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# ENVIRONMENTAL REGULATION AND COMPETITION

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The Chair of the Competition Committee, Frédéric Jenny, began by making some general observations on the stage management of the discussion, inviting delegations to react at any point to have an interactive session. He welcomed Mr. Davies, vice chair of the OECD Working Party on National Environment Policy and invited him to make an initial statement immediately after the opening presentations by Professor Heyes and Mrs Perrot (France).

**Professor Anthony Heyes (Royal Holloway College, University of London—UK)** highlighted some of the key aspects of the background document he prepared for the Secretariat. He noted that environmental regulation has become a major area of government activity, particularly over the last 20-25 years. Its impacts should be looked at carefully, and the scope for coordination of environmental and competition policies given serious consideration. In this respect, how environmental policy is conducted has an impact on competition, and vice versa. How coordination of policies could and should be managed is an issue to be discussed.

Turning to some aspects he had developed in the paper, he first addressed the way in which environmental regulations can impact the natural market structure (namely, the market structure that minimizes total industry costs). Unit compliance costs are in general – for most environmental regulations in most countries – higher for smaller firms. This naturally favors more concentrated market structures. This is a positive from the point of view of minimizing industry-wide costs, but the higher concentration can lead to competition problems. At this point he referred to a study by Eric Helland, an American economist, who examined the relationship between compliance costs and economic rent, at an aggregate level, for the US. One of the standard measures of ‘rent’ used by finance scholars is Tobin’s Q, which is the ratio of the market implied value of a company over its replacement cost value. The ratio of those 2 numbers is the measure of the amount of rent in that industry. In the US, as far as firms in the top quartile are concerned, the 1% increase in their compliance costs is associated with an increase in their Q value of between 2 and 10%. So the amount of rent, the amount of profit

that firms would expect to the result of having a 1% increase in compliance costs levied upon them, is that its Tobin's Q would go up between 2 and 10%. On this measure as a general statement big firms – at least in the US - do well out of regulation and it should not be a surprise to see pro-regulatory lobbying by large firms.

He then continued discussing barriers to entry - how environmental regulation impacts entry conditions and therefore structures performance in the industry. Conceptually, there are three different ways in which barriers to entry can be introduced:

- a) Sunk costs associated with entry. To come into an industry the existence of environmental regulation can increase the amount of capital that has to be put down, which can't then be taken back away if that firm then leaves the industry. So as sunk costs go up, contestability of a market goes down, the standard measure of contestability is this fractional measure of sunk costs.
- b) Environmental regulations can generate cost differentials between firms that are new to an industry and firms that have been in the industry for some time.
- c) Even in the absence of any entry exit problems, the regulatory process may slow down the process of entry and exit licensing and approval process.

At this point, Professor Heyes pointed out to the US Portland Cement study. The amendments to the 1990 Clean Air Act in the US made it harder or impossible for firms to use wet kilns; it was more costly to make them clean. That led to the exit of small, independent cement producers but that wasn't matched by new entry. An explanation is that the sunk costs - which are distinct from fixed costs – for those entering the cement industry in the US went up by about 1/3, and as a result, the probability of any sub-market being inhabited by 3 or more active firms became 8 times less likely post-amendment and that led to something like a 10% loss in consumer surplus.

Professor Heyes then addressed the risk of predatory behavior. The scope to influence environmental regulation can potentially provide a channel for non-price predation, i.e. activities by incumbent firms to raise their rivals or their potential rivals costs. There are a number of studies in several settings, for example the US Reformulated Gasoline, which describe, in particular, the notion that if a particular firm has privileged access to a new 'green' technology then it can have a competitive advantage over rivals. Also there

has been a move in the environmental policy over the last 10 to 15 years to 'voluntary agreements' where a set of 'industry insiders' negotiate regulations with governments, which may be to the detriment of other (perhaps smaller) firms in the industry, or potential entrants.

Last, Anthony Heyes referred to some instruments which were described in some country contributions with their potential competition problems: tradable emissions permits; extended producer responsibility programs; Eco-labeling and product differentiation; voluntary agreements; land use planning.

The Chair then turned the floor over to Mrs. Perrault.

**Mrs Perrault (France)** addressed in her presentation some basic economics, starting with an acknowledgement that both policies – environmental policy and competition policy – aim at maximizing some measure of welfare. Of course the measurement of this welfare should include all the effects of any kind of economic behaviour on consumers' surplus including environmental damages, like direct damages on health or more indirect damages on productivity of firms and that's is the classic measurement of consumers' surplus. Thus both types of policies should ideally go in the same direction but in fact there may be difficulties in ensuring this.

Competitive market structure is the aim of competitive policy. This leads to low prices and higher demand and supply too. This may turn out to be bad for the environment: i) The production process itself may be a polluting production process; ii) production may lead to exhaustion of some natural resource (a mineral resource, mine or forest, for example); iii) if the good itself produced is a polluting good, then of course the result is the same.

This is particularly evident in the context of the exploitation of a common exhaustible resource. The classical example is fish in the sea where firms try to catch fish and then compete on the downstream market where they sell fish. The 'tragedy of commons' describes the fact that every firm has an incentive to catch a lot of fish – not take account of the impact that the diminution of the fish stock will have on other firms - and so the resource may be driven into inefficient collapse. In this case it is evident that a monopolist will much better internalize the effects of its present behaviour on the future of the exhaustible resource. For example in the case of 2 firms that both produce on a river: the upstream firm pollutes the river and this reduces the quality of the input used by the downstream firm; a merger between both firms would reduce and solve the problem because the single

entity would take into account all the environmental damage created by the production process. So here there is a very simple example in which less competitive structures lead to better environmental results.

There are a lot of other problems in practice. Sometimes competition authorities are in trouble when evaluating the consequences on consumers' surplus of a simple anti-competitive practice like for instance a cartel or an abuse of dominant position. But this is even more difficult for environmental damages because the evaluation of those damages are particularly challenging. In fact this may be a problem not only for competition policy but for environmental policy itself when computing the benefits and costs of a given environmental policy excluding competitive aspects of it.

It is true that competition policy better captures short run than long run effects of a given behavior and this creates problems in evaluation. This is also true in a simple competitive situation when comparing the costs and benefits of a certain behavior in the short and long run. This problem is likely more severe problem when involving environmental damages.

There are also some points of convergence between environmental and competition policies. Since the major economic problem here is a problem of externality, the solution to most environmental problems consists in creating markets where precisely they are absent in order to allow internalization of external effects. Where these markets are created of course competition policy can guarantee that these markets function well and that there are less anti competitive behaviors on these markets. Mrs. Perrault gave two examples. The first one is the case of energy certificates. Suppliers of energy, like gas or electricity suppliers, receive an incentive to invest in special investments to reduce the consumption of the good they sell, so they suffer twice of this policy: they have to make investments and then, the quantity of what they sell is reduced. When they invest they receive a certificate from an authority; and there are usually also secondary markets on which these certificates may be bought and sold. Under this mechanism efficient investors choose to make the investment themselves, to invest in the reduction of consumption of energy in the production, and the less efficient ones simply buy certificates on these secondary markets, but in both cases polluters pay.

On these markets all kinds of strategic behaviors are possible: there can be any distortion of the prices on the secondary market through collusion or abuse of dominant position and in the energy certificates case, there are very complicated incentive mechanisms. As explained, it is costly to invest and

the investment reduces the amount of consumption of the energy. This gives an incentive to make investment to reduce the consumption of a rival energy.

It is difficult to assess what are the competitive implications of such a mechanism. Here competition policy could make a useful work in finding out the competitive implications of these cross incentives on complementary markets.

In eco industries where industries build joint ventures to deal with pollution problems, these joint ventures lead to a number of interesting questions for competition policy. First at the horizontal level, an agreement between firms may affect competition on the product market; there is a trade-off between environmental effects and competitive effects on the downstream market for the product. This also creates all the problems that can be associated with a complex vertical structure. If there is a common structure involved in the vertical chain, this can create, through price discrimination or bottle necks or refusal to deal with some firms that would not participate in the common joint venture, all kinds of exclusion problems on the downstream market for goods.

At the invitation of the chair, **Mr. Davies** made some introductory remarks. He explained that the OECD Working Party on national environmental policies deals with policy development and evaluation analysis of costs and benefits of the environmental policies. Since long this Working Party has looked at economic instruments such as environmentally related taxes and promoted regulations that might be most appropriate in the context of competition policy, seeking not to deleteriously affect competition. This WP is particularly concerned about the cost to business of competitiveness but has not yet looked at competition policy in great details at least for quite some time.

Both competition and environmental policies, he suggested, are grounded on a rationale which has to do with market failure; both come from a basis of looking at intervention rationale and both come up with issues and policies from the basis of social welfare, seeking to maximize social welfare. In this context, one feature to the development of environmental policies in the last few years has been a move to more market based policy measures. Such policy approaches may be less prone to affect competition than the command and control approaches that they have displaced.

He challenged the views expressed in the Secretariat Background document on the costs of environmental policy and related issues. He pointed out that at least in terms of economic growth and performance it may not be the case

that environmental policy is as damaging as suggested by the paper. He emphasized that environmental policy deals with some quite fundamental issues of social welfare that are beneficial in their own right: clean air, unpolluted beaches, issues to do with the very existence of nations when it comes to long term global issues. This has to be taken into account when looking at what are the policy making implications. In some cases, as environmental issues are so important, they have a high trade-off value against other policy requirements. So in fact there are circumstances where a good environment is good for the economy and countries may want to accentuate those advantages and complementarities and work on ensuring that policy design when it comes to environmental policy is conducive to economic progress.

The Chair gave the floor to Italy.

**The Delegate from Italy** referred to Professor Heyes's views that the Clean Air Act in the US may have generated entry barriers in some markets. However, he argued, in terms of policy implications there are 2 options: either you say that the Clean Air Act is not appropriate and therefore one should get rid of it, or the Clean Air Act is not challenged but the job of the Competition Authority is to identify how to implement its objectives in a less competition restrictive ways on the cement industry.

**Professor Heyes** made the point that in designing a regulatory regime all of the costs of regulation - including those through indirect channels – need to be acknowledged and taken into account. The big question is monetization, which is to identify channels about those impacts; but unless one is willing to attach a number to them - dollars, euros or whatever – one is left with a list of good impacts and bad impacts of a given policy.

The **Delegate from Italy** observed that his comment was mainly related to the fact that the introduction of a market for permits for clean air may somehow help the achievement of the policy and would reduce the negative impact on competition. In his view, competition authorities' job should be to identify ways of achieving environmental objectives in a less restrictive way rather than stating regulation raises entry barriers.

The **Delegate from the Czech Republic (CR)** asked Professor Heyes about his views on the system of CO<sub>2</sub> emission allowance trading in the EU and how it compares with some tax for CO<sub>2</sub> production. In his country, the Czech companies have decreased the production especially the production of electricity, and international companies like Metal Steel have reduced the production of steel and moved the production to countries like Kazakhstan.

CR is not involved in the system of CO2 emission trading and it is clear that 95% of the allowances are given to the companies free of charge. This very short term system does not create an incentive to companies to invest in new technology and to produce and export products but instead, given the high level of allowances, to produce and sell allowances. As an example, export of electricity of the CR has decreased dramatically because it is more profitable to sell allowances to Germany or Ireland than to produce and sell electricity.

The **US delegate** commented on the remark from the Italian delegate concerning the Clean Air Act. Initially the CAA required a percentage reduction of emission. This is a choice; it can be made in implementing environmental targets. But this choice had particular impacts on competition; it discouraged the use of low cost emission coal that was readily available and resulted in both higher coal prices and more emissions that would have been achieved by an emission standard rather than a percentage reduction standard. And the US did in fact change to emission standard, and that had significant competitive impacts which were good because the local coal and the high polluting areas were not protected from competition from the less polluting coal in the other areas, and the local coal wasn't used as much so less pollution was produced. So these trade-offs are fairly transparent and can be taken into account in the implementation of environmental regulation.

The **Delegate from Sweden** stated that from the contribution of Professor Heyes there is no empirical evidence of exclusionary manipulation of the tradable permit; but of course since this tradable permit is a kind of novelty in European environment policy, it is difficult to know exactly what kind of conclusions can be drawn. He asked him if he believes that the size and the scope of the trading system in itself may be important for the possibility of exclusionary manipulation. Is it more difficult to manipulate if there are several different industries in the system and a lot of companies, as compared to if there are only one industry and a few companies? And also it's clear that the free distribution of permits should not affect the future acts of the companies; but in real life, in real environmental policy does the standpoint hold up?

The **Delegate from Germany** echoed to the Czech concerns, explaining that indeed electricity imports from Czech Republic have decreased and this has resulted in a lessening of competition in the market. There has been a shortage in electricity and the prices have gone up by 60%. In addition, the big 4 companies have got the emission trade certificate for free meaning a lessening of competition on the German wholesale market. They now pass it

on with the impeded costs which amount to about 40 Euros/ton onto the consumers although they got the certificate for free. This situation is difficult to understand for the public opinion.

**Professor Heyes**, in response to the CR about the merits of tradable permits as a way of managing the environmental problem, said they are unlikely to better taxation in terms of efficiency. Arguments in favor of tradable permits are to do with politics; industry comes out much better under a system of tradable permits than under a system of taxation based at the level of marginal damages which is the efficient level to be.

In the US where a lot of very careful economic analysis goes into formulation of regulations it's hard to explain why an emission standard is a better choice of instrument than an emission tax. So again, according to Professor Heyes, politics has a lot to say in the choice of instruments.

On the comments by the Swedish delegate concerning potential for manipulating any market, he stressed that the ability to store the commodity is important. In terms of economic efficiency while it won't be as good as tax, one hope that a well functioning system of environmental permits will give firms the incentives at the margin to produce efficiently and to abate where the abatement at the margin is cheapest.

**Chairman Jenny** noted that competition authorities would love to have a say in how to design environmental regulations. What the contributions show is that it is very rarely the case and therefore they have to live with the regulations as they are and have a small degree of freedom in trying to deal with the consequences. One extremely good example of this is the US and in particular the FTC, which is held responsible in the US for the high price of gas; but according to the US contribution, it is not the lack of initiative from the FTC, it is environmental regulations that reduce competition in the price of fuel. This is an interesting case where there has been a careful and detailed analysis of the costs of regulation which was politically chosen.

**The Delegate from the US (FTC)** clarified at the outset that the US submission—a US FTC and an Anti trust Division of the Dept of Justice one rather than a US one as a whole - is clearly based on a competition analysis of the effects of environmental regulation. It addresses the effective environmental regulation in the gasoline sector and particularly how rules on specialized gasoline formulations might have some effects on the competitiveness of the market. First, by way of background, he clarified that federal legislation mandates in certain areas called “no attainment areas”, that the specialized formulations of gasoline are used, and that affects about

30% of the gasoline sold in the US. It affects generally metropolitan areas in about 35 different states. These federal rules coexist with localized rules, the best known being the Californian Rules. Those mandate reformulated standards that are slightly different than the federal rules and are actually higher than the federal rules. The federal rules would not necessarily meet the 'carb' standards, but the California standards would meet the federal rules. From this, one can understand to what extent this leads to a fragmentation of markets: in the areas requiring use of a certain reformulated gas they are going to have fewer suppliers potentially for those types of gas. The delegate stressed that in the US contribution, economies of scope and scale are singled out. Environmental rules seem to accelerate an already existing trend of moving towards larger refineries. One sees a fair bit of exit of smaller refineries.

The US delegate picked up the point made by Professor Heyes about raising rivals costs through non-price predation in the context of reformulated gas rules used in California. He referred to a FTC complaint brought in 2003. This was against Unocal on grounds of monopolization, that they misused the California process by misrepresenting that the standards that they were suggesting that legislation be based on were actually non-proprietary. The FTC brought an administrative complaint against Unocal, which was actually never really brought full-scale because in the meantime Chevron acquired Unocal and as part of the consent in the merger case they agreed to allow the licenses to become public and Unocal no longer enforced those licenses. So it was an abuse of the process, not just a legal effort - as far as we would allege -as to the use of the process and it is fairly egregious. Per year the savings from having the licensing go public was approximately 500 million \$ per year to California drivers.

On the mundane effects of environmental regulations on the implementation of competition policy; the **US DOJ representative** added that his department has found difficult in many merger investigations to obtain permits to build or operate facilities. The requirement therefore presents a substantial impediment to entry that has a material effect on the evaluation of the competitive effects of mergers. A good case in point is the collection and disposal of municipal solid waste; in just the last 6 or 7 years there have been 5 mergers in this industry in which a major factor in the DOJ decision to challenge the mergers was the difficulty of obtaining permits such that there was no prospect of entry following the merger and the industry was already concentrated; so the environmental regulation has to be accounted for in the everyday operation of competition policy and has been in a significant number of cases as major factor in our evaluation.

**The Chair** noted that in some submissions it is not so much the environmental regulation which is at stake but more the fact that the national operation of the competitive markets leads to a competition problem. At least 3 authorities: Turkey, South Africa and Switzerland offer examples of cases where the competition Authority has accepted anticompetitive arrangements or transactions because of the environmental benefits they could provide. In the case of Turkey several competing distributors of liquefied gas were allowed -- for reasons of economic efficiency as well as for environmental reasons-- to establish a joint venture for the construction of a connection system to ships, a storage system and pumping mechanism in Izmir.

**The delegate from Turkey** clarified at the outset that the Turkish Competition Act doesn't include any reference to environmental standards or regulations. However, he acknowledged, looking at the Board's decision for the cases presented in the submission, especially the case about the LPG – it seems that there is some room for that. Article 4 of the Turkish Competition Act prohibits explicitly agreements, decisions and concerted practices which restrain, distort or restrict competition. However certain agreements and decisions which restrict competition and therefore fall under article 4 may have some useful effects for ensuring an improvement in the production or distribution of products or for contributing to the technical or economic development. Such agreements may individually or as a group be exempted from the provision of Article 4, under Article 5 of the Act.

The LPG distribution case is closely related to the fact that some firms may, under environmental standards, choose to go into horizontal agreements to avoid the financial risks. In this case, 3 competitors were willing to form a joint venture to support the management of the construction of the ship connection system, internal storage and pumping mechanism in the bay of Izmir up until the completion of the construction process.

To be exempted 4 conditions listed in article 5 are obligatory. First of all the agreement or concerted practice or decision of an association of undertakings limiting competition should ensure new developments and improvements or economic or technical development in the production or distribution of goods and the provision of services. Under the evaluation of this item the Board decided that from an economy of scale perspective, the construction of a single terminal instead of 3 was a positive element from both financial and environmental points of view. If any horizontal agreement is illegal if it restricts, prohibits or limits competition within the market, horizontal agreement can be exempted individually or as a group upon the satisfaction of certain criteria. Moreover if some legal environmental

obligations can be seen as barriers to entry, their competition assessment will depend upon the positive impact on environment and to what extent they affect the behavior of companies. The implementation of the Turkish Competition Act by the Competition Board reflects the importance of environmental concerns, the impact of economic activities on the environment and the willingness of the business community to establishing a link between environmental issues and competition policy.

Chairman Jenny then turned to South Africa which in its contribution refers to an anti competitive merger in the supply of granite slabs which was accepted for environmental reasons. He invited the delegation to describe the issues in this merger which were accepted by the competition authority.

**The delegate from South Africa** stressed that the environmental considerations were not overriding in this case. The competition authority thinks that the efficiencies that were primarily production related outweighed the anti-competitive effect; and of course there is a positive benefit for the environment in so far as improvement in recovery and reduction in wastages improve. Independently of that the Authority is able to weigh up efficiencies against anti competitive effects and it took a broader view that the efficiencies outweighed the anti competitive effects in this case.

**The delegate from South** also mentioned as another example a glass recycling association which approached the Competition Commission. It had a number of programs that, it felt, perhaps involved some anti competitive restrictions, and asked the Commission on how these objectives could be achieved without having to use restrictions or some ground for exemption or approval. The association consisted of a number of players in horizontal and vertical relation, but the largest producer of glass and also the largest purchaser of cullets suggested that it might be necessary to agree on the purchase price of cullets and agreed to raise it so as to create an incentive to collectors and to draw more glass from the waste stream; that of course would have involved a restriction. At the time the Commission didn't agree.

Upon the chair's invitation, **the delegate from Switzerland**, discussed a merger case which was accepted on the ground of failing firm defense. The second company in the recycling market of used batteries was in a difficult financial situation. For that reason and not on environmental grounds, the Commission agreed to the merger. But the Comco played a key role in getting from the Office for Environment the lifting of the prohibition to import and export used batteries, hence opening up the recycling market of used batteries.

**Chairman Jenny** turned to the issue of coordinating competition and environmental policies and invited the EC delegation to explain how the state-aid policy can help manage the interface between competition and environment

**The EC** representative referred first to the guidelines on environmental protection, which explain how the EC intends to implement the state-aid provision to aid for environmental protection. These guidelines allow high aid intensities going to 100% of the extra cost, i.e. the cost necessary to meet the environment objective, in particular for 8 foreign global energies and for Combined Heat and Power Installations. Then investments for energy savings can also be supported and a state-aid up to 40% of those extra costs can be authorised. The guidelines also mention the possibility to authorize state-aid in situations where the national standards which are imposed to the companies are stricter or more stringent than the EU standards or are voluntary improvements by member states.

Another instrument which is quite widely used are tax reductions or exemptions. At first sight it may look contradictory to protect environment and promote sustainable development by allowing tax exemption in particular when the companies which are exempted are high energy intensive companies. But after consultation with the member states, the EC decided to accept these exemptions to allow for certain environmental taxes to be introduced while at the same time not undermining the competitiveness of specific industries. Such exemptions are allowed only where the taxes themselves are intended to make a significant contribution to environmental protection, and where the exemptions do not themselves undermine the good effect of the benefit of those taxes. In general, the global impact of introducing these taxes, including the exemptions to certain industries, is positive for the environment.

There are cases where member states were allowed to subsidize companies which were obliged to take measures in order to allow the member state to meet its environmental obligations, international environment obligations and European environmental obligations. One example is a UK state-aid which was authorized to allow the member state to subsidize companies to meet the requirements of the EU packaging waste directive.

The figures show that the member states could use more state-aids to promote sustainable development and that there is a clear trend upward in environmental aid. In 2004, 11.4 billion – that is 25% of the total amount of aid granted by member states in the industrial sector - were for

environmental purpose; but only a small proportion of this environmental aid is for promoting 'specifically sustainable development', i.e. for reaching higher environmental standards than the EU ones or aid to undertake for the investment to reduce pollution or for the development of renewable energy sources. If the same environmental requirements can be met by the market itself the EC don't necessarily encourage the member states to grant a state-aid.

On the choice of trade emission, the EC representative recalled that the EU has made its choice with this trade emission system which, as Professor Heyes mentioned, might be considered as a political choice. Assessment of the trade emission system which is relatively new, is under way, and a more in depth discussion is needed before drawing any conclusions, including on its possible anticompetitive effects.

**Chairman Jenny** invited the delegation from the United Kingdom to brief the Committee on the different ways in which government can intervene to correct market failures, and the pros and cons of those instruments from a competition perspective.

The **UK delegate** explained that various environmental policy tools can be used. Traditional regulation which obviously affects competition, can limit the range of firms directly or indirectly, or perhaps limit the ability of suppliers to compete or even reduce incentives. The OFT does actually scrutinize regulation, as a competition assessment which policy makers have to fill out when thinking about introducing a new regulation. Ex-post the OFT conducts market studies many of which are focused on how regulation in a particular market is affecting competition, and the related benefits to consumers.

Turning to public subsidies which include state-aid, these can also affect competition through pricing and output decisions being made inefficiently or perhaps inefficient firms staying in the market when they otherwise would not have done, had the subsidies not been available. It can also distort R&D and investment decisions. Further to the OFT review of the public subsidies and their impacts on competition, some guidance will be released for policy makers to assist them in designing subsidies that either don't distort competition or where they believe there is an overriding benefit, subsidy taking over the least restrictive approach.

The UK submission also refers to market based mechanisms which are the sorts of environment policy tools which build on competitive forces to deliver environmental policy objectives. How public procurement affects

competition in the market and how public procurers could encourage competition between suppliers of waste treatment facilities to actually deliver the facilities that the UK needs, were analysed in the submission. It was found that many public procurers at local level were aggregating landfill contracts with treatment contracts. Because it is difficult to secure planning permission, or get a permit to operate a landfill site, this is actually having the impact of restricting the numbers of people who were able to bid for those sorts of contracts. So it was recommended to public procurers to think about the benefits they are hoping to gain from aggregating these contracts and whether they actually are limiting the number of suppliers. Another example relates to the treatment sector, which is a new growing sector. When thinking about the sorts of skills needed to operate these waste treatment facilities, it seems that relevant skills from other industries may be combined with smaller waste companies which could form consortia to bid for contracts. What the OFT recommended was that local authorities should be open to those sorts of bids in order to widen the supply base and try to achieve their objective of trying to get these treatment facilities in place.

Another market based approach is tradable permit where in the UK scheme it's not just firms but anyone can register to be a trader of permits; there was hope by putting that design feature in, the new entrants would have a source to buy from which would not be one of their competitors basically. Also the UK scheme includes a range of green house gases with exchange rates for the different types of gases.

According to the UK delegate, environmental policy tools can use competition to a greater or lesser extent, but the real key is how to design and implement those in practice. In this respect competition advocacy is an important element. He reported that the OFT has recently published its report, which was welcomed by the Environment Department Minister

**Chairman Jenny** invited Korea to describe its advocacy efforts, noting the status of the Korean Fair Trade Commission at the Cabinet level, which is high enough to enable it to intervene at the upstream level before competition problems arise.

The **Korean Delegate** emphasised that many coordination mechanisms exist in Korea. The most important one is the intergovernmental regulation consultation mechanism under the Korean Fair Trade Law. Under Section 53 of the Korean Fair Trade Law, any Ministry including the Ministry of Environment willing to introduce device regulations which contain anti competitive provision elements must hold prior consultations with the Korea Fair Trade Commission. In 2004, 430 cases of environmental laws and

regulations were introduced. The KFTC expressed opinion regarding 44 cases and out of those its opinion was fully or partially accepted in 33 cases.

**Chairman Jenny** invited Japan to describe the JFTC's advocacy efforts.

The JFTC believes, reported the **Delegate from Japan**, that it is very important for competition policy to deal with environmental issues in a positive and active manner. It commissioned a study by a Japanese think-tank on the interface between the competition policy and environment protection. First, the report says that, "appropriate environmental policies can improve the effectiveness of the market mechanism thereby enhancing its credibility by correcting the market externality caused by environmental destructions. Such implementations could promote technological innovation and development of related industries. In designing or crafting proper means of internalizing the cost of environment destruction is a market combining multiple policy tools of conservation including of course competition policy is effective." As a result, the report suggested that in addition to legal enforcement of anti monopoly act in the environmental field several specific issues should be addressed by competition policy or the JFTC: First, a clarification of the basic approach of the Japanese anti monopoly act to joint activity by farmers for attacking various environmental issues; and second, advice and proposals on implementation measures of environmental policy in the light of competition policy.

The Delegate also stressed that the JFTC has been taking every opportunity of communicating with the Ministry of Environment to express views on environment related matters. One recent example of coordination concerns the proposed regulation for promoting measures to cope with global warming. In Japan, the regulation was introduced in April 2006 as one step for containing the emission of green house gas. That regulation required that firms over a certain size calculate and publish the volume of their emissions of greenhouse gases. One of the most significant greenhouse gases is carbon dioxide and the first issue was how to determine the 'emission coefficients' to be used in calculating the volume of carbon dioxide emitted. In principle, the volumes of carbon dioxide emissions are worked out according to this proposed regulation through multiplying the amount of electricity the undertaking consumes by such coefficient. The determination of such coefficients would be vital to competition in the electricity market in Japan, since by the introduction of this regulation for coping with global warming, customers in the electricity market or undertakings will consider this coefficient as one decisive factor when deciding which suppliers they buy electricity from. This issue is particularly important in light of the competition under the current electricity market in Japan where the total

share of the new entrants still remains quite low even though 6 years have already passed since the electricity market was partially liberalized in 2000. Under that situation the original proposal made by the Ministry of Environment was the following: the emission coefficient be determined differently for each of the 2 groups of electricity suppliers, one group is the incumbent that means, who used to operate in the restrictive regions as monopoly before the partial liberalisation of the electricity market; and the group 2 is the new entrants. Thereby the Ministry proposed that average fee of emission of carbon dioxide of each of the 2 groups was to be used as a coefficient. According to their proposal the coefficient of the incumbent suppliers would be much lower than that of new entrants, because incumbents have nuclear power plants – at least some of them - which emit this carbon dioxide from their power stations. So actually the proposed coefficient for the new entrant group was twice as high as that of the incumbent group. Naturally the undertakings would tend to buy electricity from the incumbent supplier in their region other things equal. So when the JFTC looked at the electricity suppliers individually the emission coefficient of some of the new entrants are actually lower than those of some incumbents; therefore the JFTC argued that the actual figures can't be used and if the actual figures about coefficient cannot be used mainly due to the constraint of the availability of credible data, at least for the time being, the coefficient of the 2 groups – new entrant and the incumbent – should be identical for avoiding a distorting effect on competition in the electricity market. At first the argument encountered strong resistance not only from the Ministry of Environment but incumbents and other related groups. Finally the Ministry of Environment agreed to the JFTC proposals and before the actual figures are used they decided that identical coefficients have to be used for both groups, incumbents and new entrants.

At the invitation of the chair, **the Delegate from Finland** highlighted a number of points. He noted that environmental regulations have a connection to another important issue in Nordic countries, and that is governmentally owned production and productive activities. There has been a general tendency – at least in the Nordic countries– to connect the realisation of environmental cause in the way of governmentally owned production, and thereby monopoly rights have been created with obvious and quite common effects. There are clearly new technological possibilities to enhance the use of waste for example, new possibilities to reach environmental goals and also investment needs are increasing because of regulations, and these regulations are causing very strong demand for new services. It is at this point that the problem of the monopolies and the monopoly way of realising the environmental cause has become so central in Finland. As far as waste management issues are concerned a new legislation

is being worked out, which would really scale down certain parts of the monopoly enjoyed by municipalities as far as waste created by businesses is concerned. Another aspect is that usually environmental regulations come about in a situation where actually meritorious business activities concerning these very environmental effects had already taken place. So it easily happens that the new regulations take the business away of the hands of the businesses that had in a meritorious way actually served these very needs. This problem has emerged in Finland for example in producers' responsibility for junk cars where surely there were lots of entrepreneurs earlier on. The Finnish Competition Authority did persuade the Finnish Diet to impose a new legislative measure to the relevant legislation which is cause for attention to these entrepreneurs and prohibits for example production responsibility of organisation to completely ignore these activities.

Another aspect also concerns producers' responsibility organisation and the particular disadvantages small firms have faced as these requirements have to be met. Concerning the recycling system bottles the FCA contributed to legislative amendments that clearly brought these disadvantages down and opened the Finnish market to competition.

On the tradable emission rights, the active test is going to be about the relationship between newcomers and the incumbents. What is going to be the situation of newcomers? It may be more difficult to switch providers if the emission rights have been distributed according to historical emissions.

The **Delegate from Czech Republic** reported on the electronic waste disposal decree. In September 2005 the Competition Authority received a complaint from a group of lamp producers operating in the CR to investigate a possible creation of an electronic device disposal monopoly. This resulted from the implementation of the Waste Act by the Ministry of Environment. The act imposed an obligation on all producers, importers and distributors of electronics to create a system for joint financing the waste management of electronics items placed on the market before October 2005. All entities involved were imposed an obligation to contribute to the system proportionate to the volume of their current production of electronics. The operation of the system was delegated by the decree to a simple undertaking chosen by the Ministry, hence establishing a real monopoly in this field. The Competition Authority required the Ministry to stop this situation but it was not followed. The Competition Authority and some representatives of electronic producers then asked the Parliament to repeal the Decree. A petition to the Constitutional Court was introduced and the case is now pending.

**The Chair** observed that so far the discussion have touched upon the analytical underpinning of this issue of environmental policy and competition policy; a few cases where clearly the competitive structures were not so consistent with environmental goals were looked at; various instruments, including state subsidies, whereby government could intervene to try to increase the consistency between the competition policy and environment, were discussed, in particular advocacy. He wanted now to turn to two topics also addressed in many contributions, the waste disposal market and the international dimension of the problem.

**The delegate from Germany** described the dual system waste disposal, adding that it is a good example of the interface between competition policy and environmental policy. It was argued to show that those policies can be pursued and balanced. In 1990, thanks to the EU, Germany got a new regulation on packaging which required the manufacturers and distributors to recycle their waste and to reduce the amount of waste. A variety of national collection and recycling system was needed, which gave rise to the German dual system. It was first tolerated because it implemented the packaging regulation, and that was a goal of the legislator. But more competition restraints arose, the manufacturers became shareholders of the DSD and it became a kind of cartel like structure where the customers are also the owners of the DSD. The DSD acquired a monopoly position which resulted in monopoly behaviours such as excessive license fees and the hindrance of new entrants. So the Bundeskartellamt took a tougher approach; it initiated proceedings in all aspects: cartel agreement, abuse of dominant position, boycott proceeding and was very successful. Also the Commission stopped the long term supply contract DSD had with the suppliers. The exclusionary conduct was abolished by the DSD, and new entrants came into the market. The Commission initiated cartel proceedings and made a dawn raid against suppliers who sorted and collected the waste for DSD, which led to a reduction of 20% in the amount of money charged to DSD. Also the excessive license fees were lowered significantly, about 40%, and at the end the chair holder structure changed because the manufacturers sold the DSD to a financial investor altering the cartel like structure. As a result, the customers are now saving up to 500 million euros by lowering the licence fees of DSD.

**The Chair** then gave the floor to Norway which provided an analytical paper on the issue of waste disposal. This paper provides both a competition analysis, but also a review of the different policies that one can adopt.

The **Delegate from Norway** referred to a report on recycling and competition published in 2004 (appended to the Norwegian contribution). Norway's interest in this area can be explained by the fact that extended producers' responsibility was introduced in Norway 10 or 15 years ago. As a result, recycling companies are covering a great number of different products and materials. The arguments put forward in support of Norway's industry-owned recycling companies typically include economies of scale, operational efficiency and avoidance of non participating products for free riding on the recycling system. It was noted that free-riding has been a problem and a number of the recycling companies did not reach their collection targets. One key reason appears to be a lack of incentives, including an absence of sanctions. Looking at the waste disposal market itself, the likeliest problem with organising industry-wide recycling companies is that a monopoly may result in high costs and high prices than would be delivered by a competitive market. This is supposed to be hindered by the fact that the recycling systems are non profit companies, so the risks would not be so much monopoly profits but the rather excessive investments or other costs leading to higher prices than necessary. Several of the companies had provisions that any profit shall be used in developing the company. Some have engaged in activities out of their core business. Although few examples were found of formal barriers to entry for competing recycling systems, potential new comers find it very difficult to enter the market. In some instances the authorities have granted first advantages in form of direct economic support for other services which later competitors don't enjoy. There is a requirement that recycling system must be nationwide, which increases the costs as well. The agreement between the environmental authority and the industry also tends to give the industry owned company an advantage in itself.

Furthermore the dominant market participants can employ various strategies to prevent new entry, for instance by aggressive pricing. The competition authority is currently investigating a complaint against one of the few recycling companies that faced some competition where it is alleged that a 75% reduction in fees by the dominant company constitutes predatory pricing.

Another issue as far as the waste collection market is concerned, is the buying power recycling companies have of entering into contracts with subcontractors on behalf of an entire industry. This may lead to high concentration on the supply side as well. It was suggested that a tyre recycling company revises its contract strategy as it had entered into a 7 year contract with only one nationwide supplier.

Moving on to competition problems in the underlying product market most problems were pricing issues. The competition problem here is that cooperation in the recycling company is based on coordination of part of the product price. The organisation of the recycling companies makes it very easy to pass on the entire costs of the recycling to the consumers and several recycling companies had more or less explicit agreements with their members to identify the so called environmental fee separately on the invoices. Such a practice is particularly attractive if it is possible directly or indirectly to transfer the recycling company surplus to its owners. Examples exist of recycling companies retroactively returning earnings to its owners. Recycling companies can also indirectly transfer earnings to its owners by assuming tasks that members would otherwise have to perform, such as lobbying or joint marketing of the industry environmental profile. At the outset of our investigation several recycling companies had built up considerable funds without a very clear reasoning as to why this was necessary.

In general organising industry wide recycling companies will facilitate exchange of information that may harm competition and facilitate joint understanding among participants in product markets. The investigation however shows the relatively high degree of awareness with respect to avoiding exchange of concrete market information among the participants. Nevertheless the Authority recommended that the companies bring in independent board members to improve transparency within the companies. The competition, as to environmental friendliness, is also reduced with this organisation; industry owned recycling companies will typically find it hard to differentiate prices based on the costs of collecting and recycling.

Entry into the product market may be more difficult as well. There are examples of potential abuse of conduct by the joint collecting system set up by different packaging recycling companies and the Competition Authority is currently investigating a complaint against the tariff structure in the recycling system for reusable PET bottles allegedly favouring the dominant producers that are also the owners.

In the 2004 report, the Competition Authority tried to help environmental authorities considering different approaches, taking into account the full cost of the environmental harm of waste. The authorities could introduce an environmental tax on harmful products that also reflects the environmental damage of the products that are not recycled. If the discarded products are treated properly a portion of the tax could be refunded. A refundable tax would also facilitate competition in collection and recycling as collectors would compete for discarded products, and consumers, if offered the refund,

would have stronger incentives to recycle. Creating a value chain for discarded products in this way would eliminate the problem of free riding, allow for competition on environmental friendliness as well as disconnect the waste market from the product market.

The main implication for competition policy, based on the Norwegian experience in investigating and advocating in this case, is the need for a closer cooperation between environmental and competition authorities. It is difficult to enforce competition rules on cooperative arrangements that have been promoted and in fact are viewed as highly successful by another part of the government. An important outcome of the process is however that there is now a much clearer understanding that recycling companies have to adhere to competition rules both within the environmental authorities and among companies. The idea of a radical new approach as sketched before did not receive a great deal of enthusiasm by environmental authorities. Problems in estimating harms to the environment for all the different products and administrative costs in the Norwegian refundable tax system were pointed out as the main problems. The political advantage of a strategy based on so called voluntary agreements among governmental industries is also put forward. Also the introduction of a similar approach in EU regulation and in other European countries is put forward in favour of the existing Norwegian system.

The Pollution Control Authority has, as a response to our report, declared that if new recycling systems are to be established in the future, priority will be given to products that have potential to cause serious environmental harm. In its report on the environment to the Parliament in 2005, the government declared its intention to consider how a greater degree on competition can be introduced in this area.

**Chairman Jenny** turned to Sweden and South Africa to discuss the international dimension of the problem and quoted the Swedish submission which expressed a pressing need for harmonisation of environmental rules “as Swedish enterprises otherwise risk being left in a relatively worse competitive position in the increasingly open European market”.

The **Representative from Sweden** pointed out that most environmental problems are of an international character and therefore much of the environmental politic deals with harmonisation. Similarly, harmonisation is very important from a competition policy perspective when several companies are in the same market but abiding different laws under different regulatory regimes. This may foster some unfair competition and this problem tends to grow as geographical markets grow.

The survey from the Swedish agency for economic and regional growth, performed on a government mandate shows that Swedish enterprises feel there is considerable room for interpretation in the environmental legislation and this leads actually to local differences and unclear guidelines for business operating nationwide in Sweden (much of environmental legislation in Sweden is applied at a local or regional level).

The need for harmonised rules is particularly pressing in the case of Sweden, as is the case of any country with a relatively high environmental protection.

Taxation in the transportation sector is an example where harmonisation is to be wished. The transportation sector has been international for a very long time and taxes often have underlying environmental reasons; the purpose may be to internalize external effects to the environment. SCA has argued in this case that taxation should be, as far as possible, the same for domestic and foreign transporters.

SCA has also requested that regulations in the waste management sector be clarified, better implemented and harmonised.

SCA has recommended that eco-labelling systems be harmonised if possible to avoid reinforcing the demarcation of national markets. For the Swedish Competition Authority, competition is not only an efficient means to lower prices but also it can result in high quality products that are friendly to the environment.

The Swedish delegate concluded by saying that the interests of competition and environment are typically complementary, and the conflicts between the two policies can often be avoided. Different environmental policy instruments can be more or less competition friendly and in that respect, economic instruments lead to lower costs for the environmental policy and are in general more competition friendly.

**The delegate from South Africa** argued that in an international context developing countries are concerned about the ability to trade and the risk that environmental laws may act as another tariff. Harmonisation is one approach but it may impact on the domestic market. In South Africa, where a number of environmental protection provisions are scattered across a number of pieces of legislation; there is a need for a greater political coordination. Also, a proper competition analysis as well as an impact assessment must be done before developing advocacy efforts.

**Chairman Jenny** invited MM. Heyes and Davies to react to the discussion.

**Professor Heyes** picked up the harmonisation issue. There is always a presumption that harmonisation is a must but it is also important to remember why countries are putting regulations in place: to protect local environment, the places where people live. It is legitimate that different places should have different feelings about how clean their local environment should be.

The second issue relates to the belief that economic instruments are necessarily always more competition-friendly than old style regulations.

**Mr Davies** picked up the issue of competitiveness vs. competition policy. This is a factor in the EU ETS scheme that has to do with the national allocation plans that countries produce. Those national allocation plans are not shaped by competition policy but by concerns about competitiveness within sectors and of course industrial sectors. And it's this very competitiveness that has turned that particular aspect, the distribution aspect to the certificates in the EU ETS into a very contentious and complicated situation.

He also noted the Norwegian idea to implement a tax system as an alternative to the existing organisation of the recycling, and the fact that it was not followed for political reasons.

In conclusion, **Chairman Jenny noted** that a lot of thinking has been going on in many countries, not only on how to enforce competition law with respect to environmental matters but also how to devise an optimal system. Significant advocacy efforts have been pursued with some success. There was also a lot of commonality of views on the fact that, with all the respect for environmental goals, competition authorities would like to find practical ways to make environmental policy as consistent as possible with competition policy, and to assess them.

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