Petroleum Economics and Management

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Module - 12
Implication of Fiscal and Trade Policies
Lecture - 57
BoP Crisis of the Indian Economy in 1991

Hello, I am Dr. Anwesha Aditya, offering the NPTEL course Petroleum Economics and Management. We are in the last module of our course that is module 12, where we are discussing the Implication of Fiscal and Trade Policies. And this is the 3rd lecture in module 12 and overall this is lecture number 57 in our course.

So, in today's lecture we are going to discuss the Balance of Payment Crisis that Indian Economy faced in 1991, with a specific reference to the external events especially the events in the global oil market that might have triggered the crisis.

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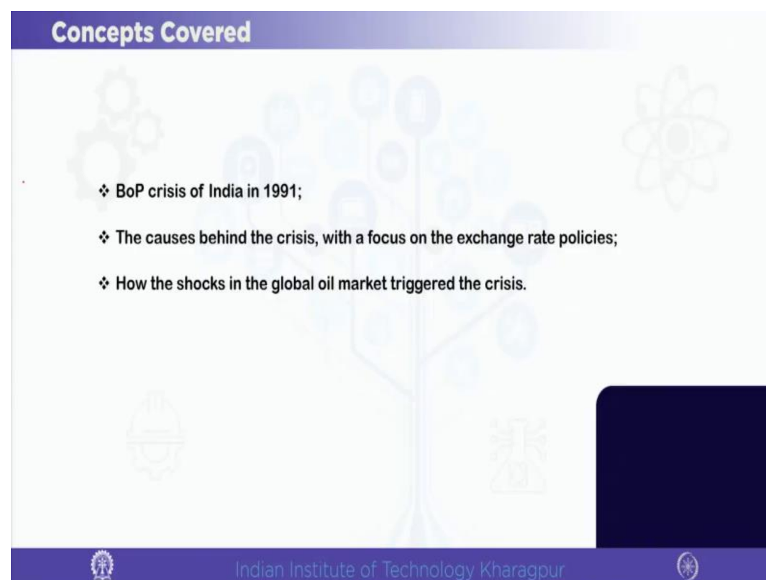

So, if you remember we have already discussed the importance of petroleum in global trade. In our very initial lectures when we motivated the course we dealt with lot of empirical observation, and we found that petroleum products constitute a large part of global trade.

So, we have compared with other resources also, other mineral resources which are in fixed quantity fixed supply. We have also compared with major agriculture products, manufacturing products, but petroleum products constitute a very high amount in world trade.

There are countries which are endowed with petroleum and they are large exporter, main exporters of petroleum products; like the OPEC countries and of course, there are non-OPEC countries like US and Russia. And there are on the other hand countries like India who have to import lot of oil. So, petroleum is no doubt a major traded commodity.

So, when we are engaging into transaction with the rest of the world, domestic currency will not do, therefore we need to understand how exchange rate is determined. Because we, when we are supposed India, we are buying a petroleum from the OPEC countries or other countries like Russia, so we have to pay in terms of dollar. So, how this rupee dollar exchange rate is determined.

And when there is some oil price shock; so, what will happen to the domestic economy for the net importer of oil. Because you have seen that we have devoted many modules in our lecture from the point of view of the petroleum endowed countries; like we have discussed about what will happen to the structural changes in the country when natural resources suddenly discovered.

So, we have discussed the Dutch disease and resource cuts phenomenon in module 7. Then we have discussed the inter temporal pricing and allocation of oil in module 10. And in module 11, we have discussed the economic growth how it can be affected by sudden discovery of natural resource and with respect to uncertain price of oil in future. And also, we have also discussed the importance of oil rent in GDP for the OPEC countries and we have dealt with lot of a country experiences, right.

Now, we have to also see the implication of the major global events in the oil market, how those events affect the net importer of oil. So, with this idea in mind we have designed the last module in our syllabus, but overall, you see as I mentioned in earlier lectures also exchange rate is itself a vast topic. So, you can think that this module is just only an introduction and overview of the fiscal and trade policies, because to do a proper justice to this topic we need a course itself.

So, those who are interested you can go for some advanced courses on international economics or international finance or even open economy macro economy. But unfortunately, we do not have time so what we are doing here? In the previous lectures, we have defined what is exchange rate; we have classified different types of exchange rate, but our focus is on the global oil market.

So, if you remember in the previous lecture, we have seen the impact of oil price shock under different exchange rate regime. So, what happens in the clean float, that if there is oil price shock. So that means, sudden increase in oil price under clean float the currency, the domestic currency will depreciate; there is no intervention by the monetary authority.

Under pegged regime, the reserve of the monetary authority will run down very fast because exchange rate is fixed. And under dirty float or managed float both exchange rate and the reserve can change.

So, exchange rate will depreciate, but if the depreciation is too high the monetary authority may feel to interfere. So, reserve can also change. So, our focus is on the global oil shock, how that affect the domestic economy under different types of exchange rate regime.

And we are discussing this from the point of view of the importing country. Because we have seen that for the importer countries what happened is that if oil price increases and petroleum being inelastic in nature, it is a necessary good, we do not have close substitute till now. So, if oil price increases in the global market due to some war or political turmoil or any other event for the importing country, import bill will increase.

So, by if price increases quantity demanded should fall, but for necessary products quantity demanded falls by a lesser magnitude. Therefore, import bill increases and dollar demand curve shifts to the right. So, we discussed the implication under different exchange rate regime.

But our attention is again on mainly on the Indian economy. So, you may be aware that Indian economy faced a balance of payment crisis in 1991. So, in today’s class we will be discussing briefly about the crisis with a focus on the exchange rate policies, and how the external events in the global oil market might have triggered the crisis.

See, our attempt focus is our objective is not to discuss the balance of payment problem in India. Then, we have to start from the independence period and the planning period, so for that if you are interested you should go for some courses devoted on Indian economics, but we do not have that much of time.

So, that is why we are just focusing our attention on how the events in the global market, oil market might have triggered the balance of payment crisis, and the implication on the exchange rate policies. Because as we know the exchange rate policies means the different types of exchange rate regime can have severe implication on the balance of payment problem of a country. So, we have discussed it, how overvalued pegged e cannot be a sustainable policy.

So, we are discussing now this particular issue with reference to the Indian economy. So, that is what you can; means assume that what we are going to do in today's class. But not to discuss the balance of payment crisis of India and detail of the reform policies because that will take much more time than we have this is already our last module.

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The Crisis of 1991

- By the beginning of 1991 a BOP crisis emerged when India's foreign currency reserves came down to 1.1 billion that could meet only two weeks' import bill.
- India also came closer to defaulting on its international debt commitments.

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So, what we will do we will just give you a brief overview of the balance of payment crisis that India faced and the possible reasons, but not going into the detail, but we will be focusing on the issues in the oil market and the exchange rate policies. How the overvalued pegged e might have been the one of the important reasons behind the crisis that India faced.

So, first of all, we need to know, what is balance of payment. So, it is the record of economic transaction of a country with the rest of the world, ok.

So, we can show it empirical observation that by the beginning of 1991, India's foreign currency reserve came down to a very low of only 1.1 billion dollar and that could meet only 2 weeks of import bill. So, India's foreign currency reserve was so less that it was just sufficient to meet only 2 weeks of import bill. And we say that is a balance of payment crisis.

Means India was not able to afford more than 2 weeks of import spending. And India also came very close to defaulting on its international debt commitments. So, we will be also discussing in the next class how India overcome this crisis.

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Origin of Crisis:

Orthodox view

Large fiscal deficits in the 1980s spilling over into large current account deficits, which were financed by unsustainable foreign borrowing;

Bias against exports resulting from the import substitution strategy;

An overvalued pegged exchange rate regime with exchange control.

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But let us now focus on the reasons behind the crisis, but of course, we will be focusing on the external events like the global oil market shocks and the exchange rate policies. So, in the orthodox view, one of the major reasons of India's crisis or balance of payment crisis is due to the large fiscal deficit during the 1980s which led to large current account deficit.

So, see the government has to spend in lot of welfare projects giving salaries and wages and creating the infrastructure as we discussed, but for financing those expenditure the government also needs income. So, if the expenditure exceeds the income, so we say that

there is a fiscal deficit. And what is the current account deficit or trade deficit is if the value of import exceeds the value of export, so that is the current account deficit or the trade deficit.

So, what happens for India, you see, as we are major importer of oil, so our and as we mentioned already that as oil price increases quantity demanded falls by a smaller means lesser percentage, so import bill increases. So, it is because of import of oil mainly our, we always have a trade deficit even till now also, our value of import exceeds the value of export.

So, and in 1980s, we had large fiscal deficit also and these were financed by unsustainable foreign borrowing, so we had to borrow or take loan from foreign countries. And then, if you are taking loan from foreign countries, so there are often these are conditional and also you have to repay in foreign currency. So, that puts a huge stress on the balance of payment and countries financial position.

Then, second cause of the crisis has been that export promotion was not focused that much. Mainly the policies of India till 1980s may, before mid 1980s at least was on import substitution. So, the idea during the planning period was to substitute import and to make India self-reliant, so we do not have to import the final goods.

But we do not we did not have to expect the infrastructure, even the raw material, the machineries, capital equipments to produce the final good in the manufacturing sector. So, in many cases, we had to import the machinery and raw material, to produce the final goods. So, export promotion was not the focus. And if you do not promote your export; so, as we already discussed in previous lectures. So, export is a major source of most important source you can say of dollar supply. So that means, you were earning less dollar.

On the other hand, you are trying to substitute your import, so that the demand for dollar is also restricted. But see we could not; we were not importing the final goods, but we had to import the raw materials and the machineries. So, for that we had to already spend our less amount of the dollar that we are having.

And you can well imagine that in that case if you are not promoting export, so your earning is less. And to substitute your import products to make India self-reliant, we had

to buy the goods, raw materials and capital inputs so for that the dollar demand was rising. So, you see there was some in-built balance of payment crisis, the current account deficit or the trade deficit was there earlier also.

And finally, the as far as the exchange rate policies are concerned, an overvalued pegged exchange rate was maintained in India with exchange control. So, we have already discussed about overvalued pegged d. So, if the exchange rate is set by the monetary authority below the market clearing level, so that is called overvalued pegged d.

Why it is called overvalued? If you remember we have already discussed in the previous lecture, so it is called overvalued because the monetary authority is deliberately making the exchange rate means the domestic currency stronger. So, if this is the say e0 is the market clearing exchange rate, overvalued pegged d means if you set the currency means set the domestic exchange rate, this is rupee by dollar exchange rate we are plotting over here and the horizontal axis is the amount of dollar.

So, these are the dollar demand and dollar supply curve. So, I am not discussing again the slope we have already discussed, ok. So, you see if the exchange rate is set at a level at e bar. So, this is called overvalued because you are making the domestic currency deliberately stronger. So, what happens? We have already discussed if you make the domestic currency stronger, you are losing competitiveness in the global market. So, your export earning is less.

First of all, you see in the second point we discussed that export promotion was not the focus. And third, in third point we see that this overvalued pegged d also deterred India’s export earnings to grow because India was losing competitiveness in the global market whatever goods and services India was exporting.

And the idea is that if you make the domestic currency stronger so that means, your import bill should fall. But as we also discussed that we were importing most of the goods were inelastic in nature, so import bill was also high and we are earning less. And we also discussed how balance of payment crisis is in built in this overvalued pegged e, because you see to maintain the exchange rate at e bar, we can easily see that at e bar there is excess demand of dollar being created, is not it.

At a lower price we know by law of demand, demand increases by law of supply, supply falls. So, how this excess demand was satisfied? So, we already discussed in the last class the excess demand can be satisfied by running down the reserve of the monetary authority. So, the Central Bank or RBI has to supply more dollar. So, dollar supply curve shifts here.

So that means, you see because of this overvalued pegged d, you are losing your competitiveness, so your export earning and dollar earning is less. And whatever you are earning you have to also, supply from that earning to defend the exchange rate at the overvalued rate e bar. So, it is like a vicious circle you can see it can become.

So, you are running down your dollar supply. So, R delta R becomes negative and e bar is fixed. There is no change in exchange rate, but R is falling ok. So, it is because of maintaining e at e bar you are earning less and whatever you are earning you have to defend you have to use a part of that to defend your exchange rate right. So, it becomes unsustainable.

Now, there can be another way of controlling the exchange rate at e bar that is exchange control, but it is a quantity restriction. So, we will be discussing that in upcoming lectures. So, quantity restriction means if the monetary authority does not allow transaction beyond a particular amount, but that will also not be sustainable. We will discuss that in the subsequent lectures.

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Rakhshit's (2004) view

1. The Gulf War;
2. The legacy of the macroeconomic policy related to financing the fiscal debts and current account deficits;
3. Breakdown of USSR and loss in Rupee Payment Account.

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Now, before going into the detail of the exchange rate policy, let us now stick see how the events in the global oil market might have affected the or triggered the balance of payment crisis in India. Means, the crisis otherwise would have also happened, but due to the events during 1990 and 1991 that happened in the global oil market the crisis might have preponed.

So, according to Professor Mihir Rakshit (2004) there are few points; means external events in the global oil market as well as there was some internal events also which led to the crisis. And this external events in the oil market culminated with the internal factors. The internal factors were there for a long time.

So, see the second point is basically the internal factors with the legacy of the macroeconomic policy related to financing the fiscal debt and current account deficit. So, we have already discussed it the or in orthodox view. So, we had huge amount of current account deficit and fiscal deficit. So, that was not sustainable.

Now, our focus is not on that part. So, we are focused on the external events in the global oil market. So, as far as the global oil market is concerned, if you remember, we have discussed in detail the oil price movement. So, in 1990 and 1991, we had a Gulf War. So, that Gulf War led to increase in price of oil.

Though, we have discussed that it is because of Saudi Arabia's intervention; Saudi Arabia increased the supply so oil price increase was bit less, but till oil price increased. So, that actually caused a burden on India's balance of payment.

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The Events in the Oil Market that Triggered the Crisis: Gulf War

During the war the merchandise and invisible trade balances worsened significantly due to:

i. The skyrocketing oil prices, which has been the most important factor affecting India's import bill;

ii. Decline in the inflow of remittances coming from the Middle-East.

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So, what happened? Due to the Gulf War, you can see there are two channels via which the Indian economy was affected; one on the demand side and one on the supply side. In the demand side, what happened? As oil price suddenly increased in 1990 and 1991; because you see we remember already from the great price collapse period of 1985 and 1986 there was a decline in oil price, we have discussed it. But suddenly due to the Gulf War oil price skyrocketed.

So, and if oil price increases, we have already discussed that foreign net importer like India, import bill will increase and dollar demand curve will shift to the right. So, demand for dollar increased. And that is been one of the most important factors affecting India's import bill.

But there is some supply side impact also. As we know that lot of Indians work in the Middle East countries, and if you remember we have discussed that one of the sources of supply of dollar is the remittances. So, the Indians working abroad they send their income to their families back in India in terms of dollar. So, the families will convert the dollar into rupee.

So, these remittances constitute one of the major sources of supply of dollar. So, during the Gulf War those Indians who were there in the Middle East countries they returned. So, there was a fall in the inflow of remittances coming from the Middle East. So, we can see that Gulf War had both demand side impact by increasing the dollar demand as

well as a supply side impact by lowering the supply of dollar by reducing the inflow of remittances. So, this is how the Gulf War might have affected or triggered the balance of payment crisis in India.

So, this is one event in the oil market which has affected both the demand side and supply side.

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Rakhshit's (2004) view

1. The Gulf War;
2. The legacy of the macroeconomic policy related to financing the fiscal debts and current account deficits;
3. Breakdown of USSR and loss in Rupee Payment Account.

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But there are other events also. So, that was the third point of Mihir Rakshit (2004) view. So, this is the breaking down of USSR. The then Soviet Russia actually broke down in 1991. And what happened; because we know that India had a very good trade relation with Soviet Russia and India used to buy oil and even many other products from Soviet Russia. So, due to the breaking down of USSR also oil price increased.

And again, you see there is a demand side shock arising due to the breaking down of USSR which also increased the oil price. But there was some additional show means burden that was put on India's balance of payment due to the breaking down of USSR. Actually, because India had a very good trade relation with USSR India and the then Soviet Russia had a special agreement which is known as the Rupee Payment Account.

So, in this Rupee Payment Account as per the agreement, India could pay in terms of rupee. Means for other countries when India is importing something India has to pay in terms of dollar. But with Soviet Russia, India could pay in terms of rupee. So that means,

payment to Soviet Russia could be made by the Indian currency, India did not need dollar. But when Soviet Russia broke down, this Rupee Payment Account ceased to exist.

Now, you see we know that in short run our elasticities of demand is very less inelastic. So, we cannot change consumption pattern suddenly. So, suppose India was importing some commodities goods and services from Russia. Lot of Indians also used to go for education in Russia, so if suddenly USSR broke down and the Rupee Payment Accounts ceased to exist. So, India had to import those products from other countries, because in very short run we cannot change the consumption pattern. So, India had to change its import destination.

But in other countries when India was importing India had to pay in terms of dollar, because their rupee was not accepted. So, these also this abolition of the Rupee Payment Account also put additional burden on India’s dollar demand. So, India’s dollar demand again increased.

So, dollar demand increased due to the Gulf War and breaking down of USSR which led to increase in oil price. But in addition to that because of the abolition of the Rupee Payment Account, India had to import the products which India earlier imported from USSR. So, India imported those products from other countries. And for that also the demand for dollar increased, because India could no longer pay in terms of rupee that India was allowed with a trade to Russia.

So, you see how the external events, especially in the global oil market have put in a additional burden on India’s balance of payment both in the demand side and supply side. So, we can identify two events, one is the Gulf War and the breaking down of USSR, ok.

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Overvalued Pegged Exchange Rate

- Resulting excess demand is usually met by the central bank in two ways:

I. By selling foreign currencies from the reserves.

- In general, the central bank is pre-committed to maintain the exchange rate and hence has to take suitable policies following any external shock such as oil price shock, trade liberalization.
- Accordingly, now only reserves change.

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Now, coming back to the exchange rate policies that we are discussing in this module. So, we have already discussed that if the exchange rate is fixed at a level below the market clearing level say eM and you fix the exchange rate at e0. So, we know that the way that will create; e 0 will create excess demand for the foreign currency that is dollar. So, that can be made by running down the reserves. So, del R is negative.

So, you see initial means the private supply of dollar is given by this dollar supply curve. And in addition to the private supply now the Central Bank is also that is RBI for India is also supplying dollar so this is the new supply curve of dollar. So, you see the way of defending the exchange rate at e0 is to running down the reserve. Because in pegged bridge in the Central Bank is pre-committed to maintain the exchange rate and has to take suitable policies following any external shock.

And you remember in the previous lecture, we discussed that with oil price shock because we have already seen the events in the global oil market which led to increase in the dollar demand due to the Gulf War and the breaking down of USSR. So, if you see that if you bring the oil market shock so, what will happen? Your demand for dollar shifts to the right. So, this is the new demand for dollar curve.

So, then you see to maintain the exchange rate at e0 you have to run down your reserve faster, because now the dollar supply should increase up to this point. So, you are running down your reserve faster and faster. So, you can see that this is not sustainable

because here e is fixed, only now reserve will change. And because of the rupee being deliberately made stronger India was also losing competitiveness and was not able to earn enough foreign exchange.

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Overvalued Pegged Exchange Rate

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- In general, the central bank is pre-committed to maintain the exchange rate and hence has to take suitable policies following any external shock such as oil price shock, trade liberalization.
- Accordingly, now only reserves change.

$S
$S+ $CB
e_M
e_0
$d
ΔR<0

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Now, the other way of sustaining the exchange rate at e0 is exchange control as I mentioned in this lecture. So, let us discuss the implication of this exchange control. So, exchange control means when the monetary authority does not allow transaction beyond a particular amount. So, by rationing the demand for foreign currency through exchange control and import license.

So, if you suppose if you do not allow transaction beyond the amount R. So, what will happen? You are actually curtailing the demand. This side this demand curve is no longer relevant because you do not allow the transaction beyond this amount R, ok. So, what you see this. So, now, the demand curve and the supply curve intersect and the exchange rate is at e0.

But you are making transaction beyond R illegal, but that does not mean that you are wiping out the demand right because demand is there. When exchange rate is at e0, what is the amount demanded? This is the demand for the dollar and this is the amount that R is the amount which is allowed to be traded. So that means, you see the excess demand actually is there.

See, if the excess demand proceeds, what will happen? The consumers mean the buyers, the potential buyer of dollar means we know who need dollar; so if you want to go abroad, so for travel tourism or say medical purpose or education. So, if you need dollar, you would be looking for illegal sources, right.

If you remember in our, the very initial module when we discuss some basic economics issues, we devoted one module in our discussing public policy and there we discussed quantity restriction. And we saw that any type of quantity restriction finally, leads to black market.

So, same happened in Indian economy with respect to the foreign exchange. So, in the foreign exchange market, this exchange control, this binding exchange control led to a black market of foreign exchange which was known as the hawala market. Because what happens you see in the black market if the consumers want to buy, those who want dollar they will look for illegal sources.

So, they will look for the they will try to buy the dollar in the black market because there is unsatisfied buyers. And in the black market of course, the price will be high because those who are selling in the black market, they need a premium because in the black market means it is illegal. So, if you are caught while you are transacting, then you will be punished. So, for that those who are selling in the black market they get a higher return that is the black-market premium.

So, you see now the major source of dollar supply is from the exporters. So, if the exporters know that by selling their, by converting their dollar into rupee if they get a higher return, so the exporters will have incentive, they will be tempted to convert their dollar into rupee into the black market.

So, what will happen then? Then, less amount is the converted to RBI or the RBI authorized agencies, right. So that means, what? That means, the reserve with the Central Bank will further fall. Because a part of the export earning was going as a leakage into the black market.

So, first of all you see because of this overvalued pegged e0, India was earning less dollar, because this overvalued pegged d was not making Indian goods competitive in the world. So, export promotion was also not the policy. So, because of this overvalued

pegged d, you are earning less and then a part you are using for defending this exchange rate at e0 as you can see the dollar supply runs down.

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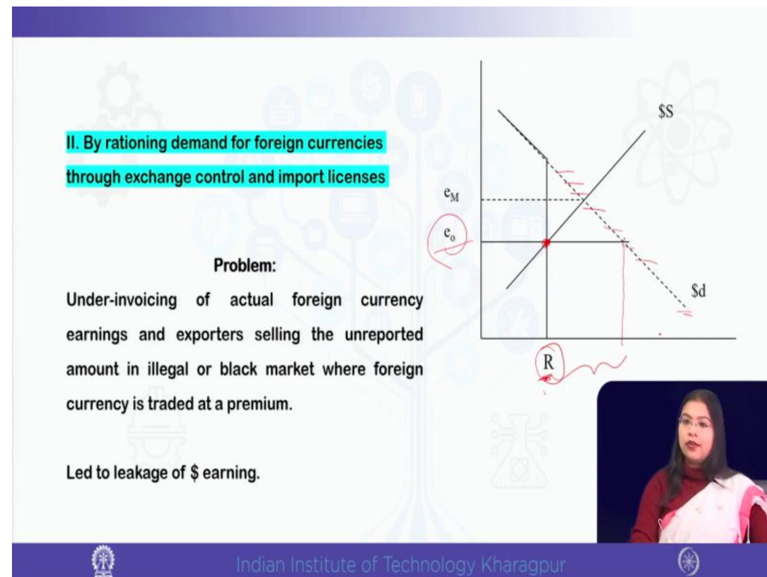

And if you are also putting exchange control, let us say physical restriction on transaction on the dollar amount, so you see that will also further lead to leakage of your very precious exchange means foreign currency into the black market. So, under invoice so, so this exchange control led to under-invoicing of actual foreign currency earning. Under-invoicing means the exporters were under reporting.

Suppose, if they were earning 100 units of dollar, they were reporting less than 100 unit of dollar to RBI and this a gap, this extra amount they were actually selling in the black market to get a higher return. So, the exporters were selling the unreported amount in the illegal or black market where foreign currency is traded at a premium.

So, you see you are earning less and whatever you are earning, one part is going to defend your exchange rate at e0 or e bar the overvalued rate, and another part was also going as a leakage to the black market. So that means, what? That means, the net amount remaining with the RBI or monetary authorities very less.

So, this is the problem that overvalued pegged d regime has. So, as we discussed in the previous lecture that, the policies also to maintain the exchange rate at overvalued rate these are not sustainable. So, both exchange control as well as running down of a reserve

from the reserve accumulation of the Central Bank both are not sustainable in the long run.

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Reasons behind Existence of Black Market

i. Due to over-valued pegged exchange rate regime;

ii. Exchange control.

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So, we can see the reasons behind existence of black market due to the overvalued pegged d there is excess demand. And then you are putting a physical restriction which induces the buyers; unsatisfied buyers to look for illegal sources, and the sailors are also tempted to convert their currency into the black market in order to get a higher return.

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Speculative Attack and BOP Crisis under Pegged Regime

- With persistent trade deficit and consequent excess demand for foreign currencies, the pegged regime with exchange control becomes unsustainable beyond a certain point as reserves run down to zero.
- Continuous *leakage* of foreign currency earnings to the black market add to the worsening BOP situation.

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So, that means, both these policies are not sustainable. So, what is the solution to the Central Bank? So, with persistent trade deficit and consequent excess demand for foreign currency, the pegged regime with exchange control becomes unsustainable in the long run, because at some point of time reserve almost can run down to 0.

And that is what precisely happened in India as we discussed in 1991; in July 1991, India had the dollar reserve was sufficient to meet only 2 weeks of import bill. And there will be continuous leakage of foreign currency earning to the black market and which will also deteriorate the balance of payment situation.

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At some point of time, we need interventions through

- either nominal devaluation of domestic currency;
- or foreign institutional borrowing and aid;
- or switch to clean/dirty float;

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So, at some point of time, we must need intervention through either devaluing the domestic currency, because you are making a rupee or the domestic currency deliberately stronger. So that means, you have to now abandon this policy and you have to make a rupee weaker. So, that India earns competitiveness means the country which is following this policy should earn competitiveness.

Or you have to buy means you have to take loan or any aid from foreign countries. Or the third option is switching to a clean float or dirty float. Now, you see this first and third kind; so that means, the exchange rate policies the nominal devaluation or switching to dirty float or clean float, that also have an associated problem which is called the problem of speculative attack.

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I think, we discussed upon the concept of speculative attack in the previous class.

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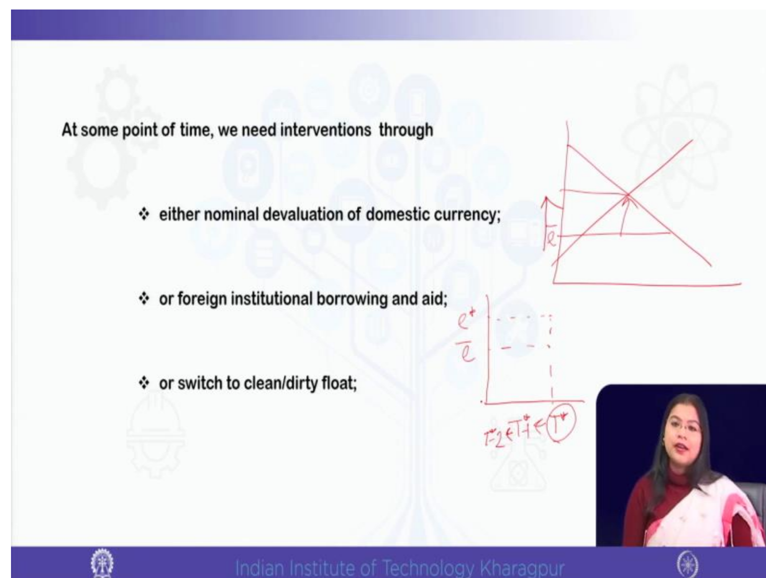

So, what happens? In these two types of exchange rate policies, the domestic currency will become weaker, right, when you switch to clean float. So, clean float means it is a market determined in dirty float also exchange rate is market determined, but the Central Bank can interfere.

So, if you now if initially your exchange rate was were valued at e bar. So now, if you abandon that policy, so you allow the exchange rate to be market determined. So

obviously, rupee will depreciate it will reach towards this level where the market clears right. And devaluation also means it is policy induced. See, what is the difference between depreciation and devaluation?

So, the devaluation is when it is policy induced and depreciation is when the domestic currency becomes weaker due to market forces, ok So, you see both these policies this either nominal devaluation or switching to clean float means the investors think that there will be capital losses on their domestic asset holdings.

So, as we discussed in the last class, they will try to convert their rupee into dollar, so that means, the dollar demand will increase. So, because everyone tries to sell off their domestic currency holding and convert the domestic currency into dollar. So, this actually prepones the crisis because dollar demand increases faster.

So, you see you were trying to correct the balance of payment problem, but when you were trying to do. So, by abandoning your overvalued pegged e policy then that is actually pre-poning the crisis because the investors expect capital losses, because you see expectation plays a very major role in economics.

So, as we discussed in the last class also, if you see this is the speculative attack you can see that if; suppose the investors assume that at period T star for example, the Central Bank wants to devalue the currency. So, suppose this is initially the overvalued pegged T at e bar. So, if the investor expect that the Central Bank will devalue the domestic currency at our T star time T star, so now domestic currency becomes a e star.

So, they we will try to convert the rupee into dollar at period T star, so they know that periods T star rupee will be weaker. So, they will try to do; so, at period T star minus 1 they will try to do, so at period T star minus 2. And in this way, you see if you regress backward, so you finally come to period 0.

So that means, the reserve will run down not at period T star, but at period 0 only, the initial period. So, this is called speculative attack which actually prepones the crisis. So, that is what happened in Indian economy also.

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Conclusion

- We discussed the reasons behind the BOP crisis in India in 1991, in particular the role of over-valued pegged exchange rate which led to faster decline of forex reserve along with black market and leakage of foreign exchange.
- Further we found that some external events of the global oil market triggered the BoP crisis in India.

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So, you see in today's class what we discussed; we discussed the balance of payment crisis that Indian economy faced in 1991. So, we discussed the orthodox, following the orthodox view we discussed the internal reasons like the macroeconomic policies, the large fiscal deficit current account deficit.

However, our focus was on the external events; how the events or in the global oil market might have triggered the balance of payment crisis. So, we saw that the events in the oil market have affected the India's dollar demand as well as dollar supply in 1991. So, we pointed out two events mainly, the Gulf War and the breaking down of USSR.

So, due to the Gulf War oil price increased which increased India's dollar demand because India is a net importer of oil and oil being inelastic in nature if oil price increases import bill increases dollar demand increases. And also, from the supply side, we saw that Gulf War also led to decline in the inflow of remittances from the Middle East countries. So, the Gulf War had both supply side and demand side impact on the foreign exchange foreign currency market in India.

And the other event in the oil market was the breaking down of USSR which also increased the oil price and put a burden on India's dollar demand. But there was additional impact because of the abolishment of the Rupee Payment Account. Because India had a Rupee Payment Account with Russia via which India could pay in terms of rupee from a imports from Russia.

But when USSR the then Soviet Russia broke down, this Rupee Payment Accounts ceased to exist. So, India had to import those products same products from other countries where India had to pay in terms of dollar. So, that also put additional burden on India's dollar demand. So, we discussed these events in the global oil market how though they actually have triggered the crisis.

And finally, we discussed the extended policies, because these crises were, I mean this crisis this event in the oil market affected the Indian economy more because of the overvalued pegged d. Had India following the managed float or dirty float or clean float then we know that the impact would not have been like this.

Because those policies, those systems do not have inbuilt balance of payment crisis, because you may think that then now also this global events or oil price shock can affect Indian economy same way. No, because we have changed, we have moved away from the pegged e, because this overvalued pegged d has an inbuilt balance of payment crisis as we discussed.

So, we saw that the policies that the Central Bank has to undertake to maintain the overvalued pegged d cannot be sustained in the long run. Both the policies selling foreign currency reserve as well as the exchange control. And exchange control has additional problem of creation of black market and leakage of foreign exchange reserve.

So, we saw that these policies were not effective. So, India had to abandon and the India had to take measures in terms of devaluation as well as switching to clean float or dirty float India actually switch to dirty float.

But we saw that also has the possibility of leading to speculative atom, because the speculators those who trade in foreign assets, they expect capital losses on their domestic currency. So, they try to convert the rupee into dollar so that actually prepones the crisis. So, we saw that the policies, the exchange rate policies were not sustainable and because of this exchange rate policy the shocks in the global oil market have actually affected the Indian economy severely in 1991.

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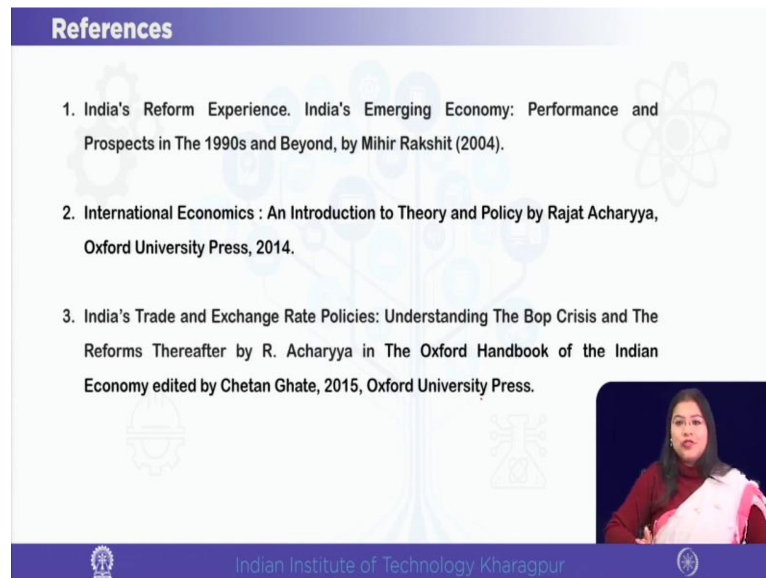

This is a very vast area you see. We are just touching upon you can see that you are just getting an overview of this means balance of payment crisis and the external events. Because if you have to do a justice, proper justice to this module, you have to go into deeper. So, you need to know the intricacies of exchange rate policies as well as you have to know about the background of the Indian economy.

But we do not have time and that is also not our purpose, because our purpose is to stick to the global oil market. So, how the global oil markets, how the external events can affect the domestic economy, so that is our purpose. So, for the exchange rate part as I mentioned you can follow any standard international economics related book, like the book of K. Franklin Jones or the book of Krugman & Obstfeld or the book of Salva. So, there are so many books.

And for our purpose we have we are referring to the book of Professor Mihir Rakshit, 2004. And we have also followed another book on International Economics by R. Acharyya, because that book has discussion on the Indian context. Then, we have also followed another book by Chetan Ghate on Indian Economy that is 2015 book. So, these are the materials or resources that we have followed in today's lecture.

So, thank you very much. See you in the next class.