International Economics

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Lecture No. #22

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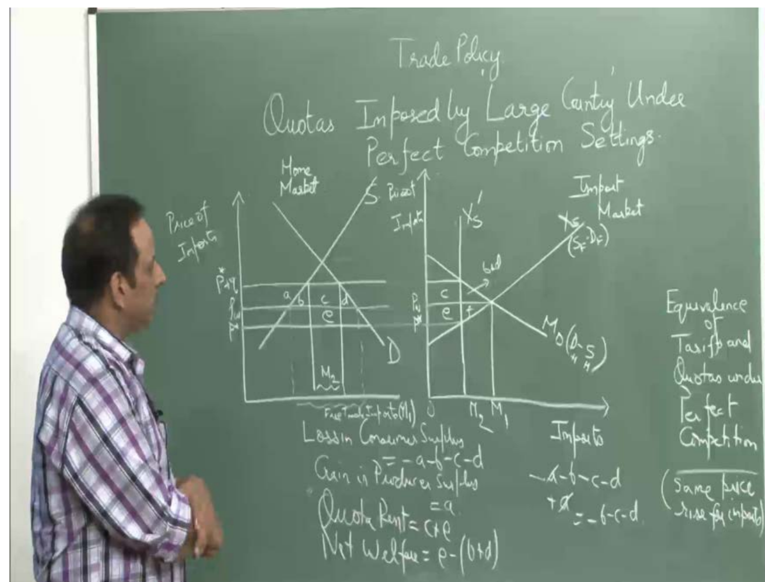

Good afternoon, we are going to continue with a discussion on trade policy. This is a depiction of what happens, if quotas are imposed by a large country under perfect competition settings. So, quotas are like physical restrictions on goods coming in a country, the first thing that it does is that when you restrict the goods coming in it increases the price of the imported good. Now, yesterday we had discussed the case where quotas were imposed by a small country.

So, three differences between that diagram, and this diagram is that the exports supply curve that this country faces is upwards slope. So, again the world prices are the one where export supply is equal to the import demand, which is equivalent to saying that whenever world demand is equal to world supply, that is the equilibrium prices.

So, these are the world prices. So, the free trade imports are M 1 and… So, this country imposes, quotas it say that now we will restrict our imports earlier M 1 imports were

coming in now, only M 2 are going to come in this country. It is like saying we had say thousand units of shirts coming in now we decide to import only 500 units, 500 units of a particular product. So, when you restrict such imports then you have to allocate the. Import of this M 2 among your producers this allocation is done through the licenses. So, not every producer is given a license certain producers are given a license.

So, the person's the producers, or anyone who receives this license can now import the product at P W and sell it at P star plus Q. But there is another thing which happens here is that when you restrict these imports. The foreign supplier would see it as some sort of a tax which is imposed. So, he would try to reduce the price of his exports. As a result look at P star P star is the price of exports of the exporter, or the price of the importer which is P star. So, P star plus Q this is the price rise.

And so, the loss in consumer surplus is minus a minus b minus c minus d. The gain and producer surplus because there is a rise of prices of the imported good it is a. The quota rent the difference between P star plus Q and P star is c plus e. This is the quota rent which accrues, to the producers who who get the license. So, the net welfare works out to be same as, the case when a large country imposed tariffs that e minus b plus d.

Now, there are four possibilities one this that the net welfare is e minus b plus d, but there is always a possibility that this quota rents get lost in corruption in rent seeking. So, so you left with only. You left with minus b minus d. So, if quota rents get lost in corruption, you would have minus a minus b minus c minus d plus a. So, it becomes (No audio from 05:08 to 05:19) minus b minus c minus d.

But, then when I say they get lost in corruption it is not that the, government is not aware of all these things because they are the once who are giving the license. So, they are very well aware that when you start giving license there will be people who will approach them that, you need to favor a b c d e. So, then they design a rule they the rule goes like this. That your production would depend on your last year's production.

So, if you produce more than what you did last time last year then we are going to favor you we are going to give the license. Now what is possible when I say in rent seeking is that in the hope of increasing the production they may not take care of the quality of the product. So, just to show or put it in the books they can they can, show that in the books they can show that they have increase the production or they can increase the production.

But, they can compromise on quality. Now all these can lead to rent seeking or corruption to an extent which will be equal to c plus e. So, when I say gets lost in corruption it is just not that its coming in the air and it gets lost. There is a process and through that process which is inefficiency inefficiency creeps in and therefore, you can lose this c plus e. So, then what is left is minus b minus c minus d. So, here one can say quotas are more pernicious than tariffs.

Then the third case is when the government auctions the license. So, it is a it is a transparent process of giving the license, but when you do auction you generate some money for your own self. So, when government does auction it generate some fees, and that fees can be equal to the quota rents. So, instead of this quota rents going to the manufactures, manufacturers the quota rent now comes in the pocket of the government in the form of auction revenue. So, then auction revenue is c plus e. Again the net welfare works out to be e minus b plus d will ambiguous like in the tariffs case because e is the terms of trade gain b and d are the distortions which are created in the economy.

The fourth case is the case of v e r s voluntary export restraints where the quota rents accrued to the foreign producers. The home government decides to give, this quota license to the foreign governments. So, the quota rents do not accrued do not accrued to the home country it accrues to the foreign country. So, again this is lost. So, your net welfare works out to be minus b minus c minus d. These are the four possibilities that you can have, when quotas are imposed by the large country. So, under the w t origin v r is not allowed at all. So, w t was pretty clear on, that we should not have v e r s and also quotas now they are increasingly saying that quotas have to be replaced by tariffs.

This one thing which, one can always show the equivalence of tariffs and quotas, and that to under perfect competition. You can always find one quota such that the price rise is the same as, the case when you impose tariffs. For the same level of imports. So, quotas and tariffs are equivalent in that sense. Because quotas also restrict impose imports tariffs also restrict imports. So, you can always find the quota which is equivalent to tariff which restricts, the imports in the same manners same level, but and the price rise is also the same. Now this can, happen under perfect competition.

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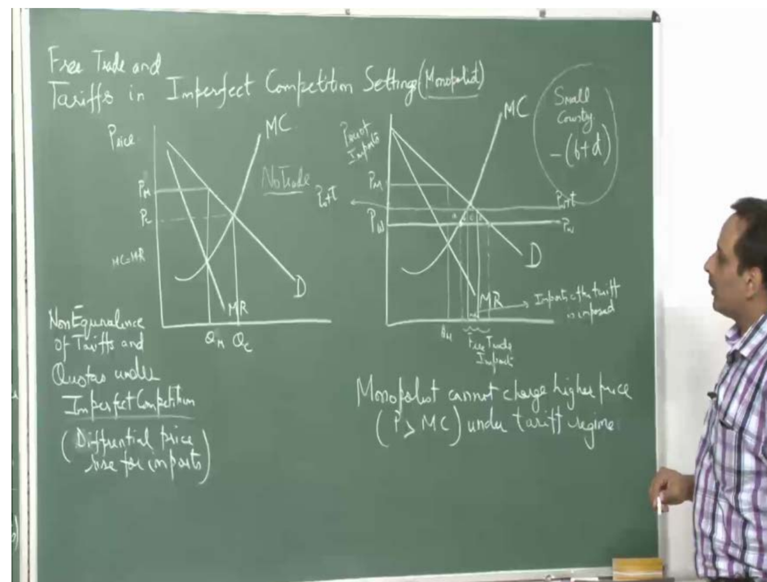

But we will see that under imperfect competition, is nonequivalence of tariffs and quotas. Because if you are a monopolist, and the quotas imposed, then you can exercise your option of charging higher prices; higher prices than the marginally cost. So, we will come back to this point, but this is the theorem which is proved in international economics one, equivalence of tariffs and quotas under perfect competition, and nonequivalence of tariffs and quotas under imperfect competition.

So, let us now move on to the situation of free trade and what happens if tariffs are imposed in imperfect competitions settings. Now the difference is earlier there were large number of producers selling homogenous product in your country. And you were importing the same product from outside that was the situation of, the perfect competition setting. Now the difference is that there is only single producer of that particular product in there in the home country and then there are so many suppliers of the same product, but they are all outside your country.

So, a monopolist in the home country, and then a set of producers outside the country. So, think of a situation where there is not trade. So, you know how prices will be determined by the monopolist remember the monopolist his demand curve is downward sloping. Is not like a perfect commutative seller whose demand curve was horizontal it was horizontal because he was a price taker.

He was selling homogenous product, if he charged a price greater than P W no one will buy it from. But, situation is different here he is the only one whose producing. So, he faces a downward sloping demand curve and then you have an M R curve you have an upward sloping M C curve where profit maximizing condition are whenever M C is equal to M R. This is the profit maximizing condition.

So, he would produce Q m and sell at P M. While a perfect competitive seller would sell it, at a price where the demand equals to supply and. So, he would sell Q c at a price which is P C equal to the marginal cost. This is a situation of no trade now see what happens if there is a monopolist, and he is trying to operate under conditions of free trade. So, let us bring in trade now.

So, there is trade and it is a small country. So, the export supply curve that it faces is perfectly horizontal, and that becomes his demand curve. So, this is the demand curve now point is whether monopolist can charge a price which is P M and sell Q m. This is the world prices, this is the world prices this is the free trade imports, now point is whether he can charge a price which is P M and sell Q M quantity of product in the market. Remember he is the only person to sell it, but then the prices which exist internationally is P W.

So, there are people from outside who are selling the same product at a price which P W. He is the only producer now, think intuitively that can he charge a price which is higher than P W, will anyone buy his product if consumers can get the same product at a price which is P W no. So, the monopolist under free trade has to act as a perfect competitive seller.

He cannot charge a price which is greater than P W. So, then under free trade he would he would produce this much wherever M C cuts M R. So, this is supply this is demand this is the free trade imports. What happens if the tariffs are imposed can he then charge, a price which is P M on the even if the tariffs are impose the prices can go till this level. Where M C cuts demand here, why cannot it go beyond this because this is the point where imports will be entirely prohibited zero. So, even if tariffs are imposed, the prices that will prevail will be this much. Still he cannot charge a price which is P M. So, what follows from this is that if you do reforms internationally, and even if you have imperfect competition or your domestic market.

The theoretically the monopolist or the oligopolistic, or the monopolistic competitors have to act like perfect competitive producers. Does it really happen that is an empirical question. So, you can see from ninety one when we initiated our economic reforms.

We had monopolist theoretically, they should have acted like a perfect competitive sellers. Whether actually that will happen or not it is an empirical question.

So, you may if you have to do an econometric work then you have to get some measure of trade liberalization, you have to then relate it to something. Which probably can capture the monopolistic competition in the economy. Is there some measure that you remember which can capture the monopolistic competition. The Lerner's index. So, people tend to relate Lerner index with trade liberalization. And then they see whether there is any relation with them, but the idea of economic reforms is that even if you have free if you have free trade then it tends to reduce the, measure of imperfection in the in the economy.

So, I am not going into the question when the tariffs gets raised what is the loss in consumer surplus again minus a minus b minus c minus d. Again in producer surplus a government revenue c. So, the net welfare of a smaller of a small country under imperfect competition again works out to be minus b plus d. How remember this a b c d. So, loss in consumer surplus a b c d because this is the P w plus t. So, loss in consumer surplus minus a minus b minus c minus d gains in producer surplus a government revenue c. So, the net welfare, again as in the case of. When we had the perfect competition settings, the loss in welfare is minus b plus d.

Now, when I say equivalence of tariffs and quotas under perfect competition. If I have to bring in quotas here, I can always find a quota which restricts our imports to this much. The same level of imports which are there after tariff is imposed, and you can see that it will lead to the same increase in prices. So, equivalence is in terms of the increase in prices. Now when quotas and tariffs are imposed under imperfect competition. Now sees what happens. So, when I when I described the equivalence of tariffs and quotas you all have to see it under perfect competition, right so. So, now, let me bring in nonequivalence of tariffs and quotas under imperfect competition.

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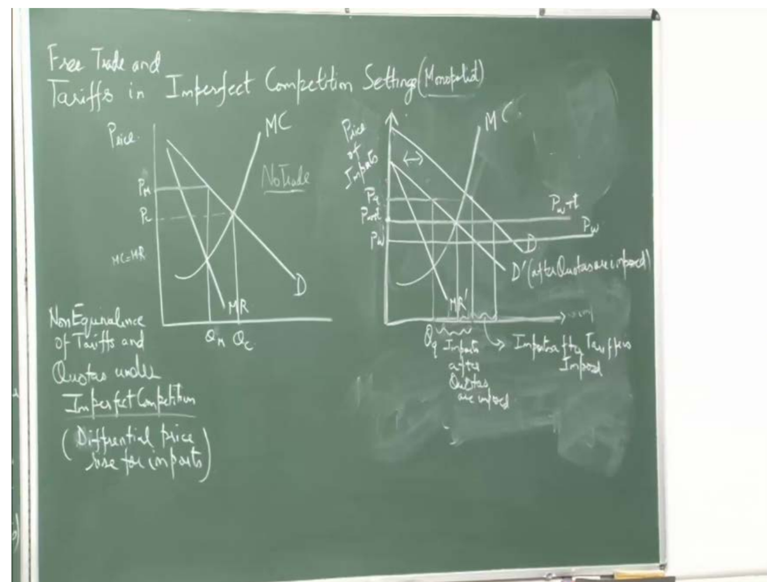

So, this diagram, will see a little change

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ok

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Well this is a So, now, I am I am trying to prove I am trying to prove the nonequivalence of tariffs and quotas under imperfect competition. Now why there is nonequivalence of tariffs and quotas under imperfect competition is. That if you impose quotas under imperfect competition then the producer can charge a price which is greater than marginal cost. Why because if, some quotas are imposed then once the quotas are imposed then the imports are restricted, you can as a producer you can charge a higher price than the marginal cost. Reason being that the consumer can now not undercut this producer he because the necessary imports have already taken place now he cannot, import things at a lower price because the quotas already fulfilled imports have already come in.

So, then the monopolist can charge a higher price than the marginal cost now this is depicted here in this diagram you had this demand curve this is the local demand curve. Now once quotas are imposed, and your imports get restricted then the demand curve after quotas are imposed is this. So, this country imposes quotas, and you have a

monopolist, it restrict imports. So, now, the demand curve that he faces is a new one which is d dash which is after quotas are imposed with this d dash this is the M R curve this is the M C curve.

So, then M C cuts M R here and the price that he can charge is P Q. Now the imports the imports after quotas are the difference between this and this. So, you can you can see this is the imports after quotas are imposed. Now the same level of imports you can have when tariffs are imposed, if tariffs are imposed the price rises from P w to say P w plus t and from here you, can see that M C cuts this average revenue curve here.

So, this is the imports, but the price and this imports are equal to this imports, but the price rise in case when the tariffs are imposed is P W plus t, but when quotas are imposed it is P Q much higher than when tariffs are imposed. So, for the same level of imports, a country charges higher prices when quotas are imposed.

Then a case when tariffs are imposed and this is happening because he can charge a price which is P Q because the quotas have already been done with. Right now he faces a new demand curve now no consumer can import things at a lower price than this. Because quotas have already come in imports have already come in imports have already have been restrict right. So, this shows the nonequivalence of tariffs and quota under imperfect competition. You can see if this was the world prices, then your free imports would have been M C cuts M R here this is this. So, this would have been your free imports. But when you start restricting imports it can be done through tariffs it can be done through quotas.

So, you can restrict imports to the same level say this is this is m two, but for the same m two there will be a higher price rise when quotas are imposed, and there will be a lower price rise when tariffs are imposed. So, quotas are more pernicious than tariffs under imperfect competition settings. So, under the w t o quotas are to be abolished by each country and converted into tariffs.

How do you calculate quota equivalent tariffs, you can always workout this c plus e that which is the quota rent in proportion to the total value of the imports. That will give you one indicator of the tariff equivalent to quotas. So, c plus e is quota rent you can always find this in proportion to the value of imports. So, you can always find tariff equivalent that will be a equivalent c plus e divided by m two will be the proportion that will be the

tariffs. That will be the tariff equivalent to the quotas. So, under perfect competition you can see that, you can restrict imports to m two, but the price rise will be the same.

Whether you impose quotas or tariffs you can always impose a quota where the price rise for the same level of imports will be the same. But under imperfect competition settings a monopolist, can charge a higher price because once he knows that the imports have come in through the quotas then he can charge a higher price because no consumer can undercut him because the imports have already taken place. So, this shows the nonequivalence of tariffs and quotas under imperfect competition.

Now, this diagram little requires little bit of attention, you need to spend some time looking at the diagram. So, I have put all this in this handout from feenstra both fenestrate and fenestrate and Taylor. And if you can look at the, if you can look at figure nine point four figure nine point four which is page three twenty. This is the effect of quota with home monopoly. So, under free trade the home monopolist produces at point b and charges the world price of P w. With the tariff of t the monopolist produces at point c and charges the price P w plus t.

So, please look at this is the world prices. So, the free trades imports are this much right now tariffs are imposed. So, the price go up the new imports are this much, we are going to see the nonequivalence of tariffs and quotas. So, we restrict imports to the same level to the same level, but for the same level of imports monopolist charges higher price while. Under tariffs the price rise would be less.

So, the monopolist would love a situation where you have imperfect competition. And you find that the government governments impose quotas. So, look at when the u s wants to impose quotas on the cheese production. Now if there are very few sellers of cheese in u s and if government goes ahead and does, imposes quotas he would like to have it because the he can charge a higher price. Much greater than the case when the government imposes tariffs.

So, he would lobby to have quotas under a regime when you have imperfect competition. So, under the w t o quotas are to be abolished v e r s have to be abolished because they are more pernicious. So, in the exam I can ask you a question why are quotas more pernicious than tariffs. So, you have to discuss all the four cases and highlight two cases here one on corruption. The other on v e r s and then you have to discuss this case that

under imperfect settings quotas leads to higher prices because there is nonequivalence of tariffs and quotas under imperfect competition.

Quickly on export subsidies, because we are going to have a break after this export subsidies remember if one country imposes export subsidies then your terms of trade fall. And your there are distortions which are created in the economy. So, it is bad for you it is bad for the country. Terms of trade goes down and there are artificial distortions which are created in the economy.

Why because remember when you give export subsidies the price that the exporter receives is P w the world price plus rupees s for each unit exporter. I am an exporter I would love to receive P w plus s now there are other producers also, who are selling the same product in domestically. Now if the price P w plus s is what the exporters will, are getting every local producer would also like to step in and charge the same price.

What happens, why because if they charge a lower price then there is a possibility see the difficulty. Remember it is a small country setting. So, he can he can supply as much of exports, and if a exporter is getting P w plus s he will not fall behind He would also charge a price which is P w plus s. And then what I said yesterday is that export subsidies whenever they are, imposed at the same time countries imposes tariffs on the products which they are exporting.

Because when tariffs are imposed on a product which is been exported the domestic price goes up. Why I am saying is because the consumers, can always say that the exporters are getting P w plus s, and if the local price is lower than the P w plus s they can always import the thing at a lower price.

So, the governments are aware of this see if you artificially raise the price of an export good locally if the prices are below P w plus s because that is possible local producers may not like to have that much of price. But the government ensures that the local price of the export good also goes up to P w plus s and therefore, they impose tariffs. On the same product on which they are exporting.

So, the local prices also jumps up to P w plus s, now internationally what happens is as soon as I start getting higher prices I will step up my production. So, if you see the world markets the export supply curve shifts to the right. When the export supply curve shifts

to the right the, world prices go down and the world prices are nothing, but the terms of trade price of exports by price of imports.

So, exports subsidies what they do is your terms of trade fall. Second because you are artificially raising the prices it create distortions, production and consumption distortions. So, if you workout the net welfare of this country it is all negative because the terms of trade fall and then there are distortions which are created in the economy. What about foreigners, if there is a terms of trade loss for this country there is a terms of trade gain for that country.

But then not all of the loss in terms of trade is passed on to the foreigners. As a result the world welfare, you will see it goes down because this there are distortions which are created in the importing country as well. So, export subsidies tend to reduce net welfare of the entire world.

So, under the w t o by 2013 all export subsidies specially relating to the agricultural sector has to be dismantled. That is one gain that we have we have achieved we means the developing countries have achieved under the under the w t o umbrella. That the agricultural export subsidies need to be dismantled and by next year you will see all agricultural export subsidies been dismantled specially by the developed world. Remember the developed world they give lot of agricultural subsidies, in what form one was export subsidies another is production subsides.

But agricultural export subsidies are more pernicious theoretically. So, they have to be dismantled. So, under the w t o both countries have decided to dismantle. There are certain countries, which are against this type of policy because what will happen is the prices that you get the prices that you receive, for your export good domestically it will come down. So, there are some countries which are against this, but overall you see a situation where next year the agricultural export subsidies will be dismantled.

So, there are three things which have been abolished v e r s, quotas and export subsidies. Why I am saying this, because it looks as if from outside that w t o comes out with a rule saying this have to be dismantled, this has to be put in, this has to be put out, whatever they say there is a theoretical reason behind it right. So, so so when we when we come next time, we going to discuss the case of export subsidies, what happens if export

subsidies are imposed by the small country, and by the large country. Thank you so much.