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Invited Speech II

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"Fighting cartels: economic analysis and the European Union Experience"

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1. Invited Speech by Dr. Massimo Motta[1]

(Introduction)

Good afternoon ladies and gentlemen. First of all let me say that it is a great pleasure and a great honor to be here, and I think it's really an exciting time to be here in Japan for a scholar of competition policy because of the recent changes.

What I'm going to do today is to speak about the economic analysis of anti-cartel laws and to briefly outline the European Union experience. And as an outline of the talk, what I am going to do is, first of all, to talk about economic analysis and in particular, what is collusion, and I will make distinction, that I will argue, its uses for between tacit collusion and explicit collusion.

I will then briefly talk about which practices can actually help the firms to sustain collusion, and drawing on this understanding of the economics of cartels. I will suggest some policy implications and I will focus in particular on the Standards of Proof to find infringement of competition law and on the enforcement issues. So this would be the first part of the talk. In the second part, I will talk about the experience in the European Union and I will briefly mention the legal and institutional framework since perhaps many of you will not be familiar with the legal and institutional framework in the European Union. I will mention a couple of cases, which are particularly interesting in my opinion, which have been dealt with by the European Commission and by the European Community Courts. And I will give a final judgment for what is concerning the divergence between economic thinking and the cartel policy in the EU.

(The economics of collusion: What is collusion?)

Let me start with the first part of the talk, which is about the economics of collusion. Well, first of all, all of antitrust laws, at least as we know then, prohibit agreements, which are aimed at fixing prices, sharing markets et cetera, i.e. what we know as cartels.

So what is the rationale for that? The rationale is that the agreements of these types among firms, which are competing, allow such firms to exercise market power that they would not otherwise have. So, which means that

[1] All of Dr. Motta's parts in this transcript are as the recording is. The CPRC has got his permission to put the transcript on the website as it is.

prices will be higher than they should be and which implies a loss for consumers and for society as a whole. This is, so called, the locative inefficiency effects. But as the Chairman of the FTC pointed out this morning, there is also another effect, which is that very often what happens is that collusion and cartels are obstacles to economic progress. If firms are not competing with each other, what happens is that they are not under pressure to innovate and therefore, they will slow down the pace of innovation and the pace of growth in the economy. There is more and more research, empirical research in economics which shows that competition is good for growth and for innovation and for investments.

So, everybody agrees that cartels are a bad thing, but it is one thing to say that cartels are bad and it's one other thing to identify where there is a cartel because in some cases it is extremely easy. You'll see that firms have talk to each other. They have discussed prices. They have met. They have agreed about prices and so you can be sure that there has been a cartel. Then there has been an infringement of the law.

But there are other cases, which are more subtle, and what I'm going to do today is also to try and give my own opinion about what should be done in order to prove collusion and what can be done in order to prevent collusion.

I think that it is extremely important to understand what is collusion in economic terms, to really understand what is the phenomenon of collusion, to understand what are the environments and the factors which help firms to sustain collusion. Because only by understanding how this phenomenon works can we do something about it, and we can do something to deter collusion or to fight it.

(The economics of collusion : Tacit and explicit collusion)

So I will now talk about two main ingredients of collusion, two main cases for collusion. There are two important distinctions to be made between the enforcement and the coordination effects within collusion. But now when I talk about enforcement I do not talk about enforcement from the point of view of an antitrust agency but I mean enforcement by the firms themselves. So what are the circumstances in which the firms can enforce, that is, they can sustain collusion. So, first of all as I said, how can collusion be sustained or enforcement?

Collusion, first of all, in economics refers to a situation where the firms set prices which are above some competitive benchmark, which can be defined in different ways or, if you prefer, collusion is about a situation in which prices are close enough to monopoly prices or joint profit maximization prices.

And so this is an important clarification that they have to make. For economists collusion is not about formal agreements, but a more general phenomenon. And it is defined as an outcome. It's defined as prices which are high enough. So for economists, somehow confusingly if you want,

collusion is not necessarily a synonym of unlawful cartel. In other words, what I'm going to say is that collusion can take two different forms, tacit collusion and explicit collusion. But the law should deem an infringement only for explicit collusion and not for tacit collusion. So, what are the ingredients which are necessary to sustain collusion by the firms? I will now explain with an example, including the main ingredients.

So imagine that I am a seller of apples and that the marketplace is a very simple open air market, like there are many in Europe. I do not know if it's still true in Japan, and so it is a hypothetical market just to make the point simpler. So, it's not an actual case. And imagine that me and other sellers of apples arrive every morning in the market, and that we have the same kind of products, so we sell apples which are similar to each other so there is no an issue of products which are differentiated. And also imagine that we all think that the optimal collusive price, say the monopoly price for selling apples is say $1 for each apple.

Now this is our understanding. We have not talked to each other. So I arrived in the morning. I have not talked to any of my rivals who also sell apples. And when I arrive in the morning and I have to decide the price at which I am going to sell apples, I will start from the understanding that from all my competitors there will be some price which is the collusive price, which is the price of $1 per apple. And now I will have to take a decision which is at what price am I going to sell. Now I have two possible options, one is to stick to the price of $1 per apple, collusive price, say this is the collusive action. Another option, I can also set a different price. For instance I might be tempted to reduce my price below the collusive price, say if I decide to sell apples at 80 cents each then I think that I'm going to get a larger share of the market. So, I have a very strong temptation to deviate from the collusive outcome and to charge a price, which is lower than the price of my rivals, because in this way I can sell more.

So I might think that this is a very clever idea and in this way I'll get more clients. But for sure enough, if I start to set a price which is lower than $1 per apple, what happens is that very soon all my rivals will realize that I am deviating from the collusive action and then they will start to punish me, in a sense that they will be more aggressive in the prices that they are choosing. So, if I was selling say at 80 cents per apple they will say here, "Ah, here, there is one of our competitors who want to cheat on us, who wants to deviate, so now we are going to sell apples at a price of 70 cents and we are going to have a price war, so that we can punish him, so that he will learn that it's not a good idea not to set a collusive price."

When we come back then to the decision that I have to take and that each seller has to take, we have to keep in mind this problem, that is I might think that it is a very clear idea to reduce price but after I have reduced price what happens is that there will be a very aggressive behavior, a retaliation by my competitors, and therefore after that there will be a period of very low prices.

So what I have to do is to compare the immediate gain that I am going to make during the period in which I am charging a lower price than the others and the gains from more outputs than the others with the long-term loss that I am going to make because instead of having a nice high price in the future periods what happens is that we'll be in the price war. So, it is this fear of retaliation, or fear of punishment by my rivals, that will induce me not to deviate from the collusive outcome in the first place. So, in an environment like this one that I have just described, which is an open air market where everybody is seizing almost immediately what is the price that the other sellers are going to charge, collusion is going to be sustained very easily because I know that as soon as I am going to change my price a punishment will follow. This is a very simple example. So what happens is that in the end, in a market of this type, I will prefer to stick to collusion and that we will charge the price of 1 dollar per apple and so collusion will be sustainable. If all of the other sellers will think in the same way then collusion will be sustained.

Now this comes with the two ingredients that I am putting in this overhead. First, in order to enforce collusion you need timely detection of deviation. So you have the possibility to monitor immediately what the rivals do in the industry and you need also a credible mechanism for the punishment of deviation, that is you need to understand that there will be a punishment, a market punishment in the case in which you are going to deviate.

Now notice in this example that collusion can be sustained without any of the competing firms to talk to each other and this is very important. In other words collusion can be sustained tacitly without an explicit agreement.

There is another issue regarding coordination. In other words I started this example by saying, let's imagine that each of us think that 1 dollar per apple is the monopoly price, the jointly optimal price. But, of course, if we do not talk to each other it's not clear that we will have common ideas about what is the optimal price, and that is where there is a distinction between tacit collusion and explicit collusion. If you have tacit collusion then what happens is that firms are not able to talk to each other about what is the optimal price and then they can make mistakes. For instance, I might arrive in the market one morning and say, "Well, I think the optimal price is not 1 dollar per apple any more. For instance, because demand has reduced or because consumers feel poorer than they were in the previous days. And so I think that the optimal price for all of us would be 80 cents per apple rather than 1 euro per apple." But if I do not have any way to communicate with my rivals about my changed expectations, and if I set the price of 80 cents per apple then what happens is that my rivals might think that I want to deviate from the collusive agreement and therefore they will start to punish me anyway. So, this is the difference between tacit collusion and explicit collusion. Under explicit collusion whenever there is a shock, whenever some of the market conditions change, the firms can talk to each other and they can avoid market punishments, they can avoid periods in which there are price wars

simply by communicating to each other. I could go to my rivals and say, "Well, look, you know, I think the market conditions have changed. I think we should not charge a price of 1 dollar any more." And then you know, if you are my rivals you can tell, well, we agree or we disagree and then in the end we, perhaps arrive at a compromise and we have 90 cents per apple but in all this process which has happened is that we talk to each other, but we never go to price wars. And consumers will never see a price of 80 cents, a price of 90 cents or perhaps some price wars which are arising. So this is the crucial difference between tacit and explicit collusion, and that is also the reason why firms will continue to talk to each other despite the fact that in principle, in theory, tacit collusion can be reached even without talking to each other. So this was the first point that I wanted to make, the difference between tacit and explicit collusion.

(The economics of collusion：Factors that facilitate collusion)

There is also another thing that should be understood when we wanted to talk about collusion. That is what are the facilitating practices and what are the environments in which firms are able to better sustain collusion. And here there are number of structural factors, which have been indicated by the literature and also Professor Harrington has mentioned in his talk like concentration, the use of entry, symmetry between the firms, the fact that firms meet in very different markets et cetera.

Now most of these are not manipulatable by the firms, so the firms cannot affect them. The degree and the frequency of the orders depend on the industry, perhaps characteristic of demand which the firms cannot affect might also affect collusion. But there are some features that can be manipulated by the firms and one of these for instance is the fact that firms might use mergers in order to lead the industry toward environments which are more favorable to collusion. For instance both from empirical works and from theory that collusion is the easier to sustain they are more symmetric than other firms, sometimes you observe mergers which not only eliminate one independent competitor but also restore symmetry in the industry. So, this type of mergers lead to an industry in which it's much easier to sustain collusion and that is why I argue that it's very important for an antitrust authority to pay a lot of attention to merger control also as a preventive measures towards collusion because most or many mergers might actually be done in order to favor collusion and that is a kind of consideration that the antitrust authorities should keep in mind. So, the analysis of joint dominance as is called in Europe or of coordinated effects, as is called in the US is extremely important in merger control. But there are also other factors like cross ownership and links with companies which have collusion and that the antitrust authority should keep an eye on.

Other factors might be, for instance, the degree to which there is price transparency in a market, in particular because of what I mentioned before, that is detection of deviation is such an important ingredient for collusion. The antitrust authority should pay a lot of attention to all practices that firms

might want to set up in order to make more observable prices and quantities. And in particular one point which I am going to come back later is an exchange of information. The antitrust authority should pay a lot of attention on, especially, the aggregate at the firm level. Because firms might use this exchange of information agreements as a way to increase the observability of what they do and therefore, to sustain collusion.

I will not mention all the points that I have written in the slides for the sake of timekeeping, but let me just mention another example, which is that there are also all sorts of pricing clauses and contracts which might help firms to sustain collusion and let me mention one in particular, resale price maintenance, which is a clause whereby the seller tells the price at which the retailer should sell. This is resale price maintenance. Now again, this is a practice which is going to increase observability and favor collusion among the sellers themselves. That is because whenever one or the other sellers observe a price we know that this is the price which has been set by the seller and not by the retailers so it's much easier to monitor the price choices which have be done by rival sellers.

(The economics of collusion：Detect and fight against collusion)

So, this is so much, as I can talk in so few minutes, about the analysis of the economics of collusion. But this is also going to lead us to some insights with respect to what we can do in order to detect and to fight collusion.

As I said before, for economists collusion is an outcome, i.e. collusion means high prices. So, as I said again, both tacit and explicit collusion can arise in an industry, so one could say, well, why focusing only on explicit collusion? Why not, for instance, looking at what are the actual prices, to look at the actual price series, the data in the industry to infer if there has been collusion or not?. After all, if collusion is high prices why not just simply say, "Well, here we observe high prices and therefore, we can say that there is collusion." I will argue that this is a very bad idea, and that lawyers and judges are right in focusing on explicit collusion rather than tacit collusion, although this is an issue which is relatively controversial and not everybody would agree with me.

But let me just mention a couple of reasons for this approach. Well, first of all as I said, one can think of inferring collusion from data about the price levels. So, if prices are too high with respect to some benchmark, perhaps, let's say, if we observe that the prices in a given industry in Japan are much higher than say in Europe and in the United States, they say "Well, that is because there will be collusion, and we want to intervene in that industry." Well, there are problems with that approach and apart from old problems about data availability there is one other problem, which is more at the roots of the problem, which is that we are in the process of doing competition policy and not regulation. So, if we start to just say to the firms, you know, this is not the right price, you should have a different price then we end up

being sector regulators, and not competition authorities. This is one observation.

The second observation is that, this is a very dangerous principle, because, I do not know enough the competition law in Japan, but in Europe and in the United States, it's not that market power per se is a bad thing, that is the ability to impose high prices per se is not something which is illegal. What one wants to pursue is abuses of dominance in the states or monopolization or attempts to monopolization in the states, so it would be difficult to argue that the firms can be found guilty just because they set high prices, precisely because this would contradict one of the principle in many jurisdiction, which is that market power or high prices per se are not a problem. So, this is the first observation. And second observation comes from the following possibility, that is to infer collusion from data, but not data about price levels, but data about the evolution of prices. In one case that you also know because until the recent amendments it was also part of the laws in Japan was the fact that, you know, firms should report whenever they do parallel pricing, that is they raise price in the same way as their rivals.

This is because in many instances, especially in the past, it was thought that price parallelism can be used as a proof for collusion. That is, if a firm increases its price and immediately afterwards the rivals are also increasing their prices, this must be a bad thing and this must be an instance in which there is some sort of underlying collusion which is happening. Indeed there have been cases in the US in the past and in the not so far away past also in the EU in which the European Commission and the courts were saying, "Well, there is price parallelism, so this is a bad thing and therefore there is an infringement of the law." This was in the past, as we'll see recently the court has taken a completely different approach.

And they will argue that the idea of inferring collusion just from the fact that there has been price parallelism is a bad idea. And it's an idea, which undermines the principle of legal certainty and which would lead the firms to a lot of second guessing. That is there are many situations for instance, in which the firms might think, "Well, my rival has increased this price, and I find it's convenient for me to increase the price as well, but can I do it or am I going to be convicted for collusion if I am going to do it." So, in this way the firms are not necessarily free to do what they want, and in some cases this might be a bad thing.

Think for instance, of all the situations in which there has been an increase in the prices of the input, which are common for all the firms in the industry. Then, of course, what happens is that all the firms would want to increase their prices. Hence we should not prevent them from doing so.

So in conclusion, very quickly, data are indeed useful. But I think they are useful in the direction that Professor Harrington pointed out to us this morning, that is in the sense of being able to screen sectors. If we see that

the prices are, you know, suspiciously higher than cost or very much higher than in other countries or that there is a lot of price parallelism, then this should be a reason not to find an infringement immediately but to investigate further what is going to happen in the industry. And instead, as a proof, we should just keep to hard evidence, which should be, you know, fax, means of agreement, phone calls, video recording et cetera.

One might also argue that this is a very lenient approach with respect to the firms. After all, if the firms are able to tacitly collude and if we focus just on finding hard evidence, are we permitting a lot of firms to escape from the net of the antitrust laws? The answer is probably no. Because as I said before, firms would try to coordinate their behavior and way in order to avoid the market shocks. And we know as a fact that there are a lot of cartels that we keep on uncovering and which leave a lot of traces precise, because firms wants to coordinate their behavior with each other.

Also another thing that we should mention is that, even with an approach which is based on hard evidence, which we can still use a lot of policies in an active way, both ex ante and expose in order to fight collusion. Ex ante, one of the things that we want to do for instance, as an antitrust authority, might be to have a blacklist of facilitating practices. Like for instance, and this is very close to the approach in the European Union, we know that agreements to exchange information at a very disaggregated level is a bad thing because they give a very favorable environment for collusion. So we might simply decide that we should prohibit agreements to exchange information at a very detailed level.

We are going to talk more about sanctions, but obviously, there is a huge issue, which is what the best sanctions in order to deter collusion are? Another issue that, perhaps, we might want to discuss this afternoon in the panel discussion, is what kind of police powers that antitrust authorities can have? And in particular, we know that the so-called dawn raids or surprise inspections are very useful in order to uncover material. One thing that recently has been done in Europe is to allow the European Commission to search not only the business premises of firms, but also to search manager's homes and private vehicles, because it has been discovered that very often very compromising materials were actually kept by the managers in their homes, rather than in their offices.

And of course, another thing that we can do is leniency programs as we have. I will not talk a lot about the leniency programs because it has already been done by Professor Harrington in a very complete way before, but these are clearly very useful and that's why I think that the Fair Trade Commission of Japan has done the right thing in having the leniency program in order to fight collusion.

(Fighting cartels: the EU's experience : Legal and institutional framework)

I will now pass to the second part of my talk, which is very briefly about the experience in the European Union.

First of all, the legal framework. Perhaps an introduction is that you should know that in Europe, there are two different levels of competition laws, one is at the supranational level, which is enforced by European Commission and by the Community Courts, and another is at the national levels. And to a great extent, the type of laws that we have in the national level, the member states are very similar to the law that we have at the supranational level. Indeed, in most countries I have simply borrowed and translated their main provision of the European Treaty, which is for cartels Article 81.

So, Article 81 of the Treaty, which is the equivalent, if you want, of Section 1 of the Sherman Act in the US is that there is a prohibition of all agreements and concerted practices, and we'll come back to this term later, that have the object or the effect to distort competition, unless they improve goods and promote economic progress, and provided that consumers gain and that agreements are no more restrictive than necessary. So this is, in a nutshell, what the law says about the cartels.

Let me stress three points here. The first one is the term of 'concerted practices'. 'Concerted practices' is a deliberately vague term, which is used to capture something which is not necessarily an agreement, which is you know, coordinated behavior of some sort. And indeed most of the discussion about the standards of proof for collusion, we've come to the issue of whether we are in front of concerted practice or not.

The second point is that in Europe there is a prohibition of agreements that have the object to distort competition. And this is a very important provision because it means that it doesn't matter if the firms are not able to sustain collusion. They are going to be punished if they have decided to restrain the competition. So it might happen, for instance, that the firms meet and decide to set a certain price, the 1 euro per apple in my example, but then everybody goes back to his headquarters and they decide to charge a different price. Well, despite the fact that the agreement will not have any effect, it is punished, and punished very strongly, almost as if it had effects.

The third point that I want to make is that cartels are almost per se illegal, in the sense that there are some exceptions, which are given and this is again something, which is similar I understand, from what happens in Japan where there are some particular sectors where there are legal exceptions. And for instance, until very recent times maritime transportation was one of the sectors, which was exempted from the anti-cartel law.

So as for the enforcement of cartels in the EU, where the main enforcer is the European Commission, and in particular, the Director General --

Directorate General for Competition DG-COMP, as its called, which is the Competition Authority at the supranational level, at the European level.

And then as I said before, there are also the NCA that is National Competition Authorities which is an administrative system, which means that the relevant antitrust authority. The European Commission acts as an investigator, a prosecutor and as a judge in the sense that he decides the fines that should be applied to the firms. So, it is an administrative system. However, the firms have always the possibility to appeal to the Community Courts, the Court of First Instance and the European Court of Justice.

So what is also extreme important is to understand that the European Commission has very extensive investigatory powers which include, as I said before, surprise inspections not only in business premises but also in private homes.

As for the fining policy in the European Union, there are four main characteristics. First of all, there are no criminal penalties in the EU; nor sanctions to managers. Again, there are some member states which have criminal penalties but it's not true at the European Union level. The maximum fine is 10% of previous year total turnover, but keep in mind that this is not the turnover in the relevant market. So, for instance, if a firm is part of a very wide group then you know it's, the maximum fine is 10% of the turnover or the world turnover of all the group, not only of the turnover in the relevant market.

Fines should be fixed according to gravity and duration and private actions, unlike the US, (which) are extremely rare and can happen only in national jurisdiction.

Another important characteristic is the fact that the European Commission has a lot of discretion in giving fines, and this is ,I would argue, not a positive thing. To a large extent the fines that the European Commission are giving are unpredictable and they are not proportional to the damages which have been made by a cartel, and this is arguably a feature which is not very good, and in particular which leads to a lot of litigation in courts.

As for the practice of the European Commission, there is another consensus that the commission has become stricter overtime, so it has increased the fines over time. However, there are a lot of discussions about whether this is enough or not, and most commentators, both lawyers and economists, would argue that although the fines have increased a lot and they have gone to a very considerable level, there are some record fines which are, you know, astoundingly high. Many people would argue that this is not enough as a deterrent.

So, there are some discussions currently about what can be improved about that, and in particular, there is a discussion about trying to increase the

possibility of having private actions for damages, and perhaps to introduce also criminal sanctions, although this is easier for national member states but under the EU level, simply because there is no criminal court at the European level. That is why it would be very difficult to understand how the appeals would work.

And it is also important that the commission recently has taken two steps in order to improve the fight on cartels. The first one has to delegate a lot of investigations, lot of cases that he was doing beforehand to the national competition authorities with the idea to focus more on cartels, and second, and perhaps more important, the main novelty has been leniency programs since '96.

(Fighting cartels: the EU's experience：EU's leniency program)

I will be very quick on this because I don't have time and on leniency programs we have already heard something. But let me just say one thing. In '96 there was a leniency program, which was approved, but the program was disappointed the expectations of the Commission and in particular, it didn't have a great success. And it was considered that there were two main reasons why it was not so successful. The first one is that the European Commission kept a lot of discretion in the fines. And the firms didn't know at the moment of applying for leniency whether they would receive immunity, that is a 100% discount or not. And in many cases, the firms would know only at the moment in which the formal decision was taken, which was the reduction that they had a right to have. So, this was the first weak point.

And the second weak point was understood that it was the fact that immunity was given to firms which report information only before an investigation has began. And this was considered as a weak point, and as a result in the 2002, the leniency program was changed and now the immunity can be given also when the investigation has already began, provided that there is enough information, which is given from the firms to the competition authority to establish an infringement. These are the main characteristics of the new leniency program in the European Union.

So, fist of all, immunity is confirmed in writing upon providing evidence so the firm would know immediately whether it has been given immunity or not or it should. Since, as I will argue later on, there has been considerable backlog and so the commission has not been able to keep the pace before the leniency applications, which has received, which is arguably a sign of success. And, as I said also, immunity is also given after an investigation is started, provided that it allows the commission to establish infringement.

And another point, on which we might want to discuss this afternoon because it's very similar to the law in Japan, is that leniency immunity cannot be given to firms which have coerced rivals into a cartel. And I will argue that this is not a necessarily good point because, for instance, if the management is changed, it could be the old management which has coerced other firms.

But the new management instead wants to get clean and come into the open about that, and so by not applying immunity to this kind of firms where the new management has changed then we are not giving the appropriate incentives for the management to reveal information.

I would like to refer to some statistics about the leniency in Europe very briefly. There have been 80 leniency applications under the '96 Notice, that is the old notice, and this was basically in six years and in most cases this was only for reduction of fine. So, immunity was not total 100% discounts.

Now compare these 80 leniency applications in six years with roughly 160 applications, which are double in basically half the time, that is in three years and half, which is up to September 2005 from February 2002. Now of which, so that where 159 applications and of which 80 applications for immunity; and interestingly so far, or at the end of September 2005, not all of them were reviewed by the Commission, but the Commission managed to review only a part of them, and most of them were conditional immunity decisions. That is where firms, which were revealing information about cartels that the Commission had not known anything about. But four of them concerned firms, which had already been investigated, there was a dawn raid, but the Commission had not enough material to be able to establish an infringement, and still the firms came up with appropriate material.

And roughly half of these 159 applications were instead applications for the reduction of fines that is firms which have not come first.

And so one, so arguably as I was saying there is that there has been a success, in a sense that more firms had actually come into the open but perhaps, now this has been too much of a success because now the Commission is not being able to carry out old investigations in proper timeframe, and so we have a lot of backlog.

And nowadays there are also some discussions about possible plea bargaining, because one of the problems in Europe, but this is different from Japan, is that the procedure is extremely long and a lot of firms, even when they apply for leniency, go to court, and so plea bargaining could actually cut down the times.

(Fighting cartels: the EU's experience：Standard of proof)

I would like to give couple of words in the remaining three minutes about standards of proof in the EU. Well first of all, parallel behavior is not unlawful per se, so there is a very important decision that the European Court of Justice has taken, which says that "parallel conduct cannot be regarded as furnishing proof of concertation, unless concertation constitutes the only plausible explanation for such conduct." This means, in other words, the fact that you have parallel pricing doesn't mean that there is an infringement. And what the court says is that the law does not deprive economic operators of their right to adapt themselves intelligently to the

existing and anticipated conduct of their competitors." So, this is an interesting point. And the other important point that I wanted to make is about agreements to exchange information.

We know from theory that information exchange agreement at a very disaggregate level is a bad thing, and basically, what the EU has done is both the Commission and the Court is to say, "Okay, even though you don't have any proof about firms agreeing on prices, but you observe that the firms have set up an agreement to exchange information, then you can establish an infringement."[2] So in other words, an infringement can be found even if you don't have documentary evidence just for the fact that firms have created an environment where collusion can be more easily sustained.

And with that I conclude, and thank you very much.

Moderator Kojima
Thank you very much Professor Motta. I would like to ask Commissioner Shibata for her comment for 20 minutes.

2. Comment by Dr. Aiko Shibata

Professor Motta made a presentation based on his own research in the past, as well as literatures found in the world of economics. Professor Motta's paper had clearly indicated the situation under which collusion is enforced and sustained, and I understand that EU's competition law policy is reflecting such economic thought. Now I would like to discuss three points.

(Conditions for Collusion)
The first point is about two conditions necessary for having collusion Professor Motta has just mentioned. The second point is about leniency program and the third about the data in economic analysis. Now let me go on to my first point.

With regard to the two conditions necessary for enforcing and sustaining collusion, firstly, if there is a deviator from the collusion then that deviation need to be detected timely and also the second condition is that if there is a deviator from the collusion then remaining members of the collusion will be able to punish that deviator. So, those were the two conditions named.

Now let me apply these conditions to a Japanese bid rigging case. In a Japanese bid rigging case there is a coordinated practice, exchange of data, and explicit rule for the collusion. Concerning the first condition, if there is a deviator having bid the price different from the agreed price then other fellow members of the collusion will detect that immediately. So that deviator's news would spread immediately to the remaining members of the collusion.

[2] It would be the case: Ahlstom v. Commission [1993] I ECR 1307 [1993] 4 CMLR 407

As regards to a second condition about the availability of punishment in case that there is a deviator, if one of the bid rigging members deviated from the collusion then the bashing will take place immediately, so that a deviator will be punished in terms of having to bid with the very low price in ensuing years. In the bid rigging case concerning steel bridge construction projects ordered by the Japan Highway Public Corporation, those involved have said that, if you win the contract by tendering the wrong price, which means that you were the deviator from the agreed upon price. Then, that deviator would be treated as if that person had been successful in having been awarded three times larger contract than the actual. So, that being the case, in later days allocation of contracts that a deviator would be able to get would be a much smaller portion of the previously expected contracts. That was what was reported in the newspaper. Therefore, two conditions Professor Motta has mentioned have actually applied to the Japanese bid rigging cases.

(Comparative Analysis of Leniency Programs)

Now let me make a comment about leniency program. Professor Motta mentioned the EU's leniency system, as well as historical improvement made so far. Let me just try to make a point about the difference between Japanese system and western system.

The leniency system is a system whereby an applicant from the violator side can make a reporting to the Antitrust Authority. And as a result of applying for a leniency, a firm can get 100% leniency or the partial leniency at 50% or 30%. In other words, economic incentives are given to the lawbreakers so that violation can be stopped or prevented.

The slide [Figure below] shows the leniency program in Japan, and ones in the EU and the US, distinguishing between before and after the beginning of the investigation. The first column under the name of "First" shows how much leniency first applicant can get. And the second means second applicant, and third means third applicant. And within this table the striking difference between Japan and the other countries is that Japanese reduction rate is 30% whereas that of US and EU is 100% in the investigation phase, and I agree that is the largest difference between Japan as opposed to EU and US as mentioned by Professor Harrington this morning.

Amount of leniency

Before investigation

	First	Second	third
Japan	100%	50%	30%
E.U.	100%	30%-50%	20%-30%
U.S.	100%	0	0

investigation-face

Japan	30%	30%	30%
E.U.	30%-100%	20%-30%	<=20%
U.S.	100%	0	0

My point here is about the incentive given by a leniency system in the investigation phase. What I want to ask here is if there exists that much difference in an incentive as indicated by the differences in the amount of reduction rates. My answer is No. In reality the difference in the incentive is not as large as difference in percentage indicates, due to the difference in the legal execution of each country. In case of Japan, after the investigation have begun means after the onsite inspection. When onsite inspection is taken place, it is being reported by the newspaper. Almost all the cases which have received onsite inspection are highly likely to be established with infringement which leads to the legal action by the JFTC. That is to say, in case of Japan after the onsite inspection has been conducted, almost at 100% the legal action is taken. However, looking at the western cases, the investigation phase actually occurs prior to this. The investigation phase begins as soon as the authority comes to hold information and knowledge. As the investigation phase may start at least several months before JFTC's onsite inspection day, companies are not sure about the full enforcement of the law, or establishment of the infringement at that time.

Let me continuously make comparison between Japan, EU and US in the investigation phase. The merit derived from the leniency may be calculated by expected gain. Expected gain would be calculated as a multiple of a probability of taking legal action and a leniency rate. Thus, in Japan it is 30% because the probability of taking legal action is 100% and partial leniency 30%. To compare this case with western cases, suppose that the probability of taking legal action was 30% and the leniency 100%. A fine is reduced by 100% if leniency was applied. But even without receiving the leniency there is a likelihood of 30% of being applied with a legal action. So the expected merit of applying the leniency program would be 30% which is the same as in Japan. I do not say that probability of taking legal action is 30% either in the EU or the US. But, due to difference in the legal procedures, the probability of taking legal action is much lower in the EU or the US than in Japan. Thus, it seems to me that in investigation face the incentive for applying the leniency is not so different among the three countries, compared to the indicated differences in the amount of reduction rates.

(Effectiveness of Economic Data)

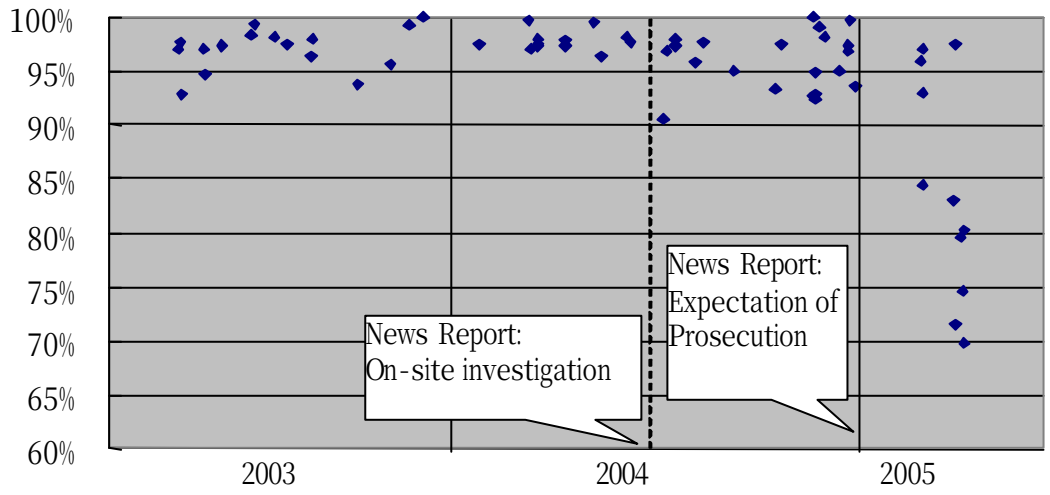
Let me go on to my next point, which has to do with economic analysis of the data. According to Professor Motta, in the Wood Pulp case, the rendered decision made clear that the economic analysis alone would not make up grounds for the obstruction of competition. Data alone will not be sufficient to prove for the collusion or a cartel. That is because a certain economic analysis, which indicates that prices in the market go up and down in parallel, may be a ground for explaining existence of a cartel, but at the same time, a cartel may result from the unusual demand curve, i.e., a kinked demand curve. Professor Motta threw a question on this matter. That is because Type I errors, which means that non-violating companies will be regard as a

violator, can be reduced but Type II errors, which means that companies actually engaged in illegal cartel will be regarded as if they were not violators, may go up. Professor Motta does not confidently say that the decision was the best, taking into consideration overall error.

Now let me turn my eyes to the efficacy and usefulness of the economic data analysis. This can be helpful for discovering the collusion as mentioned by Professor Motta and Professor Harrington. If collusion exists, a price may go up or a dispersion of prices may go down. By spotting those aspects, one can infer whether there can be collusion or not. Furthermore, I would like to advance the argument by saying that in order to prove collusion one can use such data analysis as complement to the evidence suggesting the information exchange or the illegal coordinated practices and so forth. I would like to mention this point, referring to an example.

This is a case of bid rigging, and a formal action was taken actually on this case [Figure below]. On the vertical axis, it shows the successful bidding rate, which is obtained by the actual contract price over the ceiling contract price planned by the government. If the rate is 100%, this means that the two prices are matching with each other, and if it is at 50% then the actual contract price is half the ceiling price.

Bidding Rate in Government Constructions



This is a simulation made from the actual bid rigging data. The average of successful bidding rates is 97% and most of rates are more than 90%, but if you go beyond "this timing" then the rates tends to get scattered, the average rate going down by 13%, down to about 84%. In this actual bid rigging cases, there are so many hard evidences, and we did not need economic data analysis. What had actually happened at "this timing" was that, JFTC investigation had begun and the criminal accusation possibility had

been mentioned in the newspaper and the statistical analysis can be made here. So, if we had conducted statistical analysis on these data, and found the structural changes at "this timing" caused by such kind of news, these data might have complemented other sources, such as information exchange, coordination carried out by companies.

I would like to thank interesting presentation given by Professor Motta today, and I enjoyed reading his paper very much. Thank you very much.

Moderator Kojima
Thank you very much Commissioner Shibata, and once again special thanks to Professor Motta and Dr. Shibata.