

Petroleum Economics and Management
Prof. Anwsha Aditya
Department of Humanities and Social Sciences
Indian Institute of Technology, Kharagpur

Module - 12
Implications of Fiscal and Trade Policies
Lecture - 59
Concluding Remarks-I

Hi everyone, I am Dr. Anwsha Aditya and welcome to the NPTEL course, Petroleum Economics and Management. So, we are in the last module of our course that is module 12, where we have been discussing about the Implications of Fiscal and Trade Policies. Now, this is the second last lecture of our course that is lecture number 59 in the course. Now, we have more or less over discussed our content, but I would like to present some of the concluding remarks in this last two lectures.

(Refer Slide Time: 00:54)

The slide is titled "Concepts Covered" and features a light blue background with a faint tree-like diagram. It lists two key concepts:

- ❖ Economic Sanctions and Geopolitics in Today's World
- ❖ Crude Oil: The most used tool in Economic Sanctions

In the bottom right corner, there is a small video inset showing a woman, presumably the professor, speaking. The slide footer includes the Indian Institute of Technology Kharagpur logo and name.

Now, you see the best part I feel about teaching the course is that, the course evolves over time means the time that we have been discussing about the contents there are some very recent events which I thought that I should bring to your attention. So, that is why in the last two lectures I will be discussing.

First of all, I will be also summarizing the key takeaways from the course, what are the lessons that we learnt from the course, what are the things that we are going to retain because it's not that we will just hear the lecture and we forget.

So, what are the things that we are going to retain? Because I will consider the course to be successful if the course is able to invoke a great sense of interest in you so, that you can now relate the things in the global oil market to the things that you have studied in the course. So, not only the global oil market because we also discussed lot of related issues like taxation, environment and sustainability.

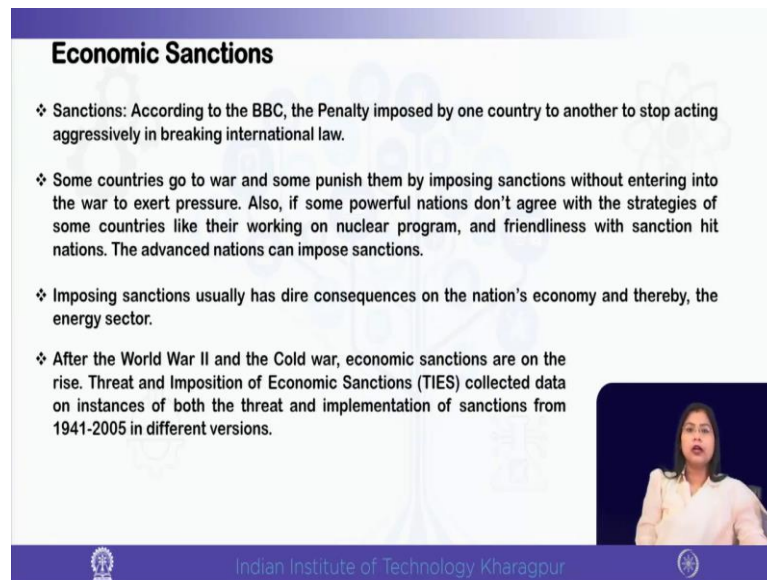
So, those exchange rate issues those beyond the global oil market also. So, if after attending the course if you feel that you have now you have generated that interest. So, you are interested to know about the recent economic events. So, then only the course will be successful because in many of the modules due to time constraint, we could not go into very detail, but I have provided you the references.

So, our purpose will be successful if you are getting enough interest and you are able to relate the things that you see in the contemporary world with the contents that you are studying in the course. So, with this idea I wanted to bring to your attention some very latest empirical observation, some recent events to your attention which is related to the course.

So, one such event is one such aspect is the economic sanction and the relation with the economic sanction with the geopolitics and the role of crude oil. So, these things we are going to discuss in the particular lecture and in the next lecture which will be our last lecture in that we will be discussing about another very important recent aspect of the world economy is regarding the fossil fuel subsidy.

So, these two things we could not discuss during the curriculum and also that we wanted to present to use some very latest data just as latest as November and December 2022. So, that is why we kept few lectures for the towards the end to conclude our syllabus.

(Refer Slide Time: 03:29)



Economic Sanctions

- ❖ Sanctions: According to the BBC, the Penalty imposed by one country to another to stop acting aggressively in breaking international law.
- ❖ Some countries go to war and some punish them by imposing sanctions without entering into the war to exert pressure. Also, if some powerful nations don't agree with the strategies of some countries like their working on nuclear program, and friendliness with sanction hit nations. The advanced nations can impose sanctions.
- ❖ Imposing sanctions usually has dire consequences on the nation's economy and thereby, the energy sector.
- ❖ After the World War II and the Cold war, economic sanctions are on the rise. Threat and Imposition of Economic Sanctions (TIES) collected data on instances of both the threat and implementation of sanctions from 1941-2005 in different versions.

Indian Institute of Technology Kharagpur

So, now if you concentrate on this particular lecture, let us focus on the role of economic sanction in geopolitics and how crude oil is so, important in controlling the economic sanction. So, often nowadays you hear about the sanctions. So, what do we mean by sanction?

So, according to the BBC, the sanction is the penalty imposed by one country to another to stop acting aggressively in breaking the international law. See earlier we had lot of military invasion nowadays also we have war, but we also have signed lot of treaties related to peace.

So, nowadays it's not that always the countries are engaged into exercise of military power, but many times we see that the countries follow economic sanctions means the penalties in terms of economic aspect because you see economic is something which will affect the livelihood everything it is related to politics.

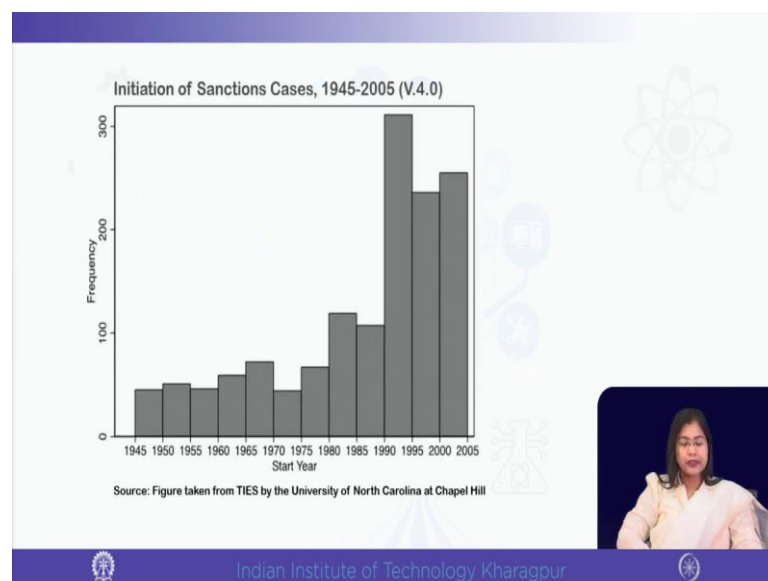
So, often economic aspects are used as penalties if the countries are breaking international laws and not maintaining the global peace. So, we see that some countries go to war and some countries punish them by imposing sanction without entering into the war to exert pressure. So, by imposing sanction you can ban import from a particular destination if the destination country is actually not following the rules of international laws and regulation.

So, then you can ban import from that country also if some powerful nations do not agree with the strategy of some countries like they are working on nuclear program and friendliness with sanction hit nations. So, but once again I would like to bring to your attention that often we lack a level playing field among there also you have this not so, divide or the developing countries divide and crude oil is often used as one of the tools of economic sanction.

So, the advance nations can impose sanctions or most of the time we see that the advance nations the first world countries are imposing sanction against the third world countries. And economy this imposition of sanction has dire consequences on nations economy and thereby on the energy sector mainly and we will see towards the end that means all type of countries the suppliers the oil suppliers, the demanders they use lot of policies related to crude oil.

So, if we look if we have a historical perspective, we can see that after the Second World War and the cold war economic sanctions have increased over time. So, we can look at some data. So, see this data is from the Threat and Imposition of Economic Sanction (TIES) who collected data on instances of both the threat and implementation of sanction from 1941 to 2005 in different version.

(Refer Slide Time: 06:20)



So, you can see how sanctions have increased over time and it has increased more after 1990 you see. So, this is the figure that we have taken by the ties by the University of

North Carolina at Chapel Hill. So, from 19 during that time 1945 to 1980 it was more or less in a stable range in one range, but after that mainly after 1990 it has increased rapidly.

So, around 1990 to 1995 it has been highest after that it has increased, means decreased, but till as compared to the period till before 1990 it is still high in the post 2000 era also.

(Refer Slide Time: 07:02)

Crude oil: Most used tool in Economic Sanctions

- ❖ Economic sanctions related to crude oil are usually used to exert pressure. Usually, an economic sanction by the US is followed by Europe, the UK and other allied nations. They usually impose it to put pressure on the current government.
- ❖ Recently, the majority of the western nations have sanctioned Russia because of its military aggression against Ukraine. Also, in 2014, they sanctioned after annexing Crimea and it included financial sanctions, an embargo on oil exports and military equipment.
- ❖ Sanctions targeting Iran, Venezuela and Russia by the US put pressure on the ruling government to change the sanctioned countries' behaviour and policies (Brown, 2020). The study points out that it adversely affected oil supply, price and trade flows.

Indian Institute of Technology Kharagpur

Now, we can see the role of again petroleum or crude oil which is most frequently used tool in economic sanction. Now, economic sanction related to crude oil are usually used to exert pressure and usually an economic sanction by the US is followed by Europe and the United Kingdom and other allied nations. So, see I was just talking about that that often we lack a level playing field.

So, if US imposes economic sanction similar type of sanction is also imposed by other OECD countries other first world countries the rich and high-income countries like Europe, UK and other nations. So, they usually impose it to put pressure on the domestic government. So, recently we can cite some events some examples like the majority of the western countries have sanctioned Russia because of its military aggression against Ukraine.

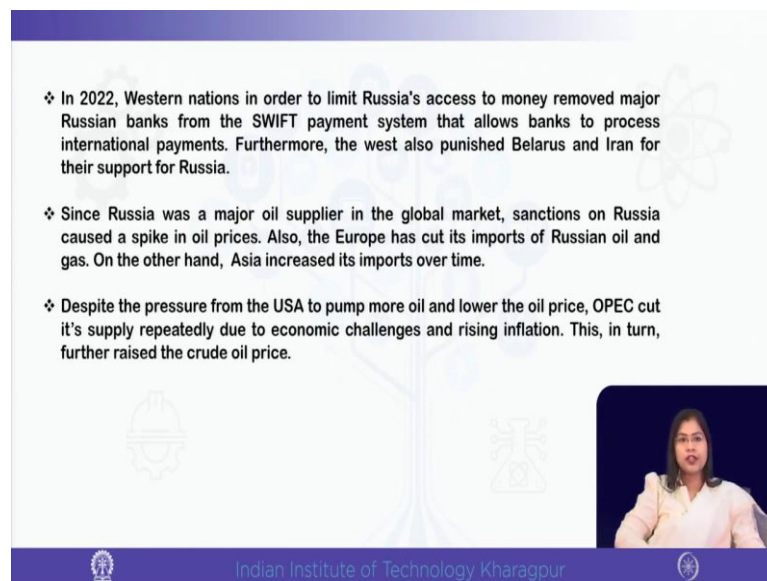
In 2014 also we saw that they sanctioned after annexing Crimea at included financial sanction and embargo means ban on oil export and military equipment. Now, we often

see sanctions which target Iran, Venezuela and Russia by the US and the objective is to put pressure on the ruling domestic government of these countries to change the sanctioned countries behavior and policies.

So, Brown (2020) has pointed this out that this type of sanctions often affect the oil supply price and trade flow because if the countries are banning import of oil from these countries like Russia, Iran and Venezuela what will happen? The total supply of oil in the global market will fall and we know from our basic understanding of demand and supply, if supply falls price will increase.

So, you see this type of sanctions often affect the price of the final good; that means, crude oil and the refined oil and we already know that if oil price increases, we feel inflationary pressure a free in every sphere of our life because if oil price increases cost of electricity, transportation everything increases.

(Refer Slide Time: 09:12)



The slide contains the following text:

- ❖ In 2022, Western nations in order to limit Russia's access to money removed major Russian banks from the SWIFT payment system that allows banks to process international payments. Furthermore, the west also punished Belarus and Iran for their support for Russia.
- ❖ Since Russia was a major oil supplier in the global market, sanctions on Russia caused a spike in oil prices. Also, the Europe has cut its imports of Russian oil and gas. On the other hand, Asia increased its imports over time.
- ❖ Despite the pressure from the USA to pump more oil and lower the oil price, OPEC cut it's supply repeatedly due to economic challenges and rising inflation. This, in turn, further raised the crude oil price.

The slide footer includes the IIT Kharagpur logo and the text "Indian Institute of Technology Kharagpur". A small video inset in the bottom right corner shows a woman speaking.

So, if we come back to some recent observation, we see that in the year 2022 the western nations wanted to limit Russia's access to money transfer. So, they ban the Russian banks from the SWIFT payment system. So, we know that SWIFT payment system allows the banks of the countries to process international payment.

So, Russian banks were not allowed to use the SWIFT payment system which allows them to into engage into transaction with international exchange. So, the banks were

prohibited. Moreover, the western countries also punished Belarus and Iran for their support for Russia. So, these countries those countries were supporting Russia they were also banned.

So, it's very unfortunate state of affairs and Russia is a major oil supplier in the global market we already know that. So, sanctions on Russia led to a spike in the oil price. Also, Europe has got its import from Russian oil and gas and, but Asia at the same time has increased its import over time.

So, we will see with data that China and India continue to import oil from Russia and China has always imported oil from Russia. India has also increased import of Russian oil because of the fall in oil price in Russia due to the imposition of ban on Russian oil by the western countries and US.

So, in spite of the pressure from the US to pump more oil and lower the oil price, OPEC continued to cut its supply repeatedly due to the economic challenges and rising inflation. Therefore, so, since OPEC was cutting the supply because as we already discussed that after the COVID-19 pandemic. So, initially the OPEC countries continued their supply, but after May 2020 they revised their production quota and they agreed to restrict their supply.

So, you see you can see that along with the ban on import of Russian oil and the OPEC countries cut in oil supply. So, oil price will definitely increase and that is what we see in 2022.

(Refer Slide Time: 11:24)



Geopolitics

- ❖ The west criticized India and China for importing Russian oil. However, Europe still buys it despite the cut.
- ❖ The west did not offer much support and assistance to Sri Lanka, which is also facing an economic crisis but offered huge assistance to Ukraine when both the countries were facing crisis.
- ❖ India helped Sri Lanka by offering a line of credit for fuel and fertilizers.
- ❖ **North-South divide:** "Somewhere Europe has to grow out of the mindset that Europe's problems are the world's problems but the world's problems are not Europe's problems. That if it is you, it's yours, if it is me it is ours. I see reflections of that," by Minister of External Affairs of the GOI: Dr S. Jaishankar.
- ❖ He added that it is sensible to buy oil at the best deal to cater to India's energy needs.

Indian Institute of Technology Kharagpur

So, now if we concentrate on the geopolitics because earlier also if you remember in our initial modules in module 4, we have discussed in detail the about the geopolitics. So, we have discussed about Saudi Arabia. So, oil plays a very important role in global economy as well as in world politics.

So, if we look at some of the recent events, we see that the western countries always criticize India and China for importing Russian oil because as I mentioned that as the western countries banned import from Russia and Russian oil price fell. So, India and China continued their purchase of oil from Russia because these two countries, domestic endowment is less.

So, to meet their domestic demand they have to import oil from Russia, they wanted to enjoy the falling price advantage. However, Europe still buys it despite the cut. So, the West did not offer much support and assistance to Sri Lanka which is also facing an economic crisis, but you see the western countries offered huge assistance to Ukraine when both Sri Lanka and Ukraine were going through crisis.

But at the same time, we know that India helps Sri Lanka by offering a line of credit for fuel and fertilizer. So, we know about the recent economic crisis in Sri Lanka how an oil price increases one of the factors behind the crisis. Apart from of course, there are domestic factors, political instability those are there, but oil price increase actually

affected, triggered the crisis and Sri Lanka also suffered because of the COVID-19 pandemic because it's a tourism dependent country.

But we can once again see that how increase in oil price is triggering the crisis in Sri Lanka, but it was not helped by other western countries who extended their help to Ukraine where both the countries Ukraine and Sri Lanka are going through the crisis. So, once again we can see a north south divide.

So, you can look at the statement by Dr. S. Jaishankar, who is the honorable Minister of External Affairs of Government of India. So, Dr. Jaishankar pointed out that so, I am quoting "somewhere Europe has to grow out of the mindset that Europe's problems are world's problems, but the world's problems are not Europe's problems. But so, that means, that if it is you it's yours, if it is me it is ours. So, I see reflection of that." So, this is the view of Dr. S Jaishankar who is the honorable Minister of External Affairs of the Government of India.

He also added that it is sensible to buy oil at the best deal which can cater India's energy need because we know that our domestic supply is very less, but our demand is very high. So, it makes economic sense for India to buy oil from the cheaper source right.

(Refer Slide Time: 14:16)

India's take on Economic Sanctions on Russia

- ❖ Sharing below India's Petroleum Minister Hardeep Singh Puri's interview on CNBC International.
https://www.youtube.com/watch?v=0F1B2FOcY6M&ab_channel=CNBCInternationalTV
- ❖ He talks about the North-South divide on energy consumption, the Russia-Ukraine war and the impact of economic sanctions, climate goals and India's plan on the transition from non-renewable to renewable energy sources, to become a net zero emitter by 2070.
- ❖ The video talks about India's energy needs as we need around 5 million barrels per day. The minister said that if we think about the moral conflict with Russia, it is also our moral duty to take care of the energy needs as India's demography is quite complex.

Indian Institute of Technology Kharagpur

So, why should India not use the opportunity of purchasing oil from Russia at a lower price. So, if we now also share the thoughts of our honorable Petroleum Minister,

Hardeep Singh Puri. So, I have also shared the link to the interview. So, Mr. Hardeep Singh Puri talks about the north south, divide on energy consumption, the impact of the Russia, Ukraine war and the impact of the economic sanctions in this aspect.

So, he also talked about climate goals and India's plan on the transition from non-renewable to renewable energy source. So, Mr. Puri focused on becoming a net zero emitter by the year 2070 because we know that when we use fossil fuel, it leads to lot of greenhouse gas emission with their environmental consequences.

So, we also aim to become a net zero emitter. So, we have to think of switching to renewable sources of energy, so, to so, as to reduce our fossil means, carbon dioxide emission and greenhouse gas emission. So, you can look at the video, the interview of our honorable Petroleum Minister Hardeep Singh Puri. So, the video talks about India's energy needs because we need around 5 million barrel per day.

So, the minister said that if we think about the moral conflict with Russia, it is also our moral duty to take care of the energy needs because India's demography is very complex.

(Refer Slide Time: 15:50)

Global Economic Scenario as of December 2022

- ❖ The world is geopolitically disrupted after the war and Covid-19, we see an economic slowdown and inflation all over the globe. IMF also predicts that global GDP growth forecasts fell to around 3.2% in 2022 from 6% in 2021.
- ❖ Likewise, inflation will likely to increase in the coming years amid energy instability. Economists predict that economic instability is near due to ongoing factors.
- ❖ To tame inflation, central banks of different nations will raise interest rates (already raised by some). But, is it enough to curtail it? If fuel and food prices are on the rise, it will be hard to control them with monetary policies.
- ❖ This puts pressure on governments around the world as inflation is said to be the public's number 1 enemy.

Indian Institute of Technology Kharagpur

Now, if we present you some very latest data of December 2022, we can see that the world is geopolitically disrupted after the COVID-19 pandemic and the Russia-Ukraine War. So, we can witness economic slowdown across different countries in the world and inflationary pressure is also felt across the globe. The International Monetary Fund

predicts that the global GDP growth forecast it fell around 3.2 percent in 2022 from the earlier 6 percent in 2021. So, you see just in one year, the fall has been quite high.

Likewise, inflation will also increase in the upcoming years because of the crisis in the energy market because economists predict that economic instability is near due to the ongoing factors. So, to control the inflation central banks of different countries want to raise the interest rate and some countries have already raised the interest rate.

But the now the crucial question is, is increasing interest rate will be sufficient to control the inflation? Because if the fuel price and food prices are rising, it will be very difficult to control them with monetary policies. And this put pressure on the government around the world because inflation is said to be public's number one enemy because when inflationary pressure is there as we know that there will be disruptions and there will be political unrest, the workers will go on strike, the consumers are adversely affected.

So, the people's opinion actually gets adversely affected towards the running government. So, inflationary pressure it's a big challenge for the domestic governments in all the countries of the world we know very well because with constant money income if there is inflationary pressure; that means, purchasing power of the common people will fall.

(Refer Slide Time: 17:50)

Recent Economic Sanctions and Geopolitics

- ❖ Recently, the energy crisis has caused global inflation and food insecurity. At the beginning of December 2022, the crude oil price (Brent Crude) is around \$78 per barrel. The G7 nations keeping in mind the crisis agreed to a price ceiling of \$60 per barrel to the third-world countries through seaborne trade from Russia. Third-world countries can purchase oil to address energy needs and curtail Russia's revenue.
- ❖ On the contrary, Russia is not offering it at the price cap. Also, the Asian giants India and China are buying Russian oil despite the sanctions as they are buying at a lucrative price but above the price cap.
- ❖ It is to be noted that crude oil is the most significant tool by both parties to exert the pressure on each other.

Indian Institute of Technology Kharagpur

So, if we now again share with you some more data related to the recent economic events, we see that the recent energy crisis has been one of the factors behind the global inflation and food insecurity. At the beginning of December 2022, the Brent crude oil prices around 78 dollar per barrel and the G7 nations, they considering the crisis, they agreed to go for a price ceiling of 60 dollar per barrel to the third world countries via seaborne trade from Russia because to limit the oil price what you need?

Because if you lower the oil price by putting some cap, we know that at a lower price what will happen? At a lower price by law of demand increases by law of supply falls. So, to maintain the price at a lower level, you have to meet the excess demand so, that can be possible via seaborne trade from Russia. So, the third world countries can purchase oil from Russia to address energy needs and curtail Russia's revenue.

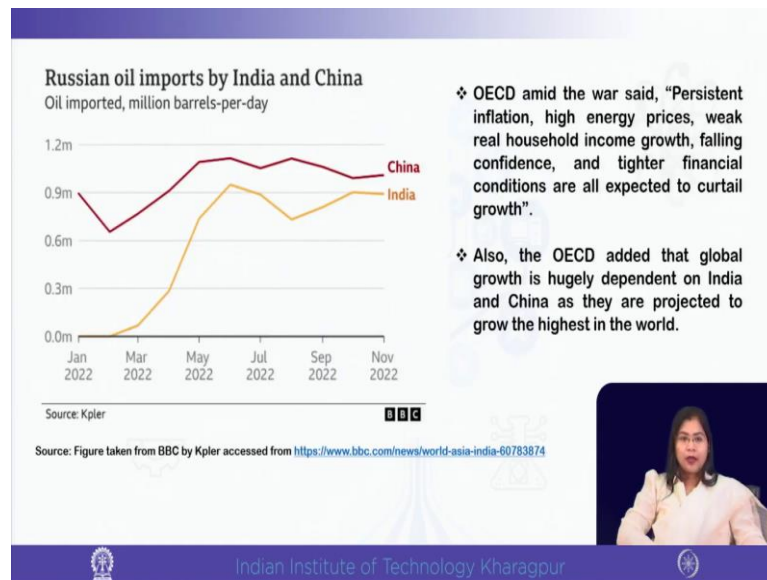
On the other hand, you see Russia is not offering it at the price cap. So, that is also another the other side of the story because Russia does not want to offer the oil at a lower price. Also, the Asian giants India and China are buying Russian oil because despite the sanctions, they are buying it at a lower price. So, as a major buyer of energy, they have to think about their means economic profit.

So, if they are economic, its economically more affordable, they will obviously, India and China will obviously, prefer to buy from the cheaper source right. But they are buying the oil from Russia at a competitive price, but of course, the price is greater than the 60 dollar per barrel.

The cap that the G7 nations are putting because Russia does not want to supply oil at the cap price. And we should also note that crude oil is the most significant tool by both the importers and the exporters to exert the pressure on each other, because see the importers can also exert pressure like see the Western countries are imposing sanctions or banning import. Because you see the we know that the oil exporting countries are very much dependent on oil rents.

So, if they cannot find out buyers, if the buyers are banning their purchase. So, it will be difficult for them also to sustain their expenditure because they earn a lot of expenditure is financed via their oil exports. So, we see that crude oil is such a crucial thing for both the suppliers as well as the demanders who want to exert pressure using the crude oil.

(Refer Slide Time: 20:40)



- ❖ OECD amid the war said, "Persistent inflation, high energy prices, weak real household income growth, falling confidence, and tighter financial conditions are all expected to curtail growth".
- ❖ Also, the OECD added that global growth is hugely dependent on India and China as they are projected to grow the highest in the world.

Now, we can look at some recent import data, how China and India continue to import Russian oil. So, this is oil imported million barrels per day. So, we have plotted the data for you can see from January to November 2022. So, the figure is taken from BBC by Kpler and accessed from the following link that we have shared.

So, we can see that throughout almost starting from January 2022 to November 2022, China is buying a lot of oil from Russia and India's initially at the beginning of 2022, India's purchase of oil from Russia was less. But then we can see that from February onward, India started importing oil from Russia at increased at a very steep rate from February 2022 to you can see to June 2022.

So, there is a steepest increase after that from June to November, it was more or less in a stable range in around August there was a slight decline, but till there was not so, much change. But initially from February to June there was a steep increase of import of oil by India from Russia. So, the OECD countries during the war, the Russia Ukraine war said that the persistent inflation high energy prices weak real household income growth falling confidence and tighter financial conditions are all expected to curtail growth.

Also, the OECD nations they added that global growth is hugely dependent on India and China because they are projected to grow the highest in the world. And because they provide a huge domestic demand and a sufficient domestic demand often provides a you

can say it's like a cushion to the external shocks, is not it? Because if because we know that if you are producing. So, you have to sell.

Now, if the world market is going through a recessionary phase, now if you are producing you have no takers. So, you would not be able to cover your cost of production right. So, it's like the Keynesian problem of lack of effective demand. So, in that sense we can see that China and India are being hugely populated they have huge domestic demand.

So, this in domestic high domestic demand often provides a cushion against the external shocks arising in the world market. And it's because of the same reason we saw that during the global financial crisis which started in US and then percolated to many nations in the world in 2008, India was suffered a bit less and it's because of a India's huge domestic demand.

So, it provides to some extent a cushion or shock absorber to the external events, external uncertainties, volatilities in the world market and the shocks arising in the world market. So, you see global growth is now highly dependent on India and China who in turn is dependent on Russian oil import because the wheel of growth will not run without energy.

Until now see this third world countries, these developing countries are dependent on oil for energy. Though earlier if you remember we have seen that in China the use of coal is also very high, but India very much is dependent on oil for them for its source of energy. So, you can see how global growth in turn depends on crude oil.

(Refer Slide Time: 24:20)

Conclusion

- ❖ At present the world is dealing with three major crises: 3Fs, namely fuel, food and fertilizers. The fuel price is impacting the other two as well. The west imposed strict sanctions on crude oil and not much on agricultural products, especially on fertilizers.
- ❖ Crude oil plays a major role in government revenue, maintaining inflation and also for imposing economic sanctions.
- ❖ In comparison to other nations where geopolitics worsen the economies, India's economy is quite stable in the current economic world war.

Indian Institute of Technology Kharagpur

So, if we now summarize our today's lecture. So, what we can conclude is that at the present situation the world is dealing with three major crises and we can say that there are three Fs. One F is fuel, second F is food and third F is fertilizer and the fuel price we already know we have discussed it many times.

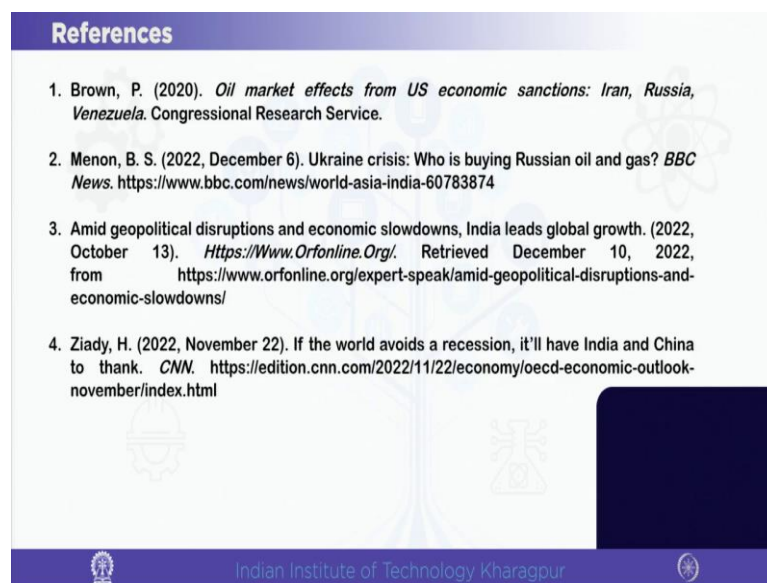
Fuel price will of course, affect the price of food and fertilizer ok. Cost of transportation, cost of production, cost of energy everything increases and this has a spiraling effect. So, the first F is actually affecting the other two F's. So, the west imposed strict sanction on crude oil and not much on agricultural products especially on fertilizer.

So, crude oil plays a major role in earning government revenue maintaining controlling inflation because if crude oil price increases there will be inflationary pressure. So, controlling the crude oil price can be one of the very important tools in controlling inflation and also for imposing economic sanctions.

So, we saw the importance of crude oil in economic sanction and crude oil is often used as a tool for both the exporters and the importer countries. So, in comparison to other nations where geopolitics actually deteriorate the economies, we are thankful that India's economy is quite stable in the current economic world war because we one thing is, we know that India's domestic demand.

So, India is less economically dependent, other thing is India's political stability, India's diplomatic policy, India's international trade policy and India's international relation policies are quite matured. So, India has been able to handle the current economic world war in a much better way as compared to other developing countries and let us hope that India will do even better. So, we have to make a transition also from dependence on fossil fuel to more renewable sources of energy.

(Refer Slide Time: 26:22)



References

1. Brown, P. (2020). *Oil market effects from US economic sanctions: Iran, Russia, Venezuela*. Congressional Research Service.
2. Menon, B. S. (2022, December 6). Ukraine crisis: Who is buying Russian oil and gas? *BBC News*. <https://www.bbc.com/news/world-asia-india-60783874>
3. Amid geopolitical disruptions and economic slowdowns, India leads global growth. (2022, October 13). *https://www.Orfonline.Org/*. Retrieved December 10, 2022, from <https://www.orfonline.org/expert-speak/amid-geopolitical-disruptions-and-economic-slowdowns/>
4. Ziady, H. (2022, November 22). If the world avoids a recession, it'll have India and China to thank. *CNN*. <https://edition.cnn.com/2022/11/22/economy/oece-economic-outlook-november/index.html>

Indian Institute of Technology Kharagpur

So, these are the references we have mainly followed different means news links and we have already presented the links to the news and the reports and we have also shared with you the YouTube video links of the Ministers of India on external affairs and the petroleum minister.

So, you can browse through the links because of time constraint we could not go through all the reports, but those who are interested they should definitely go through these reports and the news links.

So, thank you very much, see you in the last class.