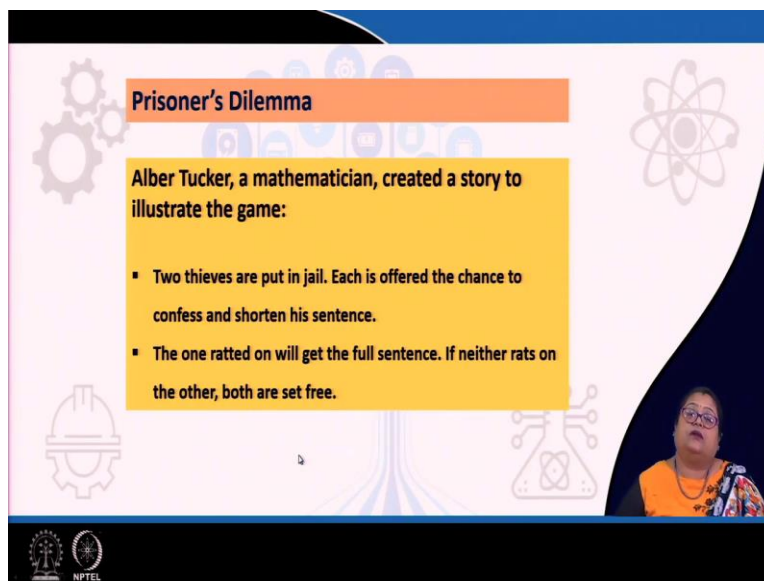
So, if these doubts are there in the mind of one of the parties, then the party that person may think of defecting. So, now that is the social dilemma like when my social perception of the other

person my is based on certain doubts, I do not know at what will be the moves of the other person given a particular situation or situations under pressure whether facing the adversities facing social pressures which may have a negative outcome to oneself.

Still then will the person go on keeping the promises or think of own benefit and like do deflect or come out of the promises that they have made about like keeping the trust on each other. So, that is what is tested in the Prisoners Dilemma. Prisoners Dilemma it was developed in 1950 by Marilyn Flood and Melvin Dresher the RAND Corporation created a game for the simplest example of a two-person social dilemma.

When two people have a choice to cooperate or defect mutual defection brings the small benefit for both. Mutual cooperation brings a medium payoff for both but an unequal move has the most benefit for one and the least benefit for the other. And the dilemma is that people may think of like what the other person is going to do.

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Prisoner's Dilemma

Alber Tucker, a mathematician, created a story to illustrate the game:

- Two thieves are put in jail. Each is offered the chance to confess and shorten his sentence.
- The one ratted on will get the full sentence. If neither rats on the other, both are set free.

The slide features a blue header, an orange title bar, and a yellow text box. It includes decorative icons of gears, a hard hat, and a molecular structure. A small video inset in the bottom right shows a woman with glasses and a microphone. Logos for NPTEL and a tree are visible in the bottom left corner.

Albert Tucker a mathematician created a story to illustrate the game. Two thieves are put in a jail and each is offered the chance to confess and shorten his sentence. The one ratted on will get the full sentence if neither rat on the other both are set free.

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Prisoner's Dilemma : The Story

Two men are arrested, but the police do not have enough evidence for a conviction. The police separate the two men and offer each the same deal:

- If one testifies against his partner (defects), and the other remains silent (cooperates), the defector will go free and the cooperator will receive the full one-year sentence.
- If both remain silent, both will be sentenced to only one month in jail for a minor charge.
- But if each 'rats out' on the other, each will receive a three-month sentence.

Each prisoner must choose either to betray or remain silent; the decision of each is kept quiet. What should they do?

NPTEL


The story is like; the two men are arrested but the police do not have enough evidence for a conviction. So, how they are going to gather the evidence? So, who is guilty kind of. So, what the police do the police separates the two men and offers each the same deal. Like if one testifies against his partner that is defects and the other remains silent that is cooperates with the partners. The defector will go free and the cooperator will receive full one year sentence if both decide to remain silent both will be sentenced to only one month jail in a minor charge.

But if each rats out on the other each will receive a three-month sentence. So, each prisoner now must decide either to betray or to remain silent. The game here is the decision is of each one is kept silent. Now what they should do?

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Prisoner's Dilemma : How Does it Work

	Prisoner B stays silent (<i>cooperates</i>)	Prisoner B confesses (<i>defects</i>)
Prisoner A stays silent (<i>cooperates</i>)	Each serves 1 month	Prisoner A: 1 year Prisoner B: goes free
Prisoner A confesses (<i>defects</i>)	Prisoner A: goes free Prisoner B: 1 year	Each serves 3 months



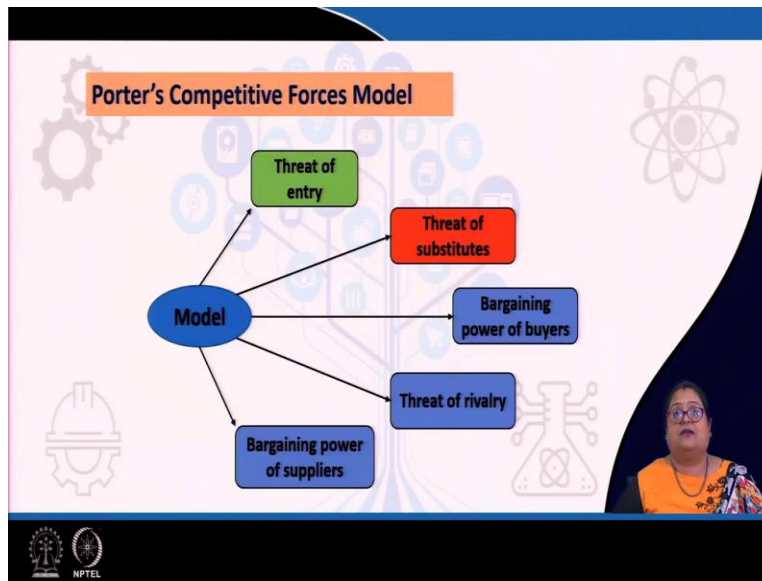
The illustration of the game is like how it works is like this. So, if prisoner A is staying silent is cooperates and prisoner B stays silent also cooperates each serve one month. If prisoner A stays silent and prisoner B confesses that his defects prisoner A gets one year and prisoner B goes free. Prisoner A confesses that is defects and prisoner B stays silent that is cooperates then prisoner A goes free and prisoner B gets one year of sentence.

In case where both prisoners A confesses and prisoner B also confesses then each serves three months. Now the choice is whether the prisoner A and prisoner B confesses or they remain silent. So, that will depend on again the type of bonding between prisoner A and prisoner B whether the person succumbs under pressure or not and what the person thinks of like only own outcome or the other person's outcome and accordingly the choice is time.

So, according to you what is the best choice for the prisoner A and president B should they cooperate with the police person or they should like confess or they should remain silent what that should what should be done? So, according to you what should be the decision of prisoner A and prisoner B. Do they remain silent or do they confess do they cooperate with each other or they defect with each other?

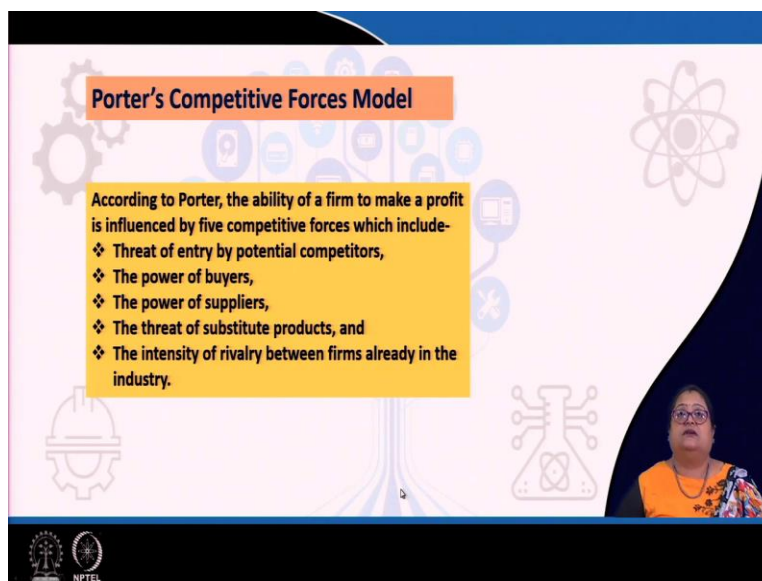
Please give your answers in the like discussion boards we try we will try to see like how you are progressing and thinking on these issues.

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The next model that we are going to discuss is on Porters Competitive Forces Model. This model is a very important model which shows like the forces acting on the organization which are taken to be competitive forces. These forces are the threat of entry, threat of substitutes, the bargaining power of buyers, the threat of rivalry and the bargaining power of suppliers.

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According to porter the ability of a firm to make a profit is influenced by 5 competitive forces which include threat of entry by potential competitors, the power of buyers; the power of suppliers; the threat of substitute products and the intensity of rivalry between the firms already in the industry.

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Porter's Competitive Forces Model

❖ **Threat of entry by potential competitors**

In general, if an industry is profitable new enterprises will enter, output will expand, prices will fall, and industry profits will decline. Managers often strive to reduce the threat of entry by pursuing strategies that raise barriers to entry

The slide features a background with various icons including gears, a lightbulb, a network diagram, and a chemical structure. A small inset video shows a woman in an orange top speaking. The NPTEL logo is visible in the bottom left corner.

Threat of entry by the company potential competitors will now illustrate the model to some extent for easy understanding. In general, if an industry is profitable new enterprises will enter output will expand prices will fall and industry profits will decline. Managers often strive to reduce the threat of entry by pursuing strategies that raise barriers to entry.

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Porter's Competitive Forces Model

❖ **The power of buyers**

The next competitive force is the bargaining power of buyers. The bargaining power of buyers is the ability of buyers to bargain down prices charged by firms in the industry or to raise the firms' costs by demanding better product quality and service. By lowering prices and demanding better service, powerful buyers can squeeze profits out of an industry.

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industry.

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The slide features a title 'Porter's Competitive Forces Model' in an orange box. Below it, a yellow box contains the heading '❖ The power of suppliers'. The text explains that suppliers provide inputs to the firm, which can be raw materials, partly finished products, or services. It notes that suppliers include employees of a firm who supply their skills and time in return for pay. Finally, it states that whether suppliers represent an opportunity or threat depends on the extent of their control over the inputs the firm needs to function. The slide is decorated with various icons like gears, a lightbulb, and a network diagram. A small video inset in the bottom right shows a woman in an orange top speaking. The NPTEL logo is visible in the bottom left corner.

The power of suppliers: Suppliers provide inputs to the firms these inputs may be raw materials partly finished products or services suppliers include the employees of a firm who supply their skills and time in return for pay, whether suppliers represent an opportunity or threat to a firm depends on the extent of the control over the inputs the firms need to function.

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The slide features a title 'Porter's Competitive Forces Model' in an orange box. Below it, a yellow box contains the heading '❖ The threat of substitute products'. The text explains that the existence of close substitutes is a strong competitive threat because it limits the prices that companies in one industry can charge for their products, and thus industry profitability. It uses the example of coffee, stating that if the price of coffee rises too much relative to that of tea or cola, coffee drinkers may switch to those substitutes. The slide is decorated with various icons like gears, a lightbulb, and a network diagram. A small video inset in the bottom right shows a woman in an orange top speaking. The NPTEL logo is visible in the bottom left corner.

The threat of substitute products: The existence of close substitutes the strong competitive threat because this limits the prices that companies in one industry can charge for their products and thus industry profitability. If the price of coffee rises too much relative to that of tea or cola

coffee drinkers may switch on to those substitutes.

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The slide is titled "Porter's Competitive Forces Model" in an orange box at the top. Below the title, a yellow box contains the text: "❖ The intensity of rivalry between firms already in the industry". Underneath this, there are two paragraphs: "Intense rivalry between incumbents, is a threat that reduces the profits of established enterprises." and "Conversely, anything that reduces the intensity of rivalry between incumbent firms, allowing them to raise prices and make greater profits, can be seen as an opportunity." The slide features a background with various icons like gears, a lightbulb, a network diagram, and a person. At the bottom left, there are logos for NPTEL and other institutions.

The intensity of rivalry between firms already in the industry: Intense rivalry between incumbents is a threat that reduces the profits of like established enterprises. Conversely anything that reduces the intensity of rivalry between the incumbent firms allowing them to raise prices and make bet greater profits can be taken to be an opportunity. So, from these competitive forces modern what we get to see over here.

As we can see from this model for the profitability of an organization for its existence for its business strategy it has to read its environment very carefully. It is to see what are the competitive forces which may act against it and try to interpret those forces? Try to do a strength and weakness analysis of itself and based on the strengths and weaknesses analysis done about itself. Now whether these forces competitive forces as we understand which are there in the environment in terms of threat of rivalries, threat of substitutes, bargaining power of buyers, threat of entry bargaining powers of suppliers.

Whether we will interpret these as threats or we will interpret this as opportunities based on the strengths that we have based on the core competencies that we have which will help us to excel in this kind of situation by taking decisions to maybe I took up it or to collaborate with some of the partners. So, that we can make our presence in the scenario in the marketplace these are

strategic decisions which need to be taken by the organization.

So, these are forces which will help you to self realize your strengths and weaknesses these are forces which will motivate you to act in a certain way. So, that you can seek your answers to these questions may be given and the problems which are there and try to find out a proper solution which is the which will make you further strong further effective as an organization as a group and that will be that could be an innovative solution also.

That is how you solve your problem based on your strengths your core competencies and the strategies that you take and through your creative solutions and guided by a proper leadership. So, these are very, very important interconnected factors and you can take this based with the help of a proper leadership and the problem-solving techniques the creative techniques that you take and your decision to either to collaborate or to compete or to make a mix of both.

The strategy that you take for yourself your organization you can decide your plans ahead and how to become more effective and sustainable. Thank you for now in the next session we are going to meet with the uses and benefits of competition and cooperation thank you