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FOREWORD

This document comprises proceedings in the original languages of a Roundtable on Environmental Regulation and Competition, held by the Competition Committee in June 2006.

It is published under the responsibility of the Secretary General of the OECD to bring information on this topic to the attention of a wider audience.

This compilation is one of a series of publications entitled "Competition Policy Roundtables".

PRÉFACE

Ce document rassemble la documentation dans la langue d'origine dans laquelle elle a été soumise, relative à une table ronde sur la réglementation de l'environnement et concurrence, qui s'est tenue en juin 2006 dans le cadre du Comité de la concurrence.

Il est publié sous la responsabilité du Secrétaire général de l'OCDE, afin de porter à la connaissance d'un large public les éléments d'information qui ont été réunis à cette occasion.

Cette compilation fait partie de la série intitulée "Les tables rondes sur la politique de la concurrence".

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EXECUTIVE SUMMARY

by the Secretariat

Considering the discussion that took place at the roundtable, the delegates' submissions' and the background papers, several key points emerged. Amongst them:

- (1) *Competition and environmental policies are complementary. They seek to correct market failures and enhance social welfare.*

The objectives of competition and environmental policies are complementary. There was widespread agreement that competition and environmental policies shared common fundamental objectives – the maximisation of some measure of social welfare. These policies also share a common rationale for policy intervention, to correct market failure. The aim of competition policy is to correct distortions due to the exploitation and pursuit of market power. The aim of environmental policy is to correct for environmental externalities (that individual firms generally have insufficient private incentive to protect the natural environment). Ideally, environmental policymakers would not implement policies that needlessly restrict competition in some way.

However, it must be recognised that it may not always be possible to secure public environmental benefits without affecting the degree of competition in the market. For instance, many of the markets in which environmental concerns are significant (e.g. waste management, municipal wastewater, etc.) are subject to indivisibilities and economies of scale. In such settings competitive markets may be inefficient, and economic (i.e., not just environmental) regulation will be necessary to secure efficiency. In other cases, natural resource stocks may be better conserved by restricting access to the resource to selected agents. It is well-understood, for example, that competition for resource will lead to over-exploitation of a commons, such as a fishing ground or a forest, unless incentives are put in place to prevent it. In settings where such incentives are hard to establish, or enforce, restricting access to the commons may be desirable.

- (2) *Environmental regulations can however reduce competition in markets through diverse channels, raising prices for consumers. They may create barriers to entry into particular markets and increase concentration.*

Environmental regulation can *increase concentration*. Evidence suggests that the impact of environmental regulation is unequally distributed across firms with similar environmental characteristics. Larger local firms tend to be less affected than smaller firms, foreign firms, and potential new entrants; a large body of econometric and other evidence points to the importance of size. The preponderance of the available evidence is that large firms face lower per unit costs of compliance. The competitive advantage that is conferred on large over small firms by economies of scale can be expected to lead to increased concentration and decreased competition. In fact, increased cost of compliance with environmental regulations has been associated with higher profits for the largest firms.

Environmental regulation can *raise barriers to entry*. It is frequently asserted that particular environmental regulations can advantage firms in an industry versus those outside. As with other

barriers to entry they can provide shelter ‘behind’ which incumbent firms can make supernormal profits. Environmental regulations can impact entry (and exit) conditions directly. There are at least three broad channels through which this can happen. First, environmental regulations can increase sunk (unrecoverable) costs associated with entry. Second, they can generate cost differentials between entrants and incumbents, putting prospective entrants at an obvious competitive disadvantage and therefore deter entry. These might, for example, be due to ‘learning’ about how to comply with complex regulations. Third, they can slow down the process of entry and exit: In many settings red-tape and procedural consideration - licensing, certification *etc.* – can impose not just a monetary cost on prospective entrants, but also slow down the speed at which entry can occur. At a minimum this can delay the time at which the benefits from competition are derived, but may also serve to diminish entry incentives.

Because of the above effects, in addition to its effects on abatement costs, environmental rules can also raise prices to consumers by reducing the degree of competition in the market. Any assessment of the costs and benefits of an existing or proposed environmental rule is therefore incomplete without an analysis of the costs generated by any resulting reduction in competition.

- (3) *Environmental regulation can also give rise to anticompetitive practices. They can be misused in predatory schemes to exclude or disadvantage rivals and also facilitate price-fixing and other collusive schemes.*

Environmental regulation can provide a *platform for predation*. For example, firms have sometimes misused environmental protection mechanisms in efforts to acquire market power. For example, the petroleum company Unocal was charged by the US FTC with abusing California’s environmental protection program to get that state to require refiners to use the firm’s proprietary process

In Germany, the firm Duales System Deutschland GmbH (DSD) was prosecuted by the Bundeskartellamt once it acquired a monopoly position in waste collection and recycling, charged excessive license fees and hindered new entrants. The BKA began proceedings against DSD’s *cartel conduct, abuse of a dominant position and boycotts*. DSD was also prosecuted by the European Commission, which ended DSD’s long term supply contracts and opened the door to new entry. Impacts of these enforcement actions include an end to DSD’s cartel-like ownership structure, a reduction of 20% in charges by suppliers who sorted and collected waste for DSD, and reductions in license fees of about 40%, saving customers up to 500 million euros.

More generally, there is concern that firms will affirmatively seek to encourage new environmental rules that will have a disproportionate effect on their rivals, *raising rivals’ costs* more than their own and therefore conferring a competitive advantage. Or, alternatively, attempt “cheap exclusion” – obtaining monopoly power through processes that are relatively inexpensive and that have no plausible efficiency justifications. Exclusionary conduct featuring the misuse of governmental rules is relatively cheap to the firm, since it does not require investment in business capability and benefits from the presence of government authority to enforce it.

- (4) *Competition authorities take environmental regulations into account in their everyday work but do not provide special consideration for environmental impacts or “environmental overrides”.*

Environmental regulations change the business environment in a variety of ways and must therefore be taken into account in the everyday work of competition authorities. In merger review, licensing requirements and environmental reviews can slow entry significantly, which must be taken into account when evaluating the potential competitive impact of a merger. For

example, the US DOJ stated that the requirement to obtain permits to build or operate facilities presents a substantial impediment to entry that has a material effect on the evaluation of the competitive effect of mergers of firms.

Competition agencies in a number of countries – such as the OFT in the United Kingdom in the context of ‘market studies’ – routinely have the opportunity to consider the competition impacts of environmental rules and regulation.

Competition laws do not however provide special consideration for environmental impact or “environmental overrides”; rather, standard analysis is used in cases with an environmental dimension. For example, a merger of Swiss battery recyclers was permitted on the basis of the failing firm defence, not environmental grounds. A merger of South African granite producers was permitted because production efficiencies outweighed anti-competitive effects, although there were ancillary environmental benefits. And firms which go into joint ventures under the impetus of environmental rules might benefit from standard exemption provisions applied to horizontal agreements, as happened concerning a Turkish LPG terminal.

The conduct of firms created in response to environment regulations is likewise subject to regular competition law enforcement, as in the German *DSD* case discussed above.

- (5) *Environmental policies should be designed to achieve their aims without unnecessary restrictions of competition. Competition authorities should help environmental agencies and legislatures find ways to achieve environmental objectives which are least restrictive of competition*

The recognition of the interactions between competition and environmental policy outcomes points to the need to coordinate policy to ensure that goals of environmental policy are achieved without unnecessary restrictions of competition. The roundtable provided a number of examples of how particular environmental policies have been or could be redesigned to reduce their impact on competition.

Environmental authorities do routinely assess the costs and benefits of their regulations. But measuring only the direct costs of compliance does not account for the impact of such a requirement on sunk costs to entry and therefore impacts on market structure in affected sectors. Such studies can, then, miss a substantial part – perhaps in plausible settings the majority – of the ‘full’ economic costs associated with the new regulation. As discussed above, shifts in the cost of entry can lead to markets with fewer firms and lower output. The resulting increase in market concentration can have far-reaching welfare effects beyond the initial, direct cost of compliance. Thus, environmental regulatory agencies should routinely conduct competition impact assessments of their environmental proposals.

Competition authorities could assist in such assessments. Competition authorities have had a limited role in the design of environmental regulations, but where that has occurred improvements have resulted. For example, in waste treatment markets in the United Kingdom, the OFT advised local authorities how to expand the base of potential suppliers, which could intensify competition in the procurement market and reduce costs. In Japan, the JFTC helped the Ministry of Environment to revise “emission coefficients” which otherwise would have reduced competition in the electricity market by benefiting incumbent suppliers at the expense of new entrants.

Competition authorities have also been active before legislatures in reducing anticompetitive effects of environmental protection. In Finland, for example, the FCA persuaded the Diet to

amend legislation concerning the recycling of automobiles and recycling of bottles to help restore competition in both markets while meeting environmental objectives. Likewise, the Czech authority is seeking the revision of an electronic waste disposal scheme which establishes a disposal monopoly and disadvantages new entrants.

SYNTHÈSE

par le Secrétariat

Les débats de la table ronde, les présentations des délégués et les documents d'information ont fait apparaître plusieurs points essentiels :

- (1) *Les politiques de la concurrence et de l'environnement sont complémentaires. Elles visent à corriger les dysfonctionnements du marché et à améliorer le bien-être social.*

Les politiques de la concurrence et de l'environnement ont des objectifs complémentaires. Les délégués se sont accordés sur le fait qu'elles partagent un objectif fondamental : optimiser dans une certaine mesure le bien-être social. Les interventions dans le cadre de ces politiques partagent aussi la même motivation : corriger les dysfonctionnements du marché. L'objectif de la politique de la concurrence est d'éliminer les distorsions dues à la recherche et à l'exploitation d'un pouvoir sur le marché. Celui des politiques environnementales est de corriger les dysfonctionnements associés aux externalités environnementales (les incitations internes aux entreprises en faveur de la protection de l'environnement étant en général insuffisantes). En principe, les responsables des politiques environnementales ne devraient pas appliquer de mesures qui, d'une façon ou d'une autre, limitent inutilement la concurrence.

Il faut reconnaître cependant qu'il n'est pas toujours possible de se procurer les avantages collectifs de l'environnement sans influencer sur le degré de concurrence sur le marché. Par exemple, de nombreux marchés caractérisés par d'importants aspects environnementaux (gestion des déchets, eaux usées municipales, etc.) présentent des indivisibilités et des possibilités d'économies d'échelle. Dans de tels contextes, des marchés concurrentiels peuvent être inefficients, et des réglementations économiques (autres qu'environnementales) seront nécessaires pour en assurer l'efficacité. Dans d'autres cas, la meilleure façon de conserver les stocks de ressources naturelles est d'en limiter l'accès à certains agents. On sait par exemple que la concurrence qui s'exerce pour l'obtention des ressources conduit à la surexploitation de biens communs, tels que lieux de pêche ou forêts, à moins que des incitations ne l'empêchent. Dans des contextes où il est difficile de mettre en place ou d'appliquer de telles incitations, il peut être souhaitable de restreindre l'accès aux ressources communes.

- (2) *Les réglementations de l'environnement peuvent cependant limiter la concurrence sur les marchés de diverses façons, et se traduire par une hausse des prix pour les consommateurs. Elles peuvent créer des obstacles à l'entrée sur des marchés particuliers et accentuer la concentration.*

Les réglementations de l'environnement peuvent *accentuer la concentration*. Les données dont on dispose montrent que leurs effets ne sont pas équitablement répartis entre les entreprises aux caractéristiques environnementales similaires. Les grandes entreprises locales sont souvent moins touchées que les petites entreprises, les entreprises étrangères et les entreprises nouvellement créées ; de nombreuses données, économétriques et autres, font apparaître l'importance de la taille de l'entreprise. Dans l'ensemble, les éléments disponibles indiquent que les coûts unitaires de mise en conformité sont moins élevés pour les grandes entreprises. On peut

supposer que l'avantage concurrentiel que confèrent les économies d'échelle aux grandes entreprises conduisent à une plus grande concentration et à une réduction de la concurrence. En fait, les coûts accrus de mise en conformité avec les réglementations environnementales sont associés à une hausse des bénéfices des grandes entreprises.

Les réglementations de l'environnement peuvent *accroître les obstacles à l'entrée*. Il est souvent affirmé que des réglementations particulières de l'environnement peuvent avantager les entreprises présentes dans un secteur par rapport à celles de l'extérieur. Tout comme d'autres obstacles à l'entrée, elles constituent parfois une protection qui permet aux entreprises déjà en activité de réaliser des bénéfices exceptionnels. Les réglementations de l'environnement peuvent agir directement sur les conditions d'entrée (et de sortie), de trois façons différentes au moins. Premièrement, elles peuvent augmenter le montant des fonds perdus (irrécupérables) associés à l'entrée sur le marché. Deuxièmement, elles peuvent produire des différentiels de prix entre les entreprises en place et les nouvelles venues, plaçant ces dernières en situation de désavantage concurrentiel manifeste, et les dissuadant ainsi de s'implanter sur le marché. Il peut s'agir par exemple de « l'apprentissage » nécessaire pour respecter des réglementations complexes. Troisièmement, elles peuvent ralentir le processus d'entrée et de sortie : dans de nombreux cas, les formalités et les procédures (obtention de licences, certification, etc.) se traduisent non seulement par des coûts financiers pour les arrivants potentiels, mais risquent en outre de freiner leur entrée. Au minimum, elles retardent le moment où la concurrence commence à porter ses fruits, mais peuvent aussi diminuer les incitations à entrer sur un marché.

En raison des effets énumérés ci-dessus, les réglementations de l'environnement peuvent, en réduisant la concurrence, se traduire par une hausse des prix pour les consommateurs, qui s'ajoute aux coûts de la lutte contre la pollution. Toute évaluation des coûts et des avantages d'une réglementation de l'environnement, en vigueur ou en projet, est donc incomplète si elle ne comporte pas un examen des coûts générés par la diminution de la concurrence susceptible de résulter de la réglementation.

- (3) *Les réglementations de l'environnement peuvent aussi donner lieu à des pratiques anti-concurrentielles. Certains peuvent en faire un usage abusif dans le cadre de dispositifs d'éviction destinés à exclure ou à désavantager des entreprises rivales, et aussi à faciliter les ententes sur les prix et d'autres systèmes de collusion.*

Les réglementations de l'environnement peuvent constituer un *cadre favorable aux comportements d'éviction*. Il arrive par exemple que des entreprises fassent un usage abusif des mécanismes de protection de l'environnement pour acquérir un pouvoir sur le marché. Aux États-Unis, la FTC (Commission fédérale du commerce) a ainsi accusé la compagnie pétrolière Unocal de se servir abusivement du programme de protection de l'environnement de la Californie pour obtenir de cet État qu'il demande aux raffineries d'utiliser des technologies dont la compagnie détenait la propriété intellectuelle.

En Allemagne, le Bundeskartellamt a engagé des poursuites contre l'entreprise Duales System Deutschland GmbH (DSD) qui se trouvait en situation de monopole dans le secteur de la collecte et du recyclage des déchets, fixait le montant des redevances à un niveau excessivement élevé et faisait obstacle à l'entrée de nouvelles entreprises sur ce marché. Le Bundeskartellamt a engagé ces poursuites à l'encontre du DSD pour *entente, abus de position dominante et entrave à la libre concurrence*. La Commission européenne a également poursuivi le DSD, procédure qui a mis fin aux contrats de longue durée dont il bénéficiait et a ouvert le marché à de nouvelles entreprises. Cette action a eu pour effet de modifier la structure de l'actionnariat du DSD, analogue à une entente, de réduire de 20 % les charges supportées par les fournisseurs chargés de trier et de

collecter les déchets pour le DSD, et de faire baisser de 40 % environ le montant des redevances, d'où une économie de 500 millions d'euros pour les clients du DSD.

De façon plus générale, on peut craindre que les entreprises ne cherchent à encourager de nouvelles règles environnementales susceptibles d'avoir un effet disproportionné sur leurs rivales, en *faisant monter les coûts encourus par ces entreprises concurrentes* par rapport aux leurs et en créant ainsi un avantage concurrentiel. On peut craindre aussi qu'elles ne recourent à l'exclusion à bon marché, en obtenant un pouvoir de monopole par des procédés relativement peu coûteux sans justification plausible d'efficacité. Les comportements d'éviction reposant sur l'exploitation abusive des réglementations publiques coûtent relativement peu à l'entreprise, car ils n'exigent pas d'investissements de renforcement des capacités et tirent parti de la présence des autorités chargées de l'application de ces réglementations.

- (4) *Les autorités de la concurrence tiennent compte des réglementations de l'environnement dans leur travail quotidien mais pas particulièrement des impacts sur l'environnement ou des considérations d'environnement prévalentes.*

Les réglementations de l'environnement modifient les conditions d'activité des entreprises de diverses manières et doivent donc être prises en compte dans le travail quotidien des autorités de la concurrence. Dans les enquêtes sur les fusions, les conditions d'attribution de licences et les études d'impact sur l'environnement peuvent ralentir considérablement l'entrée, ce qui doit être pris en considération pour évaluer les effets possibles d'une fusion sur le plan de la concurrence. Le ministère de la Justice des États-Unis a par exemple affirmé que l'obligation d'obtenir un permis pour construire ou exploiter des installations constituait un obstacle réel à l'entrée, qui influe sur l'évaluation des effets des fusions d'entreprises sur le plan de la concurrence.

Dans de nombreux pays, les organismes chargés de la concurrence – comme l'OFT au Royaume-Uni, dans le cadre des « études de marché » – ont automatiquement la possibilité d'envisager les incidences sur la concurrence des règles et réglementations environnementales.

Cependant, le droit de la concurrence ne prévoit pas de tenir spécialement compte des impacts sur l'environnement ou des considérations d'environnement prévalentes ; il recommande plutôt l'utilisation d'analyses standards dans les situations qui comportent une dimension environnementale. Par exemple, la fusion d'entreprises suisses de recyclage de piles usagées a été autorisée sur la base des arguments de l'entreprise défaillante, et non pour des motifs environnementaux. La fusion de producteurs sud-africains de granit a été autorisée parce que les éléments d'efficacité productive compensaient les effets anti-concurrentiels, même s'il existait aussi des avantages sur le plan de l'environnement. Et les entreprises qui concluent des accords de participation sous l'impulsion des règles environnementales peuvent bénéficier de dispositions standards d'exemption s'appliquant aux accords horizontaux, comme cela s'est produit dans le cas d'un terminal GPL turc.

De même, le comportement des entreprises créées sous l'influence des réglementations de l'environnement fait l'objet de contrôles réguliers de la bonne application du droit de la concurrence, comme dans l'affaire de l'entreprise allemande DSD mentionnée ci-dessus.

- (5) *Les politiques environnementales doivent être conçues pour atteindre leurs objectifs sans restreindre inutilement la concurrence. Les autorités de la concurrence doivent aider les agences et les organes législatifs chargés de l'environnement à trouver les moyens les moins restrictifs pour la concurrence d'atteindre les objectifs de protection de l'environnement.*

Compte tenu des interactions reconnues entre les politiques de la concurrence et de l'environnement, il faut assurer une coordination qui permette de garantir que les objectifs des politiques environnementales soient atteints sans restriction inutile de la concurrence. La table ronde a permis de montrer, par plusieurs exemples, comment il est possible de revoir des politiques environnementales pour atténuer leurs effets sur la concurrence.

Les autorités chargées de l'environnement évaluent systématiquement les coûts et les avantages de leurs réglementations. Cependant, en mesurant uniquement les coûts directs de mise en conformité, elles ne tiennent pas compte des incidences de la réglementation sur le montant des fonds perdus associés à l'entrée sur le marché ni, par conséquent, sur la structure du marché dans les secteurs touchés. De telles évaluations risquent ainsi d'omettre une part substantielle (voire l'essentiel) du coût économique total associé à la nouvelle réglementation. Comme on l'a montré plus haut, la modification du coût d'entrée risque de créer des marchés où les entreprises seront moins nombreuses et la production plus faible. Ce renforcement de la concentration pourrait avoir des effets considérables sur le bien-être social, au-delà des coûts initiaux directs de mise en conformité. C'est pourquoi les organismes de réglementation de l'environnement devraient procéder systématiquement à des évaluations d'impact sur la concurrence de leurs propositions de réglementation.

Les autorités de la concurrence peuvent contribuer à la réalisation de telles évaluations. Elles jouent un rôle limité dans l'élaboration des réglementations environnementales mais, lorsqu'elles y prennent part, apportent des améliorations. Dans le cas de marchés de traitement des déchets au Royaume-Uni, par exemple, l'OFT a conseillé aux autorités locales d'élargir la base de fournisseurs potentiels, pour intensifier la concurrence et réduire les coûts. Au Japon, la JFTC a aidé le ministère de l'Environnement à réviser les « coefficients d'émission » pour éviter de réduire la concurrence sur le marché de l'électricité en favorisant les fournisseurs en place au détriment des nouveaux entrants.

Les autorités de la concurrence ont aussi agi avant les organes législatifs pour atténuer les effets anti-concurrentiels des politiques de protection de l'environnement. En Finlande, par exemple, le FCA (Bureau de la concurrence) a persuadé la Diète de modifier la législation sur le recyclage des véhicules automobiles et celui des bouteilles, pour rétablir la concurrence sur ces deux marchés tout en respectant les objectifs de protection de l'environnement. De même, les autorités tchèques cherchent à modifier un dispositif électronique d'élimination des déchets qui crée un monopole dans ce secteur et désavantage les nouveaux entrants.

BACKGROUND NOTE¹

1. Background

Over the past three decades environmental issues have emerged as critical features of the business environment. This is true across all areas of activity, but particularly in sectors such as chemicals, natural resource extraction, energy generation and transportation, which can have potentially significant impacts upon the natural environment.

The natural environment places not just direct constraints upon the conduct of various activities, but also indirect constraints through regulatory response. In an effort to conserve natural resource stocks and environmental quality, regulatory authorities intervene in the market in a myriad of different manners. It is therefore natural to expect that the way in which the environment is regulated should have a substantial impact on the pattern of business behaviours and practices in affected sectors.

Indeed, environmental regulation in the modern world is a major activity of government.² In order to secure public environmental benefits, this regulation can sometimes place a significant cost burden on business. Indeed, even if a given environmental policy is welfare-improving overall, the effects on particular markets can be considerable. Firms may be subject to several layers of environmental laws and regulations imposed by different tiers of government – from municipal, to state or provincial, to federal or national, through to the imperatives of international environmental agreements. Those strictures are incorporated in explicitly ‘environment’ rules and regulations, and are also bound up more generally in, for example, the laws of tort and nuisance, strictures on land use and the planning process.

The key points that will be made here are as follows:

- Environmental protection and competitive operation of markets are two high policy priorities, and objectives in the two policy spheres are complementary. Both are concerned (as with all public policy) with social welfare maximisation. Environmental regulation is about correcting the market failure associated with environmental externalities competition policy about promoting consumer welfare and efficiency by fighting anti-competitive practices and regulations.
- There are convincing bases in economic theory, and evidence from case study and econometric analyses, to conclude that, depending upon their design, environmental regulations can constitute substantial **barriers to entry** in some markets, can provide a basis for **predatory behaviour** in some markets and can be harmful to competition and welfare through a **variety of other channels**.

¹ Professor Anthony Heyes of Royal Holloway University of London assisted the Secretariat in the preparation of this report.

² In the United States, for example, the Environmental Protection Agency is the largest regulatory agency with over 18,000 staff and a budget of around \$7 billion.

- Evidence suggests that the impact of environmental regulation is unequally distributed across firms, with similar environmental characteristics. In particular, larger local firms tend to be less affected than smaller firms, foreign firms, and potential new entrants.
- Because of the above effects, in addition to its effects on abatement costs, environmental rules can also raise prices to consumers by reducing the degree of competition in the market. Any assessment of the costs and benefits of an existing or proposed environmental rule is therefore incomplete without an analysis of the costs generated by any resulting reduction in competition.

However, it must be recognised that it may not always be possible to secure public environmental benefits without affecting the degree of competition in the market. For instance, many of the markets in which environmental concerns are significant (e.g. waste management, municipal wastewater, etc.) are subject to indivisibilities and economies of scale such that competitive markets may be efficient, and economic (i.e., not just environmental) regulation will be necessary to secure efficiency. In other cases, natural resource stocks may be better conserved by restricting access to the resource to selected agents. It is well-understood, for example, that competition for resource will lead to over-exploitation of the commons unless incentives are put in place to prevent it. In settings where such incentives are hard to establish, or enforce, restricting access to the commons may be desirable.

The environmental implications of competition policy are important but are beyond the scope of this paper. Rather, this paper focuses on the competition implications of environmental policy. It provides numerous examples in which environmental policy has restricted competition and points to the possibility that those environmental benefits could be derived using less distorting means. Alternative policies could meet given environmental objectives at lower cost, including the costs associated with restricting market competition.

There are therefore gains to the **coordination** of environmental and competition policymaking – and those gains may be very large. How that coordination can best be managed within or between agencies is a matter for discussion.

1.1 Environmental regulation – rationale and a stylised history

Protection of the natural environment has become a central ambition of regulation in most countries in recent years. Many elements of the natural environment (clean air, water, peace and quiet, views) are public or quasi-public goods. In the absence of policy intervention, social cost of use will exceed private cost and the public good will be subject to welfare-reducing over-exploitation (Coase 1960). This phenomenon has come to be referred to as the ‘tragedy of the commons’ (Hardin 1968).

Institutions aimed at protecting the environment have existed for many centuries. Until comparatively recently policy was predominantly ‘command’ based - the regulatory agency placed restrictions upon what a polluting firm could and couldn’t do by, for example, putting a cap on its emissions, mandating particular technologies, or limiting entry to conduct of the activity (Heyes and Liston 2006, Perman *et al* 2003).

The primary objective of an environmental regulatory program is to limit damage to the natural environment. A secondary objective is to achieve that end without generating excessive economic burdens.

Recent decades have seen not just an increased intensity of regulation, but also the application of a much wider set of policy instruments. Dissatisfaction with traditional regulatory instruments - sometimes referred to as ‘command and control’ approaches - grew not out of their inability to deliver the first, but rather the second. In a setting in which firms were different, and those in which firms had private information regarding their costs of operating more cleanly, it seemed likely that the economic burden of

achieving given environmental objectives might be reduced by the adoption of ‘incentive’ or ‘economic’ instruments of one sort or another.³ Economic theory backed up that claim, and incentive instruments have come into widespread use in many countries in the past decade or so.

There is a substantial body of evidence to indicate that environmental legislation has delivered considerable social and economic benefits, including health improvements and reductions in mortality and damage to vegetation and improvements in aesthetics and recreational opportunities (Carlton and Perloff, 1990). There is also a large body of evidence pointing to the fact that the cost-burden of achieving environmental ends has been substantially reduced in many contexts by the use of incentive or economic instruments.

1.2 *Complementary Policies*

The objectives of competition and environmental policies are complementary. Both are concerned - as all public policy should be - with social welfare maximisation. Environmental regulation is about correcting the market failure associated with environmental externality, competition policy about promoting consumer welfare and efficiency by fighting anti-competitive practices and regulations. Ideally, environmental policymakers would not implement policies that needlessly restrict competition in some way.

In almost every jurisdiction the boundaries of agencies are such that environmental regulation and competition law enforcement are the remit of different agencies. But policy governance can still be more ‘joined up’ than those organisational boundaries might suggest.

A basic approach might be to propose that environmental regulatory agencies should routinely conduct competition impact assessments of their environmental proposals. This would at least ensure that there was an awareness of the impact of policymaking in one domain upon activities in the other, and insofar as awareness is better than ignorance such could be progress. But such a proposal, until fleshed out, does not say what the status of those assessments should be, or how the outputs of those assessments should lead to reformulation of proposals in the ‘home’ domain.⁴ Something more thorough-going is required.

The settings here are necessarily ‘**second best**’. There are the distortions associated with market power, and corresponding welfare losses, but there are also distortions and welfare losses associated with environmental externalities.⁵ In these sorts of second best settings general welfare conclusions are notoriously difficult to draw and a lot of case-specific results should be anticipated.

³ These included instruments such as pollution taxes and tradable permits.

⁴ In many places this sort of ‘cross-referencing’ between regulatory areas already happens. In the UK the Office of Fair Trading has a general responsibility for competition issues and if it is concerned about the effect of existing regulations on competition, those concerns can be reported to government, typically as part of a market study. It also comments on competition concerns in the context of draft legislation. Similar provisions and responsibilities exist elsewhere. The Finnish Competition Authority (2004) outlines principles for the competitive impact assessment of regulatory reforms and points to ways in which they could be improved. But in both cases there appears to be no systematic method for the findings of the study to feed through into policy change.

⁵ A second best setting is one in which there are two or more market imperfections (distortions). The ‘Theory of the Second Best’ tells us that correcting one of them may either increase or decrease welfare. The theory was first developed by Lipsey and Lancaster (1956). It is straight-forward to think of examples in our setting. In a competitive but polluting industry the introduction of pollution tax to internalise

1.3 Preliminaries

The aim of this study is to outline the most important channels through which the regime of environmental regulation in place will impact (a) the degree and nature of competition in markets and, (b), the way in which competition policy should be conducted.

The approach taken is to lay out theory, and support it with econometric or case study evidence by example. Examples are provided for illustration and typically they are selected because they have been well studied or documented - no claim is made that they are particularly egregious examples of the phenomenon of concern.

Empirical work – whether econometric, case study or otherwise based – is particularly sparse in this setting. It would not be sensible to conclude from absence of empirical evidence of the significance of a particular channel of cause and effect that the channel is not important. This is an area where the evidence-base is weak.

2. The “Passive” Impact of Environmental Regulation on Competition

Absent explicit efforts by firms to influence or induce the nature or intensity of environmental regulations, we can explore the impacts of such regulations upon market outcomes.

In particular, environmental regulations may:

- Have differential effects on firms with different characteristics (size, capital intensity technique *etc.*) and therefore impact market outcomes in those settings.
- Impact market structure and therefore competition and market outcomes even in settings where firms are *ex ante* identical.

2.1 Firm Size, Compliance Costs and Market Outcomes

The cost of complying with a given rule or regulation is likely to depend on a number of characteristics of the firm in question.

In particular, a large body of econometric and other evidence points to the importance of size.⁶ While it is possible to find impacts of particular regulations that may favour smaller producers, the preponderance of the available evidence is *that large firms face lower per unit costs of compliance.*⁷

environmental externalities is a welfare-improving. But if the industry is monopolised and output is already ‘too low’ from a welfare perspective, then the introduction of such a tax may be welfare-reducing.

⁶ Dean *et al* (2000: 59) identify three classes of reasons why size might matter for unit compliance costs. *Compliance asymmetries* result from differences in compliance costs per unit of output between small and large establishments when regulations are equally applied and enforced across small and large firms (Bartel and Thomas (1987), Pashigian (1984)). *Enforcement asymmetries* result when regulations are enforced unequally across small and large establishments (Finto (1990), Pashigian (1984)). *Statutory asymmetries* reflect differences in the stringency of legislation or regulation that small firms face relative to large ones (Brock and Evans (1985)).

⁷ Various studies have concluded that environmental regulations favour large firms or plants over small ones (Birnbaum (1985), Brock and Evans (1986)), Pittman (1981)). Chakrabarti and Mitra (2005) explore the economic and environmental consequences of pollution control regulation on small industries in the context of an Indian case study.

The stylised fact that per unit regulatory compliance costs tend to be higher at small firms than big ones will in many settings reflect the fact that there are substantial fixed costs associated with compliance. Fixed costs are those elements of a firm's costs that do not depend on its level of output. A small firm is obliged to spread any fixed cost across a smaller number of units. Higher fixed costs imply more significant economies of scale – per unit costs being lower for larger firms – and a higher minimum efficient scale of production.

Those fixed costs will often be due to the 'lumpiness' of the fixed capital used in many environmentally-sensitive industries. Until comparatively recently most regulation was explicitly or implicitly technology-based – attaining a permit requiring use of a particular technology. However, many of these technologies were capita intensive end-of-pipe technologies, implying significant economies of scale (see for example Markusen (1997)).

There may also be administrative economies of scale:

“Administrative economies of scale may also exist in firms' compliance activities. Empirical research has indicated that regulations may affect smaller organisations that lack the specialised resources needed to handle regulatory compliance more severely than large organisations (Birnbaum 1985, Ungson, James and Spicer 1985). The costs of discovering and interpreting relevant regulations and of dealing with regulatory agencies and the paperwork associated with the process have a large fixed-cost component that increases the scale necessary for efficient compliance (Brock and Evans 1986). Firms that can spread these administrative costs over a larger volume of production will gain a per unit cost advantage.”(Dean and Brown (1995: 291)).

There is at least good anecdotal evidence that these administrative economies of scale could be quite significant, and they warrant more careful empirical measurement. The cost advantages can relate to static measures of size and also experience.

An increase in minimum efficient scale is associated with an increase in the degree of concentration embodied in the 'natural market structure' – that market structure which serves to minimise industry-wide costs, Brock and Evans (1986), Chen and Metcalfe (1990).

More generally the competitive advantage that is conferred on large over small firms by economies of scale – here exacerbated by environmental regulatory initiatives – can be expected to lead to increased concentration with pursuant implications for competition and competition policy.

In a well-known study Pashigian (1984) uses careful panel-econometric techniques to assess the impact of both environmental and occupational health and safety regulation programmes in the United States in the 1960's and 1970's. He estimates the weighted average gross pollution abatement cost per thousand dollars of value added and tracks it through time for a set of industries defined at the 4-digit level, and relates these to changes in market structure and to factor shares (the distribution of costs between capital and labour). For details of his results see the Tables in his paper, but he concludes that:

“Compliance with environmental laws has not only reduced the number of plants in the affected industries but has placed a greater burden on small than on large plants. Small plants have found it more difficult to compete and survive with larger plants under environmental regulation. Besides redistribution of within-industry market shares, environmental regulation has increased the use of capital relative to labour,” (Pashigian (1984: 23)).

This is a qualitative result that has been echoed in other empirical studies – regulations tend to hit small firms disproportionately.

The impact on concentration can occur by impacting the output choices of firms already in the industry and/or through altering the patterns of plant births and deaths.

Dean, Brown and Stango (2000) estimated the effect of environmental regulations on the formation of small establishments across 170 manufacturing sectors over a ten year period. Their careful econometric analysis found that "... a greater intensity of environmental regulation is associated with fewer small business formations. There was no effects on the formation of large establishment, however, implying that regulations put small entrants at a unit cost disadvantage" (Dean, Brown and Stango (2000: 56)). In particular, an industry with abatement costs 20% above the mean would experience a level of formations 4% below the mean.⁸

This and other existing studies are incomplete in not going on to assess the impact of the reduction of firm births upon equilibrium market structure. Insofar as an increase in the extent of economies of scale – either their magnitude over a particular range of outputs, or a widening of the range of output over which they can be derived – can be expected to increase market concentration, that will have associated implications for the intensity of competition, and the appropriate conduct of competition policy in that market setting.

2.2 *Quantifying Barriers to Competition at an Aggregate Level*

Without subscribing to a particular theory as to *why* regulation should diminish competition in a particular setting, there are econometric methods that allow such diminution to be identified and quantified.

The first is to use ‘event studies’ to assess the impact of a particular regulatory change upon the stock-market values of traded firms.⁹

The second involves correlating some index of the ‘amount’ of regulation to which a firm is subject, and some other index or measure of the ‘rents’ that a firm commands.

Such exercises are about looking for statistical associations– they don’t aim to uncover *why* regulation generates rents. They can, though, be highly insightful in providing evidence as to the impact of a particular regulatory event (in the first case) or the cumulative body of regulations (in the second) on competition.

Helland and Mayami (2003) use the second approach to examine the impact on competition of environmental regulation in the US in the 1970’s and 1980’s. The dramatic increase in state and federal environmental regulation in the United States during the 1970’s and 1980’s has been well-documented. The period saw the enactment of several major pieces of environmental legislation, in addition to a plethora of smaller ones. As the authors note (page 243): “While compliance costs have been evaluated using case studies of specific law changes and in specific industries ... (W)e examine the role of environmental regulations as barriers to entry using a panel of industries over a 10 year period.”

The dependent variable that they adopt is Tobin’s Q - a measure of firm rents frequently used in financial research.¹⁰ An increase in Q - other things equal - can be interpreted as a softening of the

⁸ List (2003) and Bjorn, Golombek and Raknerud (1998) provide evidence on the impact of environmental regulatory stringency upon entry and exit in various contexts, and references to other research in the area.

⁹ For examples in the context of environmental regulation see Badrinath and Bolster (1996), Maloney and McCormick (1984).

competitive environment in which the firm operates. The independent variable that is the focus of the study – and of primary interest to us here – is the measure of the regulatory burden upon the firm.¹¹ The main results that the authors derive are as follows

- On average in the US for the median firm – as ranked by size - an increase in the cost of compliance with environmental laws has no statistically significant impact upon its Q value.
- For a firm in the top quartile – as ranked by size – a 1% increase in the cost of compliance with environmental laws is associated with an increase in its Q value of between 1.2% and 9.7%, depending upon the ‘type’ of law in question.

The analysis suggests that the impact of regulation is to reduce the overall competitiveness of markets but to the advantage of larger firms, with smaller firms benefiting less or not all.

3. Barriers to Entry

It is frequently asserted that particular environmental regulations can advantage firms in an industry versus those outside. As with other barriers to entry they can provide shelter ‘behind’ which incumbent firms can make supernormal profits.

There are different notions of barrier to entry. Bain (1956: 3) defines them as “... the advantages of established sellers in an industry over potential entrant sellers”. Stigler (1968: 67) refers to “... a cost of producing which must be borne by a firm which seeks to enter an industry but is not borne by firms already in that industry.”

Section 2 identified channels through which environmental regulation might impact the ‘natural’, or industry-wide cost-minimising, market structure. In particular a tendency for regulations to favour firms of particular sizes - most often large firms – was highlighted. For example, anything that adds to the fixed costs of production will widen the range of output over which a producer enjoys economies of scale, increase the minimum efficient scale, and increase the average cost advantage that a larger firm has over a smaller rival.

Such results relate compliance costs to firm size, but do not specifically relate to new entrants versus incumbents. The additional costs apply equally to a small firm that is currently an incumbent. So such considerations may seek to discriminate against smaller producers, but not particularly those seeking to enter.

Here we focus more explicitly on features of environmental regulations that can be expected to impact entry (and exit) conditions directly. There are at least three broad channels through which this can happen:

¹⁰ Tobin’s Q is defined as the ratio of the market value of the firm to its replacement costs (the latter based on accounting data about the value of machines, building, and so on). A value exceeding one means that the market values the firm more highly than the sum of its parts. That differential has a natural interpretation in terms of rent.

¹¹ For this they take US government figures, expenditures on compliance with environmental laws as found in the 1997 Council of Environmental Quality’s Annual Report. That report itself draws on other sources, notably the *Pollution Abatement Costs and Expenditures* report published by the US Bureau of the Census. There are other measures of regulatory burden that could have been adopted. Some authors, for example, have taken cumulative page counts of regulatory orders. There are distinctions in interpretation according to whether you measure capital expenditures, or capital plus variable expenditures, though the authors do not find much difference empirically.

- **Increase sunk costs associated with entry:** Sunk costs refer to those investments that are required for entry, but that a hit-and-run entrant is unable to recoup upon exit. Sunk costs imply imperfectly contestable markets and provide the preconditions for incumbent firms to engage in a variety of entry-detering activities.
- **Generate cost differentials between entrants and incumbents:** put prospective entrants at an obvious competitive disadvantage and therefore deter entry. These might, for example, be due to 'learning' about how to comply with complex regulations.
- **Slow down the process of entry and exit:** In many settings red-tape and procedural consideration - licensing, certification *etc.* – can impose not just a monetary cost on prospective entrants, but also slow down the speed at which entry can occur. At a minimum this can delay the time at which the benefits from competition are derived, but may also serve to diminish entry incentives.

3.1 *Environmental Regulation as a Source of Sunk Costs*

The significance of sunk costs in determining entry conditions is highlighted most explicitly in the theory of market contestability. Contestability theory points to entry conditions – as opposed to market concentration – as the key determinants of incumbent conduct and therefore market performance.

Sunk costs are prevalent in most economic activities. An essential piece of equipment, for example, that has no alternative use and for which there is no second-hand market, would be regarded as entirely sunk. If that piece of equipment could subsequently be converted for use in some other productive activity (albeit a use to which it is perhaps less suited) or sold on a second-hand market, then only the part of the expenditure not recoverable would be regarded as sunk. The same would apply to market-specific knowledge or costly-to-obtain regulatory approvals that have no transferable value.¹²

A 'perfectly contestable market' is one in which there are zero sunk costs. Such a market is susceptible to hit-and-run entry. If supernormal profits are being made in the industry, or if production is not organised in a way that minimises industry-wide costs then an opportunistic raider from can enter the market, undercut the incumbents(s) and take the entire market.

In a perfectly contestable market the incumbent(s), then, is/are obliged to produce in a least cost way and charge Ramsay prices. The incumbent exercises no monopoly power and no supernormal profits are made.¹³ Significantly that is true regardless of market concentration. It is equally true whether the industry is inhabited by a monopolist or by a thousand small firms.

The extent to which a market is contestable is determined, then, by the entry conditions that characterise it. The notion of perfect contestability provides a benchmark against which the implications of imperfect freedom of entry can be contemplated.

¹² The distinction between 'fixed' and sunk costs is a murky one in practice, even though a clean delineation can be made in theory. In particular it is one of degree and time scale. The process of capital depreciation implies that fixed costs are only sunk in the short-run. The question then becomes how short the short-run is, and how the length of commitments to investments compares with the timescale of the instruments of product market competition, *e.g.* price changes; Tirole (1988:308), Besanko *et al* (2000).

¹³ Ramsay prices are those that are welfare-optimal subject to the constraint that the producer breaks even. Whilst the discussion here is related to a single-product firm the analysis applies equally to multi-product settings.

Insofar as a market is not perfectly contestable – to the extent that there are sunk costs associated with entry – the discipline brought to bear upon incumbents, both with regard to productive efficiency and pricing, will be diluted. The extent of dilution will depend positively upon the extent of sunk costs. So raising sunk costs, other things equal, will make entry ‘harder’ and market performance will deteriorate.¹⁴

3.1.1 *Evidence on Sunk Costs and Environmental Regulation*

While the theoretical distinction between sunk and fixed costs is clear enough – and despite the critical significance of ‘sunkness’ to market outcomes – economists have had relatively little success in disentangling the portion of fixed costs that are sunk in practical settings (exceptions include Klimek (2004), Hausman and Stuart (2000)).

The fact that they are difficult to identify econometrically should not be taken as evidence that the magnitude of sunk costs is not a very significant determinant of market structure, however, nor that they cannot be significantly influenced by regulatory climate. We can propose as plausible two general hypotheses:

- In most settings environmental regulation increases the fixed capital required for participation in the activity, and other things equal an increase in fixed capital is likely to be associated with an **increase in sunk costs**.¹⁵
- To the extent that regulatory requirements are ‘embodied’ in capital, and those requirements are jurisdiction- or setting-specific, then increased regulatory requirements can be expected to lead to a **higher fraction of the fixed costs of entry being irrecoverable at exit** (*i.e.* being sunk).

Both point to the ‘amount’ of environmental regulation being positively correlated with an increase in the sunk (not just fixed) cost of entry. This in turn implies less contestability, less free entry conditions and a reduction in the disciplinary effect that potential entry places upon the behaviour of incumbents.

3.1.2 *Example: The US Clean Air Act (CAA) and the Market for Portland Cement*¹⁶

The Clean Air Act gives the Environmental Protection Agency in the United States responsibility for regulating emissions of a wide set of airborne pollutants. It also requires that the Agency assess the costs and benefits of regulation for implementation.

Typically the cost analysis that the EPA conducts is an engineering-based estimate of the expenditures – fixed and flow – that would be needed to render a plant compliant with a proposed requirement.

Such an approach fails to account for the impact of such a requirement on sunk costs to entry and therefore impacts on market structure in affected sectors. Such studies can, then, miss a substantial part – perhaps in plausible settings the majority – of the ‘full’ economic costs associated with the new regulation.

¹⁴ There is a close interdependence between entry and exit conditions. It is the inability or costliness exit, with the sunken portion of investments having to be abandoned, that makes entry less appealing to outsiders and provides the basis for incumbents to engage in entry-detering activities.

¹⁵ A starting point as a rule of thumb might be to think in terms of some fixed fraction of fixed investment costs being also sunk – though note next bullet point.

¹⁶ The analysis in this section is based upon Ryan (2004) and reports his inferences.

Shifts in the cost of entry can lead to markets with fewer firms and lower output. The resulting increase in market concentration can have far-reaching welfare effects beyond the initial, direct cost of compliance.

Estimating such knock-on effects empirically is likely to be very challenging. It requires that the assessor project the flows of firms into and out of the industry, in addition to the growth and behaviour of existing firms that remain, under the assumption that the proposed regulation is promulgated. This then needs to be compared against some ‘business as usual’ counterfactual or, more ambitiously, against the analogous projections under alternative policy scenarios.

Perhaps the most technically ambitious and comprehensive attempt in this area is a retrospective analysis of the impact of the CAA Amendments of 1990 upon the market for Portland cement conducted by Ryan (2004).

Ryan uses sophisticated econometric techniques to estimate a fully-dynamic oligopoly model.¹⁷ The recently-devised estimation techniques that he adopts allow him to estimate the entire cost structure of the industry, including the sunk costs of entry and exit.¹⁸ This can be used to measure the welfare costs of a regulation in the presence of dynamic and market power for the first time.

The cement market in the US is less concentrated than many large polluting industries (paper, petrochemicals aluminium *etc.*) with a Herfindahl-Hirschman Index (HHI) of 466 as reported in the US Economic Census for 1997, though this national measure understates the degree of concentration since transportation costs mean that the industry is effectively segregated into regional markets.

Ryan's estimates suggest that the CAA Amendments of 1990 increased the sunk costs of entry by 35% (from \$120m to \$162m).¹⁹ Thus, the exit of a substantial number of smaller independent producers (in particular those using ‘wet kiln’ technology) in the period was not matched by new entrants, despite increased profitability in the sector. The 10-firm concentration ratio - which had been on a downward trend during the 1980's - rose each year between 1990 and 1995.

“This shift in the distribution of sunk costs is the single most important determinant of market structure in the second (post-Amendment) period ... The parameters neatly rationalise how it is possible to observe lower entry rates when operation in the industry is more profitable than ever” (Ryan (2004: 16)).

In terms of welfare implication, the Amendments are estimated to have caused a 10% loss in consumer surplus, primarily due to the probability of any particular sub-market being inhabited by three or more active firms being eight times less likely post-Amendment.

The present value of being a firm in the market, on the other hand, increased by 4% as a result of the increased market power associated with lower competition from potential entrants. “So not only does the static cost analysis fail to account for the welfare effects of consumers through reduced entry and increased

¹⁷ The methodology is in the tradition of Ericson and Pakes (1995), but adapted to ‘fit’ key features of the cement market, and developed to allow the impact of alternative regulatory innovations to be simulated. He models the interaction of firms in spatially-segregated regional markets in which firms are differentiated by production capacity and compete over quantities in (local) homogenous good markets. He explicitly incorporates fixed costs of entry, exit, and capacity adjustment.

¹⁸ To the best of the current author's knowledge this is the first time that such a recovery has been achieved. It makes it one of the most significant recent papers in empirical industrial organisation.

¹⁹ The *benefits* from entry also increased to reflect the lower amount of competition an entrant would expect post-entry, and this is incorporated in the analysis, but not by enough to offset the increased cost of entry.

market power, it actually gives the *wrong sign* when evaluating the cost to the incumbent firms.” (Ryan (2004: 50)).

Such a study – even if the results are taken at face value – does not mean that the CAA Amendments were necessarily welfare-reducing. Evaluating that question would require a trading-off of the environmental benefits from cleaner air with the ‘full’ economic costs of the program, including the affects on competition. What it does point to is that failing to account for the (in this case) negative impacts of regulation on competition can lead to significant underestimation of the costs and therefore bias the likely results of cost-benefit analyses.

3.2 *Regulation as a Source of Cost Advantage of Incumbents over Entrants*

Another way in which environmental restrictions can constitute barriers to entry and competition is when they treat new entrants - whether that is firms, plants or technologies - in a way that is systematically different from the way in which incumbent or existing firms, plants or technologies are treated.

3.2.1 *Vintage-Differentiated Regulation (VDR) and “New Source Bias”*

A common – indeed prevalent in a number of countries, including the United States - feature of many environmental policy programmes is that the standards for regulated units are fixed in terms of date of entry, with later vintages facing more stringent regulation. Many US environmental regulations, including the 1975 Clean Water Act and 1977 Clean Air Act, place a heavier burden on new pollutant sources than on existing ones, whether large or small (Liroff (1986)).

An extreme form of vintage-differentiated regulation (VDR) is ‘grandfathering’ whereby units coming into operation before some threshold date are exempted from some new regulation or face lesser requirements.²⁰

There are a number of rationales for VDR. The first results from the simple application of cost-benefit criteria to promulgation of standards. The cost of retro-fitting an existing plant to emit less pollution is generally a lot more expensive than ensuring that a new plant has cleaner characteristics as it comes on-stream. Tighter requirements may pass a cost-benefit test when applied to the new plant, but not when applied retrospectively to old ones.²¹ A second relates to perceptions of fairness to owners of existing sources in the face of changing social norms and scientific understanding about pollution and the environment.

Such ‘new source bias’ can be expected to institutionalise a cost advantage of established incumbents over subsequent entrants.

²⁰ Stavins (2005) provides a critical survey of research on the impacts of vintage-differentiation. See also Hsu (2006).

²¹ The same applies in other settings including occupational licensing, consumer product safety laws and tax reforms. Building regulations regarding things like pitch of roof, width of staircase and location of gas vents typically apply to new construction. Ensuring that they are satisfied in a new build context is much cheaper than retrofitting.

3.2.2 *Example: The ‘New Source Review’ Program in the US²²*

The New Source Review Program (NSR) in the context of electricity generation in the US is a widely-studied example of VDR. NSR sets emission control requirements for new sources and for sources that are being expanded or modified. Existing facilities are therefore excluded from new emissions control requirements, so new or subsequently upgraded plant needs to be cleaner than its older counterparts.

A number of studies have investigated the impacts of the NSR Program on a number of dimensions of industry behaviour. The most natural distortions that we would expect are that producers would have an incentive (a) to use older capital more intensively (because newer sources have higher operating costs) and (b) to maintain existing plants beyond the point at which they would otherwise have been retired (since replacement capital would be subject to the new, tougher requirements).^{23, 24}

Our particular focus here – the impact of the NSR on entry conditions – may not have been explicitly studied. The cost distortions identified in a number of studies, however – and including those cited here – have been significant and substantial. This would make it reasonable to claim that the program will be likely to have discriminated against prospective entrants, entering with new plants, and also against existing producers wishing to expand output through construction of new capacity.²⁵

3.3 *Licensing, Certification and Red-Tape*

In many settings the activity of entry and/or exit itself is subject to direct regulatory hurdles on environmental grounds.

In environmentally sensitive settings entry of new producers - or introduction of new products by new or existing firms - will often, and for good reason, be subject to scrutiny. Licensing, certification and related procedures can all generate a regulatory barrier that would-be competitors have to surmount if they wish to compete in a market (Lyon and Maxwell 2004). These can imply both a monetary and time cost. They can also constitute a risky investment if the outcomes of applications are unpredictable.

²² There are plenty of other examples from other jurisdictions. In 1991 the Czech government issued its Clean Air Act (Act 309/1991), which imposed more stringent limits on both existing and new air pollution sources, but differentially so. For new sources the more stringent limits were based on “best available technologies”. Existing source limits were based (initially at least) on the “lowest attainable emission rate under optimum operations given the state of the technological equipment and fuel used”. In other words incumbent firms could use having old or dirty technology to excuse higher pollution levels. See Earnhart and Lizal (2006) for some excellent empirical analysis of the environmental implications of the Czech regulatory reforms of the 1990’s.

²³ Since they create incentives for generators to (a) hold on to old plants longer than they otherwise would and (b) to bias their production in favour of those old plants, the environmental impacts of the NSR have been subject to question. The focus of those interested in NSR explicitly in terms of its environmental merits has been in the extent to which the program has slowed the rate of capital replacement and therefore held emissions levels above what they would have been absent NSR.

²⁴ Nelson, Tietenberg and Donihue (1993) use a panel of 44 electric utilities from 1969 to 1983 to show that regulation increased capital age by 25%. Stanton (1993) presents evidence of significantly higher utilisation requirements. List, Millimet and McHone (2004) and Levinson (1999) provide further empirical evidence.

²⁵ In an excellent overview and analysis Stavins (2005) points to the potential for NSR to act as entry barrier, and in his discussion of it notes that whilst “... it is important to distinguish here between the entry of new firms and the expansion of existing firms, the entry barriers of environmental regulation generally apply to both situations”.

It is also important to note the potential for the licensing/permitting process to increase the risk of regulatory capture. A potentially great advantage of economic instruments is that they provide comparatively little space for discretion on the part of regulatory agencies, and thus little potential for capture. This is particularly the case where there is significant informational asymmetry and receiving a license to operate (and/or the terms of that license) can be the more the outcome of a negotiation than a simple administrative procedure.²⁶

3.3.1 *Example: US Pesticide Approval and Registration*

Critiques of these types of review processes have tended to focus not on the *principle* that review is needed – even at the expense of ease of entry – but on the mechanisms of review and approval.²⁷

Pesticide use in the US is subject to the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), which requires that all pesticides be registered with (approved by) the EPA for the sole purpose of ensuring safety.

Logosmasini (2003) uses a case analysis based on the wood preservative market to contend that the approval process can be used by established firms introducing new products to suppress competition from small firms wishing to continue in competition using existing variants, even where the environmental integrity of those existing variants is not in doubt.

Particular criticism of the impact of pesticide regulation in the US to product availability and competition has come in the context of “minor” uses (Competitive Enterprise Institute, 2004).

3.3.2 *Example: REACH in the EU*

The European Commission proposed a new EU regulatory framework for the Registration, Evaluation and Authorisation of Chemicals (REACH) in October 2003, the aim being to improve the protection of human health and the environment through the better and earlier identification of the properties of chemical substances.

The REACH proposal was designed to give greater responsibility to industry to manage the risks from chemicals and to provide safety information on the substances, obliging manufacturers and importers to gather information on the properties of their substances. Central to the scheme is a centralised database and the establishment of a Chemicals Agency to act as the central point in the REACH system - to run the databases necessary to operate the system, co-ordinate the in-depth evaluation of suspicious chemicals and run a public database in which consumers and professionals can find hazard information.

Whilst there are obvious benefits from such a scheme, the likely cost burden on business has been a subject of dispute.

CEFIC, the chemical industry body in the EU, for example, has been concerned about the additional lags and costs that may be put in the place of product entry. It notes that “Already today, bringing a new chemical to the EU market takes 3 times longer and costs 10 times as much as it does in the United States.”

²⁶ This paper does not address the political-economy issues in any depth. Naturally these can be important and there is a large related literature.

²⁷ Similar debates take place in the context of approval processes for new medicines where there is a clear tension between getting effective drugs to market as soon as possible and ensuring drug safety.

Furthermore it is likely that the process will place a greater burden upon smaller firms than larger ones such that the impact upon market structure – and market performance – may be adverse.

3.4 *Miscellaneous*

Space here precludes an exhaustive listing of the ways in which environmental regulation may deleteriously impact entry conditions. Others might include:

Land-use planning: In many sectors, such as retailing, entry to the activity can require land-use approval. Land-use planning is a primary tool of protecting the quality of local environments.

Planning hurdles can represent a barrier to entry in general, but can also have a particular impact on small, independent entrants, compared to large chains. In the UK, for example: “The issue of supermarket power has been a complete blind-spot for regulators ... the trench warfare required to fight the detail of planning applications wears local authorities down because of the imbalance of resources”²⁸

The Office of Trading in the UK has recently made public its concern that planning regulations could hamper competition and act as a barrier to new entrants. According to the Financial Times (“Focus on Planning Delights Tesco Rivals”, 10 March 2006):

“Asda and Sainsburys have both complained in the past few months that UK planning laws have helped Tesco, which commands more than 30% of the supermarket shopping market, to maintain its dominant position. The OFT seemed to come out in favour of this view yesterday, as chief executive John Fingleton said his ‘primary concern’ about the current state of the market was around barriers to entry at the supermarket level. Mr Fingleton said planning laws made it difficult for new entrants to open stores.” In addition, “...currently, a supermarket can develop a site it already owns without approval from the competition authorities. However, a supermarket must get approval every time it tries to buy a store from a competitor.”

Here, suitable sites for the location of a supermarket are in short supply – because of planning restrictions which in turn are driven to a large extent by environmental concerns, broadly defined – and there is a record of the large supermarket chains buying up suitable sites.

In a study of industrial site approval in the United States, Duerksen (1993) concluded that the rules for industrial sites changed dramatically in many States in the 1970’s, making the approval of new sites very difficult for business, and again favouring incumbents. Primary causes were argued to be overlapping and sometimes contradictory permit reviews, changing laws and regulations, lengthy judicial reviews, and increased rights for citizen and interest group intervention.

Regulatory complexity and compliance learning curves: An entry deterrent effect of environmental regulations also results from the complexities that compliance requirements introduce into business operations. Firms facing environmental regulations encounter an array of political, technical, administrative, and legal issues that add to the complexity of their activities.

“The effect of complexity on new firm entry can be understood through the concept of the learning curve ... The more a firm deals with environmental regulatory agencies and has to perform pollution control activities, the more the firm learns (1) which regulations and

²⁸

Andrew Sims of the New Economics Foundation, quoted in *The Observer* newspaper (29 January 2006) in the context of the publication of a report on supermarket power by the All Party Parliamentary Small Shops Group

agencies apply to its activities and how to effectively handle them, (2) which pollution abatement technologies apply and how to use them effectively, and (3) how to best modify its organisational and administrative processes to carry out these tasks. In other words compliance learning translates into lower per unit compliance costs for incumbents (Monty 1991), so inhibiting new firm entry.” (Dean and Brown (1995: 292).

However, regulation-induced learning curve barriers may be reduced if the entrant can gain the necessary knowledge and techniques by hiring consultants or experienced employees in a competitive market for expertise (Scherer and Ross (1990)).

Other authors have provided case study evidence of the use of the barrier to entry implications of a variety of other environmental rules and regulations.²⁹

4. Environmental Regulation and Predation

Scope to influence environmental regulatory requirements may provide an opportunity or channel for firms in an industry to ‘raise rivals’ costs’.

Suppose that Firm A incurs extra costs as a result of some proposed regulation, but that the extra cost burden placed upon its rival Firm B is higher. The differential impact of the regulation upon the costs of production of the two firms means that it confers a competitive advantage upon firm A over its rival. Depending upon the characteristics of the market this may lead firm B to exit the market. Equally it may redistribute market share from B to A without inducing exit. Firm A can therefore benefit from the imposition of the regulation.

A corollary of that is that Firm A will be willing to engage in political and other efforts to increase the likelihood that the proposed regulation comes into force. The theory of raising rivals costs has been used by a number of commentators to explain the observation that firms that are likely to incur costs as a result of the implementation of a regulation are frequently seen to lobby in support of that regulation.³⁰

Such activities can be regarded as a form of **non-price predation**. “A firm’s motivation may range from defensive to predatory. Standards can also create a barrier to entry for new firms, or provide a means to squeeze inefficient or laggard firms out of the market altogether” (Klaasen and McClauglin (1996)).

The original formulation of the theory of raising rivals’ costs is due to Salop and Scheffman (1983). Predatory pricing doctrine focuses on conduct that lowers revenues. Alternatively, a firm can induce its rivals to exit the industry by raising their costs. The generic theory is simple to understand and has been invoked to explain non-price strategic behaviour of firms in a variety of settings including R&D,

²⁹ For example, Maloney and McCormick (1982) point to the treatment of Concorde at US airports: “Other examples where environmental quality regulation has deterred or barred the entry of rivals are not hard to construct. The US landings of Concorde by Air France and British Airways have been severely restricted because of noise pollution. Direct-output controls of this type are necessarily price increasing and must increase the value of U.S. firms in the airline industry”. This is a conceptually different context to those modelled earlier because the incumbent and the prospective entrant are asymmetric in ways other than whether their initial location within or without the market. In particular they use different technologies (subsonic versus supersonic) with different environmental implications.

³⁰ There is an extensive body of research on the political economy of environmental regulation. Situations in which interest groups with interests that appear to be diametrically opposed – such as the prospective regulated firm and environmentalists – form a coalition are often observed. Political economists have coined the phrase “Baptists and bootleggers” to refer to collaboration between such apparently opposed interests. The two groups supported prohibition in the United States, though for very different reasons.

advertising, site-choice, product design, political activity and non-price vertical restraints such as exclusive dealing and territorial restraints.

On the basis of this we can identify conditions that make predatory cost-raising strategies more likely to be attractive to the dominant firm,

- Comparatively inelastic market demand. With less elastic demand a given reduction in supply by the fringe is associated with a larger increase in price.
- The strategy in question has a more pronounced impact on the relevant cost conditions of the fringe firms than the dominant firm, more concretely on the *marginal cost* of the fringe firms than the *average costs* of the dominant firm.

Salop and Scheffman (1983) themselves noted the advantages of cost-raising versus revenue-lowering approaches to predatory behaviour. They note that "...cost-increasing strategies can often be made irreversible and thus more credible" (Salop and Scheffman (1983: 367)). Such cost increases will certainly be highly credible when embedded in legislative or regulatory requirements.

They also note that "unlike classical predatory pricing, cost-increasing strategies do not necessarily need deep pockets or superior access to financial resources. In contrast to pricing conduct, where the large predator loses money in the short run faster than its smaller victim, it may be relatively inexpensive for a dominant firm to raise rivals costs substantially. For example, a mandatory product standard may exclude rivals whilst being virtually costless to the predator." (Salop and Scheffman (1983: 367)).

Since the regulation in question will likely serve to correct some other market failure - that associated with the environmental externality - the welfare impacts of such predatory behaviour are not straightforward to determine.

There are comparatively few well-evidenced examples of the use of environmental imperatives to raise rivals costs – though anecdotal evidence surrounds in many settings.

4.1 Example: Phase II Reformulated Gasoline Regulations in the California

Brown (2005) provides evidence that is consistent with the contention that California's Phase II reformulated gasoline regulations were used as a measure for raising rivals costs. This section reports some of her published preliminary findings.

In 1992 the California Air Resources Board (CARB) implemented regulations intended to reduce pollution from gasoline emissions. It was apparent that the regulations increased the refining costs of all suppliers of gasoline in the California market.

The Western States Petroleum Association (WSPA) – the trade body for a large number of Western petroleum products companies – opposed. California's largest petrol retailer, ARCO came out in support. A number of commentators have interpreted that support as an attempt by ARCO, with advantages in meeting the new tougher standards, to raise rivals costs.

Two potential channels of cost-advantage might be identified, though it is likely to be difficult to disentangle such impacts econometrically.

Innes and Bial (2002) point to the strong vertical relationship that ARCO enjoyed with ARCO Chemical (now Lyondell Chemical) one of the United States' biggest producers of methyl tertiary ether

(MTBE). “The vertical relationship provided ARCO with a comparative advantage in producing reformulated gasoline while also providing it with the capacity to raise rivals costs at some point in the future if it chose to do so. This is a valuable position to be in because such a strong vertical relationship provides the opportunity to raise rivals costs in a fashion more credible than predatory pricing” (Brown (2005: 4)). This channel points to the lower cost that might be faced by one firm (ARCO) versus its competitors.

The second channel relates to the possibility that higher costs faced uniformly by firms in an industry will nonetheless impact the profitability of those firms differentially. The Phase II regulation implied a substantial increase in the fixed and marginal costs of all suppliers. By increasing minimum efficient scale this could be expected to push a number of small producers out of the finished gasoline market and push prices higher. Even abstracting from the likelihood that ARCO had cheaper access, the across-the-board increase in costs could be expected to advantage larger firms such as it over smaller competitors.

Brown (2005) analyses of impact of Phase II on market outcomes, including concentration and market shares. She documents a significant loss of smaller suppliers – small refiners’ share of distillation capacity capable of producing compliant gasoline in California dropped from 12.5% in 1994 to 1.3 % by 2003. The Herfindahl Index (HHI) increased from approximately 1200 points (moderately concentrated) in 1993 to over 2000 (that is to say highly concentrated) by 1999.

Largest firms gained most in terms of market share – ARCO, Chevron, Ultramar and Exxon. Specifically, the largest percentage increases in market shares 1995-1999 belonged to Ultramar (42%) and ARCO (34%).

In terms of pricing, price differentials between California and the control group increased in the period in a way that was not only statistically significant but by an amount greater than the estimated average variable cost of implementation (4 to 5 cents per gallon). That is there was a price effect over and above that associated with the additional cost of producing the cleaner fuel. So even with a full passing on of that cost to the consumer there was an additional affect presumed to be associated with the induced increase in concentration.

4.2 Example: UHT Milk in Puerto Rico in the 1980’s

The second example is an international one. According to Lyon and Maxwell (2004), in the mid-1980’s Puerto Rican milk producers voluntarily - and at considerable cost - made the investments required to ensure that their production processes were compliant with prevailing US regulations, and contributed to persuading the Puerto Rican government to adopt US regulatory standards and procedures.

Ostensibly the benefits were to allow Puerto Rican producers access to US markets – US laws prohibit the sale of foreign dairy products from countries or regions that do not have identical regulatory standards and procedures. However, the change in regulations also served to make the Canadian company Lactel almost unable to continue in the Puerto Rican market, where during the 1980’s Lactel it had enjoyed a market share of up to 88 per cent.

Rugman, Kirton and Soloway (1999) provide detailed case study analysis of the passage of this case. It is synthesised in a more formal economic framework by Lyon and Maxwell (2004) who conclude that: “... the ban on Lactel’s UHT milk products due to the passage of new legislation provides an extreme example of raising rivals costs. While the domestic industry incurred costs to comply with the new Puerto Rican legislation, the costs of compliance for Lactel were effectively infinite. We were unable to determine

whether Puerto Rican firms gained profitable access to US market. What is clear, however, is that they were the main beneficiaries of the ban on Lactel products.”³¹ Lyon and Maxwell (2004: 90-91)

4.3 Example: Dupont and the Montreal Protocol³²

The Montreal Protocol is one of the best known international environmental agreements and involved the phase-out of production and use of the greenhouse gases chlorofluorocarbons (CFC's). CFC's were commonly used as cooling agents in air-conditioners and refrigerators, and in the manufacture of cleaning fluids and other common products.

Since its introduction of Freon in the 1930's Dupont had held a substantial share of the world market but entry by small competitors had driven down both its market share and prices.

Dupont and ICI had both invested heavily in developing CFC alternatives (Dupont alone had spent \$400m at that point, according to the Wall Street Journal (9 March 1993)). “Analysts claim that Dupont saw the Montreal Protocol as an opportunity to reclaim market share”. Dupont supported the Montreal Protocol - even though they implied bans on some of their own products – “... so that the new product market for alternatives was more concentrated and differentiated than the existing CFC market” (Puller (2005: 16)).

4.4 Implications for Technology-Led Environmental Regulation

The scope for raising rivals costs is embedded in a number of regulatory practices, in particular those where regulations are technology-led.

The principles that that the environmental performance of a firm should reflect either Best Available Technology (BAT) or Best Available Technology Not Entailing Excessive Costs (BATNEEC) or variants there-of are common.³³

Where technical change is endogenous any firm that so chooses can develop a technology for cleaner production and then reveal it to the regulator knowing that standards will - in principle at least - be ratcheted upwards for all firms.³⁴

While from a purely environmental perspective there may be sense to such provisions the potential impacts on incentives for predatory behaviour should be recognised. The impacts on welfare through the different channels should be compared explicitly.

³¹ They also assert (page 91) that if this had not been the case “... it would be highly unlikely that the Puerto Rican government would have dragged its feet in certifying the equivalency of the health and safety benefits of Lactel's products.” It is not clear, though, why this should be the case – unless it is assumed that the Puerto Rican regulatory was captured by domestic milk industry over local consumer interests.

³² This account is based on Section 4.2 of Puller (2005) “The Strategic Use of Innovation to Influence Regulatory Standards.”

³³ For example, from 1984 to 1996 industrial air pollution in the EU has been guided by the framework concept of BATNEEC. In 1996 it was replaced by BAT with the introduction of the Integrated Pollution Prevention and Control Directive (IPPC). Sorrell (2002) provides a selective survey.

³⁴ The theoretical model presented by Innes and Bial (2002) analyses precisely this set of incentives in a formal setting, and explores how instruments can be designed to induce socially desirable patterns of innovation.

A more general ‘lesson’ from these examples is that environmental regulators need to be wary. In none of the examples can it necessarily be concluded that the raising of rivals costs did not benefit welfare – drawing such a conclusion would require full-blown welfare analysis incorporating both environmental values and market surplus outcomes. But static concerns need to be weighed against maintaining incentives for the development of new, cleaner technologies.

Further, “... previous work suggests that cooperative pollution control activity by industry does not always have a benign effect. Hackett (1995) found that R&D by industry members to reduce the cost of more stringent pollution abatement technology may be motivated by the opportunity for successful innovating firms to lobby for more stringent standards and thus raise their rival’s costs. Anticipating this, industry members can organise a pollution control research joint venture to slow the pace of innovation in lower-cost pollution abatement technology,” (Lyon and Maxwell (2004: 66)).³⁵

5. Environmental Policy as a Source of Subsidy

A further set of concerns relates to the recognition that differences in the way in which environmental regulation is conducted between countries - or between different competing sectors of the same country - may constitute **subsidy** or **state aid** and lead to unfair or reduced competition.

The concept of subsidy is not straight-forward – being commonly used to refer to a variety of transfers, payments, supports, assistances (such as tax exceptions) or protections associated with government policy. The more generic terminology of ‘support measures’ is often used.

There are a variety of approaches taken to the measurement of environmental subsidies and these are surveyed by Barde and Honkatukia (2005). They can be substantial (OECD (2003)). The focus of many empirical studies – including most of those cited by Barde and Honkatukia is their environmental impact. This may be positive (*e.g.* subsidy of fuel-efficient technology development) or negative (*e.g.* regulatory or fiscal exemptions for air travel).

But it is not difficult to think of ways in which support measures derived from environmental regulation could impact upon competition and market outcomes in key sectors.

Tradable emission permits – assuming that they trade at a non-zero price - for example, are valuable commodities. Many tradable permit schemes “grandfather” – distribute permits to firms according to some formula based on past pollution levels – whilst good practice would involve auctioning. For example, in the context of EU commitments on greenhouse gas reductions, which are divided for implementation at Member States level, one experienced commentator notes that:

“In general there are two ways to allocate permits: private entities have to buy permits (auctioning) or they get them free (grandfathering). It is possible that one Member State conducts an auction (for instance to generate revenues) while another uses grandfathering (for instance to generate political support in the energy-intensive industry). The Commission fears that such differences in the way Member States allocate permits to their private entities may distort competition and constitute state aid” (Woerdman (2001: 4)).

³⁵

For example, the US Department of Justice successfully prosecuted a consent decree with the Automobile Manufacturers Association for using an RJV formed in the 1950’s to slow the adoption of pollution control devices on US automobiles. In terms of *intent*, as Lyon and Maxwell (page 66): “... appropriate antitrust treatment must be sophisticated if it is to distinguish between these different motivations for cooperative pollution control activities by industry.”

Whilst in this example the free assignment undoubtedly constitutes a transfer to the recipient firm, the question of whether that transfer will significantly distort competition requires further thought. The subsidy is a capital gift to the firm but is lump sum in character, the size of which is based only on measures of the past. In efficiency terms, such a lump-sum subsidy is not distorting in the product market since it does not affect *marginal* emissions reduction costs and it does not alter output and price decision of firms.³⁶

Arguably grandfathered tradable permits are amongst the least distortionary form of ‘subsidy’ since the opportunity costs of polluting are exactly the same as if the permits had been auctioned.

Some attention has been paid to how the method in which permits are distributed – and revoked – impact incentives for various types of behaviour. Johnson and Pkelney (1996) analysed the reduction in compliance costs generated by permit tradability in the context of the RECLAIM program in California. There was discussion though concerning whether or not plants that went out of business should have their grandfathered permits (allocated annually) revoked. Those authors note the potential incentives for the perpetuation of ‘ghost plants’, kept ‘in business’ for the purposes of deriving the annual allowance of permits.

More distortive of competition would be the application of different abatement requirements or environmental taxes across jurisdictions, for example, since these will impact the cost of production at the margin, and therefore the output and pricing decisions of the firms affected.³⁷ More generally exemptions from environmental taxes, the use of ‘relative’ tradable permits (as in the Netherlands), and regulatory exemptions can lead to substantial economic inefficiency.

5.1 *Example: Liability Caps on Nuclear Accidents in the US and Canada*

Environmental subsidy can accrue implicitly to a sub-set of producers through particular legal or regulatory decisions or dispensations.

The Price-Anderson Act (1957) in the United States, for example, caps the liability to an individual nuclear power operator for off-site damage caused by an accident at one of their plants. Similar provisions exist in other countries, for example under the Nuclear Liability Act (1970) in Canada.

Such a capping of liability amounts, of course, to an implicit subsidy of the activity in which the beneficiaries are engaged.³⁸

³⁶ Assuming a competitive market for permits – which is reasonable in this setting because the direct participation of private entities in any GHG emissions trading system is expected (in time) to create a thick market with many small traders.

³⁷ Woerdman (page 6) notes this distinction between different tax rates (in the form of tax exemptions) and grandfather-based assignment of pollution permits: “Some believe grandfathering emissions permits implies a competitive distortion because it would have the same distorting effect as granting tax exemptions to certain firms. A tax exemption is inefficient because it induces different prices per unit greenhouse gas (GHG) for different firms”. This is not the case under permits – however initially allocated – where the marginal price of emission faced by every polluter remains the market price of a permit.

³⁸ Estimating the *size* of that subsidy is an exercise fraught with difficulty, and the numbers have been critically assessed both in the context of Congressional hearings in the US and in Federal Court in Canada (where the constitutional legality of the capping of liability was challenged by a group of plaintiffs, including the City of Toronto).

Dubin and Rothwell (1990) developed a very neat approach to trying to derive estimates for the amount that nuclear operators would have to pay for off-site insurance in the absence of Price-Anderson Limits.

This sort of arrangement can be expected (a) give nuclear power a competitive advantage over other forms of generation and, (b) reduce the incentive for safety of plant operators. It is (a) that concerns us here – the published analysis of Heyes and Liston suggests a subsidy of perhaps 2 to 3 cents per kilowatt-hour. That is a significant number, though it should be borne in mind that this source of subsidy is just one of numerous that apply to all forms of energy use in a country such as the US or Canada.³⁹

6. Competition Considerations Relating to Particular Regulatory Instruments – Some Examples

As stated in the Section 1, recent years have witnessed not just an increase in the intensity of environmental regulation in most countries, but also an increased variety of instruments in use.

Whilst the discussion so far has not generally been instrument-specific, it is useful to think about some of the competition-impacting issues that might arise as a result of the adoption of specific approaches to environmental regulation.

6.1 Tradable Pollution Permits

Tradable pollution permits have become an important instrument of environmental regulation in recent years, in both domestic and in international settings. The efficiency arguments for an approach to regulation have been well-rehearsed under the assumption that the market for permits is competitive.

It is worth noting that this instrument is implemented via the creation of a market, and thus is directly subject to competition policy in a way that is only indirectly true of other instruments (where competition policy issues arise because of the indirect effect of the policy on product markets). So for tradable permits competition issues can arise both in the market for permits and in the market for products for which the permit is an input (see Johnstone (1999), ENV/EPOC/GEEI(99)1/Final). Indeed the biggest issues may arise if the same firms compete in both markets, since the permit market could become the vehicle through which imperfections are introduced into an otherwise competitive product market.

Several authors have pointed out that large firms may have an incentive to manipulate the market for permits.

The most general fear amongst critics of the use of tradable permits as an instrument of environmental regulation in comparatively concentrated markets is that of **exclusionary manipulation**. When permits are an essential input to production and the banking of the permits is allowed, the existence of the permit market provides an explicit channel through which one firm can ‘pay’ to exclude an actual or potential competitor from production.⁴⁰

The technique involves extrapolation from the premiums that the operators now pay for that portion of liability that they still bear under Price-Anderson. They estimate the implicit subsidy to be around \$22m (2001 USD) per reactor year, which translates to a subsidy of roughly half the capital costs of nuclear power. Subsequent work by Heyes and Liston (1998) corrected an error in their methodology and showed the true figure implied by their method to be significantly lower than that number, but still substantial.

³⁹ Other examples abound, though quantitative estimates of the implied subsidies are harder to find. There are other economic and competition implications of alternative environmental liability regimes. Auer *et al* (2001), for example, provide an interesting analysis of retroactive liability for land contamination and the incentives for foreign direct investment in the new democracies of Central and Eastern Europe.

⁴⁰ Misiulek and Elder (1987) pointed out that a dominant firm can buy permits to raise rivals costs, so the market for permits becomes a vehicle for the exercise of predation. Newberry (1990: 344-345) considers a quantity-setting oligopoly involving two identical firms and notes that, under certain conditions, aggregate

To the best of our knowledge there exist no empirical - as opposed to numerical or experimental - analyses of market power in emissions trading. A number of authors have engaged in numerical simulations - setting up trading models and calibrating them to particular trading contexts. There have also been attempts to explore patterns of trade and exclusionary manipulation of the market in an experimental setting. It is difficult, though, to draw convincing general conclusions from this young literature.⁴¹

6.2 *Waste Management and Extended Producer Responsibility*

Increasing in popularity as an instrument of environmental policy in the context of waste has been the use of 'Extended Producer Responsibility' (EPR).

Such policies widen the responsibility of producers through the product life cycle - for example by requiring that they 'take back' or plan for the orderly disposal of their products after use. The EU's End-of-Life Vehicles (ELV) Directive, for example, required member states to take necessary measures to ensure that economic operators increased the rate of reuse and recovery to 85% by average weight per vehicle by the start of 2006.

It is natural that in the implementation of such schemes there may be important network economies that would favour industry collaboration or monopoly supply of collection treatment and recovery services.

Monopoly supply generates not just the usual concerns regarding market power, but also concerns regarding knock-on effects in terms of competition in the market for the original good. Such schemes have the potential to create 'insiders' and 'outsiders', and the potential for exclusionary manipulation. The same applies to cooperation amongst industry members. To this end the DG Competition Paper (2004, paragraph 163, page 39) *Concerning Issues of Competition in Waste Management Systems* suggested that: "Collective systems should apply objective, transparent and non-discriminatory conditions as regards membership criteria and with regard to fees levied by the system."

There has been little convincing economic analysis of the relationship between extended producer responsibility schemes and competition in product markets.

profit minimised (though social welfare maximised) if both firms hold the same number of permits. This indicates that firms have an incentive to trade permits, possibly at the expense of welfare. Von der Fehr (1993) shows that monopolisation of the product market may occur through trade in permits. Other important contributions on the role played by permits in imperfectly competitive markets are provided by Hahn (1984) and Hagem and Westskog (1998).

⁴¹ There is an important distinction to be drawn between permits that are auctioned and those that are distributed freely on the basis of a grandfather rule as under plausible circumstances these can interact with entry and exit decisions. In famous early work Carlton and Lorry (1980) showed that to achieve long-run efficiency in a competitive industry, the regulatory authority needs to control both the pollution level of each firm *and the number of firms*. With a single policy instrument (aggregate number of permits) it is unlikely that both objectives can be achieved. However, the proportion of a given aggregate of permits that are issued free can be used as a second policy tool. Kling and Zhao (2000) provide formal analysis of the incentive effects of different combinations of the alternative forms of permits, and capture these interactions (page 235): "When marketable permits affect the entry/exit decisions of competitive firms, the efficient proportion of auctioned *vs.* free permits depends upon the nature of the pollutant. All permits should be auctioned for global pollutants, and some should be free for local pollutants."

6.3 *Voluntary Agreements*

Self-regulation is observed in many settings. Environmental ‘Voluntary Agreements’, for example, came to prominence in the United States and elsewhere during the 1990’s against the background of increased environmental awareness amongst policymakers.⁴²

Voluntary Agreements take various forms, but have in common that firms agree to verifiable improvements in environmental performance, or adherence to particular process requirements that are not mandatory. The USEPA recognises over 20 such schemes under its ‘Partners for the Environment’ program.

The reasons why firms might volunteer to subscribe to such schemes is something that has interested economists, and it has frequently been asserted or suggested that a significant channel through which firms can gain is reduction in product market competition.

As negotiated solutions between a sub-set of polluting firms and the government, the potential competition implications are innumerable. They have captured the attention of government authorities (for example, European Commission (1997), European Environment Agency (1997)) and some theorists but have not been explored in much depth. In particular empirical analysis is almost non-existent.

In a legal analysis of the potential antitrust issues that might arise in the context of environmental voluntary agreements Luxton *et al* (2002) offer a number of hypothetical cases where competition implications may arise. For example:

“Consider a Project XL case that allows producers of a certain commodity to agree on ‘best methods’ for how waste-streams should be handled in that industry sector. EPA promises that companies following these practices will be subject to preferential treatment in obtaining permits or in enforcement contexts.⁴³ What if this process allows a group of companies to shut out a technology used by their competitors, thereby gaining a significant market advantage?” (Luxton *et al* (2002: 5).

Voluntary schemes may provide the basis for information sharing and other activities that facilitate coordination and so damage competition. As Videras (2005: 2) notes: “voluntary programs typically offer multiple occasions for contact and communication among an industry’s members, and the standardisation of technologies further facilitates coordination upon output.”

The European Environmental Agency (1997) notes that “(E)xperiences in Austria, e.g. in the waste sector, show that where voluntary programs are agreed, a market economy can lead to distorted price structures if competition is not protected by government.” Similar experiences include a program of the Dutch Association of Independent Tank Storage Companies to curb air pollution that resulted in price fixing and an agreement by the European Committee of Domestic Equipment Manufacturers (CECED) that limited output and increased prices (according to Vedder (2000)).

⁴² Schemes are typically divided into three sorts. Unilateral commitments are set out by industry acting independently and without any involvement of a public authority (the chemical industries *Responsible Care* programme in the US is a prime example). Public voluntary programs involve commitments devised by the regulatory agency and to which firms are invited to participate (for example EMAS, operating in the EU since 1993). Negotiated agreements involve commitments developed through bargaining between a public authority and industry.

⁴³ Whilst the schemes are ‘voluntary’ there is typically promise of some sort of regulatory leniency or favourable treatment of scheme members.

Not enough is known about the precise ways in which voluntary regulatory programmes of one sort or another are likely to interact with product market conduct. In the meantime care by public authorities is needed in the negotiation of agreements, and in determining attitudes towards unilateral schemes.⁴⁴

6.4 *Eco-Labels*

Eco-labelling programs have multiplied and flourished in the past two decades, and labelling is now regarded as an important element of the environmental protection regimes in many countries. Labels attached to goods seek to inform consumers that a firm has achieved some minimum standard of compliance with or adherence to a stated set of environmental standards or practices.⁴⁵

There are at least two competition/consumer protection dimensions to consider in this setting:

- **Information and a basis for product differentiation:** It is a basic tenet of economic theory that the ability of markets to deliver social efficiency depends upon actors in the market having good quality information, in particular, here, prospective consumers having information about the good that they are offered for sale.
- Advocates of green labels contend that labels provide information to consumers on the comparative environmental attributes of goods on offer and so empower them to exercise that preference, and that the resulting shift in demand will cause brown to displace green products and processes.

Product differentiation, however, can be used by producers to relax price competition. Recall the prediction of the basic Bertrand-model that two or more price-competing firms, with constant unit costs and selling identical goods will price equal to marginal cost and make zero supernormal profits. There is then a strong profit motive on each firm to want to differentiate products from those of competitors in order to reduce the intensity of price competition. This motive can lead to **socially excessive differentiation** (Shaked and Sutton (1982), Tirole (1988)). Environmental labelling can provide a basis for product differentiation in the case of products where branding along different dimensions might be difficult (*e.g.* products as apparently generic as timber and coffee are now differentiated according to the means used in their production). The welfare impact of such diversification is ambiguous – consumers are able to identify goods more closely tailored to their desires, but are then obliged to pay higher prices for them.

⁴⁴ Lehmann (2005) offers a careful and insightful analysis of Germany's voluntary Dual Management System for Packaging Waste Collection and Recycling (DSD). He points to specific features of the DSD's governance structure that are argued to mitigate anticompetitive effect stemming from centralisation.

⁴⁵ Amongst some of the better known schemes are the Blue Angel label in Germany, the Nordic Swan label in Scandinavia, and the US-based Green Seal. There are a significant number of theoretical economic analyses that seek to characterise the market impacts of green labelling schemes (including Kirchoff (2000), Swallow and Sedjo (2000)). The central assumption that makes labels effective in these models is the existence of 'green' consumers - that some or all consumers have a preference for reducing the environmental impact of their purchases, and are willing to pay a premium for a cleaner product.⁴⁵ There is plenty of evidence to support the assumption of the existence of green consumers. Firstly survey evidence. For example, in 1996 35 per cent of German consumers declared themselves willing to pay a premium for eco-labelled products (OECD, 1997); Roe *et al* (2001) show a significant willingness to pay for certified green electricity in the context of a hypothetical market in the United States. Secondly market evidence. Bjorner *et al* (2004) use evidence from a panel of products in Norway to estimate the marginal willingness to pay for Nordic Swan labelled toilet paper to be 13 to 18 per cent of the product price; Tiesl *et al* (2002) show a significant willingness to pay a premium for canned tuna bearing the Dolphin-Friendly Label in the United States.

Information overload and spurious labelling: The welfare evaluation of schemes becomes even more difficult to evaluate once the ability of consumers to recognise and understand labels is taken into account. This is a particular issue as the number of overlapping labelling programs proliferates, and in settings in which the impacts of production upon the environment are multifarious and complex. The cognitive and informational burden placed on consumers confronted by a plethora of labels is likely to be substantial.

Standard analysis pre-supposes that consumers understand green-labels. In fact there is a large body of evidence to say that (a) many or most consumers don't recognise eco-labels and (b) even those who do tend to be not very good at understanding what they mean.⁴⁶

The interaction between label claims, consumer behaviour, competition and welfare are complex (Hansen and Kull (1994)). There are no current market tests of the extent to which spurious labelling is being used strategically by producers to 'confuse' consumers, and/or to artificially generate a spurious basis for product differentiation.

It is also worthwhile to make the observation that for labels which relate to impacts arising from production processes (rather than product characteristics), there may be no relationship between the label and the environmental preferences and ecological conditions of the community who natural environment is affected. Demand for environmental quality can differ radically between the consuming and producing communities, particularly in the context of internationally traded goods. The effect of the label could therefore be to reduce economic efficiency.

7. Social Cost Pricing – with Application to Clean Air in the US

This section relates not to the impact of environmental regulation upon competition in markets *per se*, but rather to how environmental regulation misapplied can serve to exacerbate distortions due to shortage of competition in heavily regulated sectors such as utilities. As such it serves to illustrate the co-dependence of environmental regulation and economic regulation – the need for good practice in one to reflect practice in the other.

It is often proposed that 'social costing' methods should be used by policy makers to take account of environmental externalities when evaluating investments, rate changes, *etc.* in regulated industries (for example see Freeman, Burtraw, Harrington and Krupnick (1992) and citations there-in).

The policy tool that has gained the widest interest and is most consistent with the development of quantitative estimates of externalities is the use of **adders** to account for externalities in financial analysis. Adders are similar to taxes, but are not actually charged and no revenue is actually exchanged. They serve

⁴⁶ A number of studies have measured the extent to which consumers recognise various eco-labels. In 1996, 80% of West Germans and 56% of East Germans could recognise and name the Blue Label (OECD 1997). In Denmark, 31% of respondents referred to the Nordic organic food label unaided, substantially higher than in other Nordic countries (Sweden 16%, Finland 5%). The unaided recall of the European Union's 'Flower' label was less than 2% in Sweden, though 18% in the Netherlands (Palm and Jarlbro (1999)).

Recognising a label is not, of course, the same as understanding what it implies. Van Dam and Reuvekamp (1995) tested Dutch consumers' interpretation of the labels that they had recognised. The fraction that they categorised as having an 'adequate' or better understanding of what the award of a label implied varied from 9 to 91 percent, depending on the label in question. In the US a 2005 survey by the Consumers Union revealed that 85% of respondents believed that the label 'organic' on food implied that the product did not contain artificial ingredients (untrue), whilst 65% thought the same label applied to fish would imply that the fish was free of contaminants such as mercury and PCB's (again untrue).

as ‘place-holders’ in the decision-making process and attempt to ensure that decisions are made on the basis of social rather than private costs.

Adders have been particularly widely used by Public Utility Commissions (PUC’s) that are engaged in the economic regulation of power production in the US. They are used in around 30 of the states.

A number of attempts have been made to assess the benefits of this approach to incorporating environmental issues into economic regulation. In a first-best setting, of course, the use of place-holders to act *as if* externalities were internalised would be welfare-improving. PUC’s, however, operate very much in the realm of the second-best.

“A PUC is awkwardly situated in this endeavour for several reasons. First it must take as given federal, and usually state, regulations designed to address such externalities. Second, PUC’s must necessarily take a piecemeal approach to the problem of internalising externalities because these bodies have limited authority – each PUC regulates only electric utilities (and sometimes natural gas, communications and water) in one state – while the scope of the problem is much larger, involving externalities from many sectors in multiple states. Third, the imposition of the PUC has itself helped to create a gap between marginal private cost and price, a gap that *may* be altered by social costing approaches.” Burtaw, Palmer and Krupnick (1995: 2).

A substantial literature has developed on these second best issues, examples include Dodds and Lesser (1994) and Ottinger (1990). Prominent amongst the potential unintended consequences is that of bypass, whereby higher electricity prices may lead consumers to substitute towards alternative unregulated but dirty sources of fuel – such as wood and domestic oil.

Of interest to us here is the fact that in the present market electricity prices are not, typically, at their competitive levels – they do not marginal costs. For example, Gilbert and Henley (1991) estimated that deviations from marginal costs pricing in Northern California have a negative impact on consumer welfare equivalent to around 7% of the cost of providing electricity.

Importantly for policy, the application of adders may serve to make this inefficiency worse - or be corrective - depending on a variety of circumstances in a particular service territory. Burtaw, Palmer and Krupnick (1995) conduct an insightful analysis of the welfare-impacts of adders in this setting. Their approach is explicitly second-best, taking account of the distortions due to existing regulations and inadequacies in the regulatory environment (*e.g.* limitations on jurisdiction).

Consider an adder that equals marginal environmental damage. They present their results in terms of the adjustment factor that should be applied to those adders in different hypothetical settings to render its application second-best optimal.⁴⁷ A “neutral” estimate of the adjustment factor would have a value of 1 – implying that the second-best optimal adder equals the estimate of the externality. A number above 1 would imply that adder should exceed the estimate of the externality, and so on. Best estimates from the study vary between 0.88 and 1.8, implying simple application of a ‘first-best’ adder in a second best world would be a long way from the best policy. It could also result in welfare loss.

More generally the links between economic regulation and environmental policy are important and potentially complex. Joskow (2001), for example, has noted in the context of the electricity sector in California (and in particular the Californian ‘energy crisis’) how policy failures in one area had a tendency to exacerbate policy failures in the other.

⁴⁷ The hypothetical utilities have generic features – differentiated by capacity, geographical location, *etc.*

8. 'Price' versus 'Quantity' Regulation in Imperfectly Competitive Markets

All of the analysis points to the fact that, in assessing the competition implications of a particular regulatory package it is not simply a case of looking at the intensity of the regulatory programme, but also its qualitative characteristics – the instrument or instruments used for implementation.

While the last Section pointed to a set of particular issues arising from a number of particular practices, the same point can be made much more generically. The classic instrument debate in environmental economics is between the use of 'price-based' instruments (such as taxation) and 'quantity-based' instruments (such as quotas).⁴⁸ Mansur (2005) characterises how the choice of instrument interacts with firms' choices of output levels – and welfare – in the context of an imperfectly competitive product market. He summarises the story in the following way:

In a market subject to environmental regulation, a firm's strategic behaviour affects that production and emissions decisions of other firms. If firms are regulated by a Pigovian (emissions) tax, changing emissions will not affect the marginal cost of polluting. However, under a tradable permits system, the polluters' decisions affect the permit price. This paper shows that the feedback effect increases a firm's output. Therefore, relative to a tax, tradable permits improve welfare in a market with imperfect competition. (Mansur (2005: 1)).

1. The intuition is straight-forward. If firm A elects to expand production then, if it is subject to a permit regime, it will need to buy an extra permit. This will put upward pressure on the price of permits, increase the marginal costs of competitors and hence induce them to reduce their supply. This, the 'feedback effect' referred to in the quotation, makes production more attractive at the margin to a firm facing a permits regime than an equivalently intense tax regime. Since output is undersupplied in an imperfectly competitive product market, this incentive for additional output is welfare-improving.

8.1 *Example: Electricity Producers in Pennsylvania, New Jersey and Maryland*

Mansur (2005) goes on to estimate the sizes of the impact of instrument choice on welfare, though the interaction of that decision with the exercise of market power, in the wholesale electricity markets of three US states - Pennsylvania, New Jersey and Maryland.

His simulations suggest that the exercise of market power decreased local pollution by approximately 9% and, therefore, substantially reduced the price of the region's pollution permits. Furthermore, had regulators opted to use a tax instead of permits, the deadweight loss from imperfect competition – through the channel identified in the quotation above – would have been about 7% greater.

9. Some Conclusions

The current survey has not been exhaustive. The objective here has been to identify some of the most important channels through which environmental regulation may come to impact competition and market conduct. Conclusions and contentions include:

- Environmental protection and competitive operation of markets are two high policy priorities of governments. They sometimes appear to be pushing in opposite directions, but in fact the

⁴⁸ Martin Weitzman published the seminal 1974 paper entitled "Prices *versus* Quantities" which laid the foundation for the debate and remains one of the most frequently-cited papers in the profession (Weitzman (1974)).

objectives of the two policy spheres are complementary. Both are concerned (as all public policy should be) with social welfare maximisation.

- There are convincing bases in economic theory, and evidence from case study and econometric analyses, to conclude that environmental regulations can constitute substantial **barriers to entry** in some markets, can provide a basis for **predatory behaviour** in some markets and can be harmful to competition and welfare through a **variety of other channels**.
- Because of the above effects, environmental rules can raise prices to consumers by reducing competition. Any assessment of the costs and benefits of an existing or proposed environmental rule is incomplete without an analysis of the costs generated by any resulting reduction in competition.
- The anti-competition effects of many of the policies cited in this report are unintended consequences of environmental policy. Indeed, in some cases it may be possible to reform policies such that both environmental and competition objectives are better secured.
- However, there may be cases in which securing environmental benefits through regulatory interventions inevitably results in reduced market competition. In such cases it is important that the least distorting measure is introduced, and to ensure that the environmental benefits outweigh apparent economic costs, including the costs arising from reduced competition.

And finally, it is important to stress that the relationship between environmental and competition issues is an area where the empirical evidence base is weak.

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NOTE DE RÉFÉRENCE¹

1. Contexte

Ces trente dernières années, les questions environnementales ont pris une place de premier plan dans l'économie. Cette évolution touche tous les domaines d'activité, mais surtout des secteurs tels que l'industrie chimique, l'extraction de ressources naturelles, la production d'énergie et les transports, qui peuvent avoir de fortes incidences sur l'environnement naturel.

L'environnement naturel impose des contraintes directes à la conduite de diverses activités, mais aussi des contraintes indirectes au travers des mesures réglementaires. Pour préserver les ressources naturelles et la qualité de l'environnement, les autorités chargées de la réglementation interviennent sur le marché de nombreuses manières différentes. Il est donc naturel de s'attendre à ce que la façon dont l'environnement est réglementé ait une incidence marquée sur les procédés et les pratiques des entreprises des secteurs touchés.

Dans le monde moderne, la réglementation de l'environnement constitue en fait une activité essentielle des pouvoirs publics². Pour garantir l'obtention des avantages collectifs offerts par l'environnement, elle impose parfois des coûts considérables aux entreprises. Même lorsqu'une politique environnementale donnée se traduit globalement par une amélioration du bien-être, elle peut avoir des effets considérables sur les marchés. Il arrive que les entreprises soient assujetties à plusieurs catégories de lois et de réglementations, imposées par différents échelons de l'administration publique – administration municipale, provinciale ou de l'État, administration fédérale ou nationale, et impératifs des accords internationaux en matière d'environnement. Ces restrictions sont incorporées à des règles et réglementations explicitement « écologiques » et sont également intégrées, plus généralement, au droit civil et aux lois sur les nuisances par exemple, ou aux règles sur l'occupation des sols et l'aménagement du territoire.

Les principaux points développés dans ce document sont les suivants :

- La protection de l'environnement et le fonctionnement concurrentiel des marchés constituent deux axes prioritaires de l'action publique, et les objectifs dans ces deux domaines sont complémentaires. Il s'agit dans les deux cas (comme dans tous les domaines de l'action publique) d'optimiser le bien-être social. La réglementation de l'environnement a pour but de corriger les dysfonctionnements du marché associées aux externalités environnementales, la politique de la concurrence celui de promouvoir le bien-être du consommateur et l'efficacité économique en luttant contre les pratiques et les règles anti-concurrentielles.
- Des éléments convaincants de la théorie économique et des données tirées d'études de cas et d'analyses économétriques permettent de conclure que la réglementation de l'environnement,

¹ M. Anthony Heyes, professeur au Royal Holloway College de l'Université de Londres a apporté son concours au Secrétariat pour la rédaction de cette note.

² Aux États-Unis, par exemple, l'Environmental Protection Agency est l'organisme de réglementation le plus important. Il compte 18 000 employés et dispose d'un budget de quelque 7 milliards d'USD.

selon la manière dont elle est conçue, peut constituer un important **obstacle à l'entrée** sur certains marchés, donner lieu à des **comportements d'éviction** sur d'autres, et porter atteinte à la concurrence et au bien-être social par **d'autres moyens**.

- Il ressort des informations disponibles que les effets des réglementations de l'environnement ne sont pas équitablement répartis entre les entreprises aux caractéristiques environnementales similaires. En particulier, les grandes entreprises locales sont souvent moins touchées que les petites entreprises, les entreprises étrangères et les entreprises nouvellement créées.
- En raison des effets énumérés ci-dessus, les réglementations de l'environnement peuvent, en réduisant la concurrence, se traduire par une hausse des prix pour les consommateurs, qui s'ajoute aux coûts de la lutte contre la pollution. Toute évaluation des coûts et des avantages d'une réglementation de l'environnement, en vigueur ou en projet, est donc incomplète si elle ne comporte pas un examen des coûts générés par la diminution de la concurrence susceptible de résulter de la réglementation.

Il faut cependant reconnaître qu'il n'est pas toujours possible de bénéficier des avantages collectifs apportés par l'environnement sans influencer sur le degré de concurrence sur le marché. Par exemple, de nombreux marchés caractérisés par d'importants aspects environnementaux (gestion des déchets, eaux usées municipales, etc.) présentent des indivisibilités et des possibilités d'économies d'échelle, de sorte que des marchés concurrentiels peuvent y être efficaces, et que des réglementations économiques (autres qu'environnementales) seront nécessaires pour en assurer l'efficacité. Dans d'autres cas, la meilleure façon de conserver les stocks de ressources naturelles est d'en limiter l'accès à certains agents. On sait par exemple que la concurrence qui s'exerce pour l'obtention des ressources conduit à la surexploitation des biens communs, à moins que des incitations ne soient mises en place pour l'empêcher. Dans des contextes où il est difficile de concevoir ou d'appliquer de telles incitations, il peut être souhaitable de restreindre l'accès aux ressources communes.

Les conséquences des politiques de la concurrence sur l'environnement sont importantes mais dépassent le cadre de ce document. Celui-ci s'intéresse plutôt aux effets des politiques environnementales sur la concurrence. Il donne de nombreux exemples de situations dans lesquelles les politiques environnementales réduisent la concurrence et évoque la possibilité de bénéficier des avantages de l'environnement par des moyens moins créateurs de distorsions. D'autres politiques peuvent répondre aux objectifs environnementaux pour des coûts moindres, compte tenu des coûts liés à la restriction de la concurrence sur le marché.

Une **coordination** de l'élaboration des politiques de l'environnement et de la concurrence comporte donc des avantages potentiellement très importants. La meilleure façon d'organiser cette coordination à l'intérieur des organismes ou entre eux est une question qui doit être débattue.

1.1 Réglementation de l'environnement – justification et faits saillants

La protection de l'environnement naturel a pris ces dernières années une place centrale dans la réglementation de la plupart des pays. De nombreux éléments de cet environnement (la qualité de l'air, de l'eau, le calme et la tranquillité, les panoramas) sont des biens publics ou quasi-publics. En l'absence d'intervention des pouvoirs publics, le coût social de leur utilisation dépassera le coût privé, et le bien public fera l'objet d'une surexploitation qui aura pour effet de diminuer le bien-être social (Coase, 1960). Ce phénomène est généralement désigné sous le nom de « tragédie des biens communs » (Hardin, 1968).

Les institutions visant à protéger l'environnement existent depuis plusieurs siècles. Jusqu'à une époque relativement récente, les mesures étaient essentiellement dirigistes : l'organisme de réglementation imposait des restrictions à l'activité d'une entreprise polluante, par exemple en fixant un plafond à ses

émissions, en prescrivant l'utilisation de technologies particulières ou en limitant l'accès à l'activité en question (Heyes et Liston 2006 ; Perman *et al* 2003).

Un programme de réglementation de l'environnement a pour finalité première de limiter les dommages à l'environnement naturel. L'objectif secondaire consiste à atteindre cet objectif sans que la charge pour l'économie soit excessive.

Ces dernières décennies, on a assisté d'une part à une intensification des réglementations, d'autre part à l'application d'une gamme beaucoup plus vaste d'instruments d'action. L'insatisfaction à l'égard des instruments réglementaires classiques – parfois désignés sous le nom de méthodes « autoritaires » - ne résulte pas de leur incapacité à atteindre le premier objectif, mais le second. Dans un contexte où les entreprises étaient différentes, et où elles disposaient d'informations confidentielles quant aux coûts associés à des méthodes d'exploitation plus respectueuses de l'environnement, il y avait tout lieu de s'attendre à ce que l'adoption d'instruments « incitatifs » ou « économiques » réduise la charge économique liée à la réalisation d'objectifs écologiques donnés³. La théorie économique étayait cette assertion, et le recours à des instruments incitatifs s'est généralisé dans de nombreux pays ces dix dernières années.

De nombreuses données montrent que les lois relatives à l'environnement ont apporté des avantages sociaux et économiques considérables, notamment en matière d'amélioration de l'état de santé, de baisse de la mortalité, de diminution des dommages causés à la végétation, de l'embellissement et de l'amélioration des loisirs (Carlton et Perloff, 1990). Il existe aussi d'autres données abondantes qui indiquent que l'utilisation d'instruments incitatifs ou économiques a, dans de nombreux cas, sensiblement réduit les coûts associés à la réalisation des objectifs écologiques.

1.2 Des politiques complémentaires

Les politiques de la concurrence et de l'environnement ont des objectifs complémentaires. Toutes deux ont pour finalité – comme ce devrait être le cas dans tous les domaines de l'action publique – d'optimiser le bien-être social. La réglementation de l'environnement vise à corriger les dysfonctionnements du marché associées aux externalités environnementales, la politique de la concurrence à promouvoir le bien-être du consommateur et l'efficacité économique en luttant contre les pratiques et réglementations anti-concurrentielles. En principe, les responsables de la politique de l'environnement ne devraient pas appliquer de mesures qui limitent inutilement, d'une façon ou d'une autre, la concurrence.

Dans quasiment tous les pays, le cloisonnement des organismes est tel que l'application de la réglementation de l'environnement et celle du droit de la concurrence relèvent d'entités différentes. La gouvernance politique peut toutefois être plus coordonnée que ce cloisonnement structurel ne le laisse entendre.

Une stratégie de base pourrait consister à proposer que les organismes de réglementation de l'environnement évaluent régulièrement les effets des mesures qu'ils proposent sur la concurrence. Une telle démarche garantirait au moins une prise de conscience des conséquences que les mesures adoptées dans un domaine ont sur les activités de l'autre, et toute prise de conscience constitue un progrès par rapport à l'ignorance. Mais cette proposition, tant qu'elle ne sera pas étoffée, ne précise pas quel devrait

³ Il s'agissait notamment de taxes sur la pollution et de permis négociables.

être l'ampleur de ces évaluations, ou par quels moyens leurs conclusions entraîneraient la reformulation des mesures proposées dans le domaine évalué⁴. Un dispositif plus pointu s'impose.

Les situations présentées ici sont forcément « **de second rang** ». Il existe des distorsions associées au pouvoir de marché, et des pertes correspondantes de bien-être social, mais aussi des distorsions et pertes de bien-être associées aux externalités environnementales⁵. Dans ce genre de contexte, il est notoirement difficile de dégager des conclusions générales en ce qui concerne le bien-être ; de nombreux résultats particuliers à une situation donnée sont donc à prévoir.

1.3 Préliminaires

Notre étude a pour objectif de définir les principaux vecteurs au travers desquels le régime de réglementation de l'environnement en vigueur influencera (a) le degré et la nature de la concurrence sur les marchés et (b) la façon dont la politique de la concurrence doit être conduite.

La méthode retenue consiste à exposer une théorie et à l'étayer, par des données économétriques ou dégagées d'études de cas concrets. Des exemples sont donnés à titre illustratif, généralement choisis parce qu'ils ont été bien étudiés ou établis ; nous ne saurions prétendre qu'il s'agit d'exemples particulièrement marquants du phénomène examiné.

Les travaux empiriques – études économétriques, études de cas ou autres – sont particulièrement rares dans ce domaine. Il ne serait pas raisonnable de conclure de l'absence de preuves empiriques de l'influence d'un vecteur particulier de cause et d'effet que celui-ci n'a pas d'importance. La base factuelle disponible dans le domaine étudié est insuffisante.

2. L'incidence « passive » de la réglementation de l'environnement sur la concurrence

En l'absence de démarches explicites de la part des entreprises pour influencer ou déterminer la nature ou l'intensité des règlements relatifs à l'environnement, nous pouvons examiner les retombées de ces règlements sur l'évolution des marchés.

La réglementation de l'environnement peut notamment :

- Avoir des effets différenciés sur des entreprises aux caractéristiques distinctes (taille, intensité capitalistique, etc.) et, partant, sur l'évolution des marchés dans ces secteurs.

⁴ Ce type de « croisement » entre domaines réglementaires existe déjà dans de nombreux endroits. Au Royaume-Uni, l'Office of Fair Trading est globalement responsable des questions de concurrence ; s'il s'inquiète des retombées des réglementations en vigueur sur la concurrence, il peut en rendre compte au gouvernement, généralement dans le cadre d'une étude de marché. Il s'exprime aussi à ce sujet dans le cadre des avant-projets de lois. Des dispositions et responsabilités similaires existent ailleurs. L'Autorité de la concurrence finlandaise (2004) énonce les principes régissant l'évaluation des effets des réformes réglementaires sur la concurrence et suggère des moyens de les améliorer. Dans aucun de ces deux cas il ne semble toutefois exister de méthode systématique pour que les conclusions de l'étude amènent une modification des mesures.

⁵ Une situation de second rang est une situation où le marché présente au moins deux imperfections (distorsions). La « théorie de l'optimum de second rang » nous explique que le fait d'en corriger une risque d'augmenter ou de diminuer le bien-être social. Les premiers à élaborer cette théorie ont été Lipsey et Lancaster (1956). Il est facile d'imaginer des exemples dans le contexte qui nous occupe. Dans un secteur concurrentiel mais polluant, l'instauration d'une taxe sur la pollution visant à internaliser les externalités environnementales améliore le bien-être. Mais si le secteur fait l'objet d'un monopole et que sa production est déjà « trop faible » en termes de bien-être, l'instauration d'une telle taxe risque de diminuer ce dernier.

- Influencer la structure du marché et donc la concurrence et l'évolution des marchés même dans les domaines où les entreprises sont a priori identiques.

2.1 *Taille des entreprises, coûts de conformité et évolution du marché*

Les coûts résultant de la mise en conformité à une règle ou réglementation donnée seront vraisemblablement fonction de plusieurs caractéristiques de l'entreprise en question.

En particulier, de nombreuses données, économétriques et autres, font apparaître l'importance de la taille de l'entreprise⁶. Il est certes possible de détecter des effets favorables de réglementations particulières sur les petits producteurs, mais les éléments disponibles indiquent pour l'essentiel que *les coûts unitaires de mise en conformité sont moins élevés pour les grandes entreprises*⁷.

Le fait que les coûts unitaires de mise en conformité soient généralement plus élevés dans les petites entreprises que dans les grandes tient dans de nombreux cas aux coûts fixes élevés associés au respect des réglementations. Les coûts fixes d'une entreprise sont ceux qui ne sont pas déterminés par son niveau de production. Une petite entreprise est obligée de les distribuer sur un nombre inférieur d'unités de production. Plus les coûts fixes sont élevés, plus les économies d'échelle le sont aussi – les coûts unitaires étant moindres pour les grandes entreprises – et plus l'échelle efficace minimale de production est grande.

Les coûts fixes dérivent souvent de la « concentration » du capital fixe utilisé dans de nombreux secteurs ayant des incidences sur l'environnement. Jusqu'à une période assez récente, la plupart des réglementations portaient explicitement ou implicitement sur les technologies – il s'agissait d'obtenir une

⁶ Dean *et al* (2000: 59) définissent trois catégories de raisons expliquant pourquoi la taille de l'entreprise est importante pour les coûts unitaires de conformité. Les *asymétries de mise en conformité* résultent de l'écart entre les coûts de conformité par unité de production des petites et des grandes entreprises quand les règlements les concernent toutes et leur sont appliqués de la même façon (Bartel et Thomas, 1987 ; Pashigian, 1984). Les *asymétries d'application* dérivent de l'application inégale des réglementations aux petites et aux grandes entreprises (Finto, 1990 ; Pashigian, 1984). Les *asymétries réglementaires* tiennent aux disparités, en termes de sévérité, des lois ou règlements auxquels les petites entreprises sont assujetties par rapport aux grandes (Brock et Evans, 1985).

⁷ Plusieurs études ont abouti à la conclusion que les réglementations environnementales favorisent les grandes entreprises ou usines par rapport aux petites (Birnbaum, 1985 ; Brock et Evans, 1986 ; Pittman, 1981). Chakrabarti et Mitra (2005) examinent les conséquences économiques et écologiques des réglementations antipollution sur les petites industries dans le cadre d'une étude de cas portant sur l'Inde.

Dans une étude célèbre, Pashigian (1984) utilise des techniques économétriques de panel méthodiques pour évaluer l'incidence des programmes de réglementation ayant trait à l'environnement et à la santé et à la sécurité au travail aux États-Unis dans les années 60 et 70. Il estime la moyenne pondérée du coût brut des mesures antipollution par millier de dollars de valeur ajoutée et observe son évolution dans un groupe de secteurs relevant de la classification à quatre chiffres ; il rapproche cette évolution de celle de la structure du marché et de la répartition des facteurs (la répartition des coûts entre le capital et la main d'œuvre). On trouvera les résultats détaillés de ses recherches dans les tableaux présentés ici, mais il conclut ce qui suit :

« La mise en conformité aux lois relatives à l'environnement n'a pas seulement réduit le nombre d'usines dans les secteurs concernés ; elle a aussi imposé une charge plus lourde aux petites usines qu'aux grandes. Avec la réglementation de l'environnement, les petites usines ont eu plus de difficultés à rivaliser avec les grandes et à survivre. Outre qu'elle a redistribué les parts de marché à l'intérieur de chaque secteur, la réglementation de l'environnement a intensifié l'utilisation du capital par rapport au travail » (Pashigian, 1984:23).

Il s'agit là d'une conclusion qualitative à laquelle d'autres études empiriques ont fait écho : les réglementations frappent généralement de manière disproportionnée les petites entreprises.

autorisation exigeant l'utilisation d'une technologie particulière. Or, bon nombre de ces technologies étaient des technologies de traitement en aval intensives en capital, qui entraînent des économies d'échelle considérables (voir par exemple Markusen, 1997).

Il peut également y avoir des économies d'échelle administratives :

« Les opérations de mise en conformité des entreprises peuvent aussi comporter des économies d'échelle administratives. Les données empiriques ont montré que les règlements peuvent peser plus lourdement sur les petites entreprises, qui ne disposent pas des moyens spécialisés nécessaires pour gérer les opérations de mise en conformité, que sur les grandes entreprises (Birnbaum, 1985 ; Ungson, James et Spicer, 1985). Les coûts associés à la recherche et à l'interprétation des règlements pertinents, aux relations avec les organismes de réglementation et aux formalités connexes comportent des coûts fixes élevés qui augmentent l'échelle nécessaire à une mise en conformité efficiente (Brock et Evans, 1986). Les entreprises qui peuvent répartir ces coûts administratifs sur un plus gros volume de production obtiendront un avantage de coût par unité. » (Dean et Brown, 1995:291).

Il existe au moins des observations ponctuelles fiables indiquant que les économies d'échelle administratives pourraient être très importantes ; elles méritent des mesures empiriques plus approfondies. Les avantages de coût peuvent être associés aux mesures statiques de la taille de l'entreprise et à ses antécédents.

Une augmentation de l'échelle d'efficacité minimale va de pair avec celle du degré de concentration que traduit la « structure naturelle du marché » - la structure qui sert à minimiser les coûts sectoriels (Brock et Evans, 1986 ; Chen et Metcalfe, 1990).

De manière plus générale, l'avantage concurrentiel que les économies d'échelle confèrent aux grandes entreprises par rapport aux petites – exacerbées ici par les mesures de réglementation de l'environnement – amènera probablement une intensification de la concentration, avec les conséquences que cela implique en termes de concurrence et de politique de concurrence.

L'effet de concentration peut résulter de l'influence exercée sur les choix de production des entreprises déjà en activité et/ou de la modification du schéma de création et de fermeture d'entreprises.

Dean, Brown et Stango (2000) ont évalué l'incidence des réglementations de l'environnement sur la création de petites entreprises dans 170 secteurs manufacturiers sur dix ans. Leur analyse économétrique approfondie a conclu que « ... l'intensification des règlements en matière d'environnement est associée à un recul de la création de petites entreprises. Aucun effet n'a toutefois été observé sur celle de grandes entreprises, ce qui indique que les réglementations mettent les entreprises de petite taille en position désavantageuse sur le plan des coûts unitaires. » (Dean, Brown et Stango, 2000:56). En particulier, dans un secteur où les coûts des mesures antipollution seraient supérieurs de 20 % à la moyenne, la création d'entreprises serait inférieure de 4 % à la moyenne⁸.

Cette étude et d'autres sont incomplètes en ce qu'elles n'évaluent pas les conséquences d'une diminution de la création d'entreprises sur la structure de marché d'équilibre. Dans la mesure où une augmentation des économies d'échelle – soit leur ampleur sur une gamme donnée de produits, soit l'élargissement de la gamme de produits sur laquelle elles peuvent être réalisées – doit en principe

⁸ List (2003) et Bjorn, Golombek et Raknerud (1998) apportent des preuves de l'incidence de règlements environnementaux rigoureux sur la création et la fermeture d'entreprises dans différents contextes, et renvoient à d'autres études réalisées dans ce domaine.

favoriser la concentration du marché, elle aura des retombées connexes sur l'intensité de la concurrence et sur la conduite appropriée de la politique de concurrence dans ce secteur.

2.2 *Évaluation quantitative des obstacles à la concurrence au niveau global*

Sans souscrire à une théorie particulière quant aux *raisons* pour lesquelles la réglementation devrait réduire la concurrence dans un contexte donné, il existe des méthodes économétriques qui permettent de délimiter et d'évaluer cette réduction.

La première consiste à recourir à des « études événementielles » pour évaluer l'incidence d'une modification réglementaire particulière sur la valeur boursière des entreprises cotées⁹.

La seconde consiste à établir une corrélation entre un indice de la « quantité » de réglementations auxquelles une entreprise est assujettie à un autre indice ou à une mesure des « rentes » qu'elle dégage.

Ces exercices ont pour objectif de trouver des associations statistiques ; ils ne visent pas à expliquer *pourquoi* la réglementation produit des rentes. Ils peuvent toutefois s'avérer très utiles dans la mesure où ils fournissent des renseignements quant à l'incidence d'une mesure réglementaire particulière (dans le premier cas) ou d'un ensemble de mesures (dans le second) sur la concurrence.

Helland et Mayami (2003) font appel à la deuxième méthode pour examiner l'effet de la réglementation de l'environnement sur la concurrence dans les années 70 et 80 aux États-Unis. La prolifération de règlements environnementaux, à l'échelon fédéral et à celui des États, durant cette période a été bien établie. A cette époque, plusieurs lois majeures ont été promulguées dans ce domaine, ainsi qu'une multitude de lois moins importantes. Comme le notent les auteurs (page 243) : « Si les coûts de mise en conformité ont été évalués dans le cadre d'études de cas portant sur des amendements législatifs particuliers dans des secteurs donnés... nous examinons les réglementations relatives à l'environnement en tant qu'obstacles à l'entrée au moyen d'un échantillon de secteurs sur une période de dix ans. »

La variable dépendante qu'ils adoptent est le q de Tobin – une mesure des rentes des entreprises couramment employée dans les études financières¹⁰. On peut voir dans l'augmentation du q , toutes choses étant égales par ailleurs, l'assouplissement de l'environnement concurrentiel dans lequel l'entreprise évolue. La variable indépendante qui est au centre de l'étude – et présente pour nous un intérêt majeur ici – est la mesure du fardeau réglementaire pesant sur l'entreprise¹¹. Les principaux résultats obtenus sont les suivants :

⁹ Pour des exemples concernant la réglementation de l'environnement, voir Badrinath et Bolster (1996), Maloney et McCormick (1984).

¹⁰ Le q de Tobin désigne le ratio de la valeur boursière de l'entreprise à ses coûts de remplacement (ces derniers étant calculés à partir des données comptables concernant la valeur des équipements, des bâtiments, etc.). Une valeur supérieure à un signifie que le marché donne plus de valeur à l'entreprise qu'à la somme de ses composantes. Cet écart s'interprète naturellement en termes de rentes.

¹¹ Pour ce faire, les auteurs utilisent les chiffres de l'administration américaine concernant les dépenses consacrées à la mise en conformité aux lois environnementales contenues dans le rapport annuel du Council of Environmental Quality de 1997. Ce rapport se fonde lui-même sur d'autres sources, notamment le rapport *Pollution Abatement Costs and Expenditures* publié par le Bureau of the Census. D'autres mesures de la charge réglementaire auraient pu être adoptées. Certains auteurs, par exemple, ont recensé le nombre total de pages consacrées aux mesures réglementaires. L'interprétation varie selon que l'on mesure les dépenses d'investissement, ou que l'on y ajoute les dépenses variables, même si les auteurs n'observent guère de différence sur le plan empirique.

- Aux États-Unis, globalement, une hausse du coût de mise en conformité avec les lois relatives à l'environnement n'a pas d'incidence statistique significative sur la valeur q de l'entreprise médiane (selon le classement par taille).
- Pour une entreprise du quartile supérieur (classement par taille), une hausse de 1 % du coût de mise en conformité avec les lois relatives à l'environnement est associée à une augmentation de 1,2 % à 9,7 % de sa valeur q , selon le type de loi concernée.

Il ressort de l'analyse que la réglementation a pour effet de réduire la compétitivité globale des marchés, mais au profit des grandes entreprises, les petites entreprises en tirant moins d'avantages, voire aucun.

3. Obstacles à l'entrée sur le marché

Il est souvent affirmé que des réglementations particulières de l'environnement peuvent avantager les entreprises présentes dans un secteur par rapport à celles de l'extérieur. Tout comme d'autres obstacles à l'entrée, elles constituent parfois une protection qui permet aux entreprises déjà en activité de réaliser des bénéfices exceptionnels.

Il existe plusieurs définitions des obstacles à l'entrée sur le marché. Bain (1956:3) les définit comme étant « ... les avantages dont bénéficient les vendeurs établis dans un secteur par rapport à de nouveaux arrivants potentiels ». Stigler (1968:67) évoque « ... un coût de production que doit assumer l'entreprise qui cherche à s'implanter dans un secteur, mais pas celles qui y sont déjà établies. »

La deuxième partie de notre étude a recensé les vecteurs par l'intermédiaire desquels la réglementation de l'environnement peut agir sur la structure « naturelle » du marché, à savoir celle qui réduit les coûts à l'échelle sectorielle. Elle a notamment souligné que les réglementations favorisent généralement les entreprises de certaines dimensions – le plus souvent les grandes entreprises. Ainsi, tout élément qui accroît les coûts fixes de production élargit la gamme de produits sur laquelle un producteur dégage des économies d'échelle, augmente l'échelle efficace minimale, et relève l'avantage de coût moyen d'une grande entreprise par rapport à sa rivale moins importante.

Ces conclusions associent les coûts de mise en conformité à la taille de l'entreprise, mais ne distinguent pas spécifiquement les nouveaux arrivants des entreprises en place. Les coûts supplémentaires concernent également les petites entreprises existantes. Ces facteurs visent donc peut-être à établir une discrimination à l'égard des petits producteurs, mais pas particulièrement de ceux qui cherchent à s'implanter dans un secteur.

Nous nous intéressons ici plus explicitement aux aspects des réglementations de l'environnement qui devraient agir directement sur les conditions d'entrée (et de sortie). Il en existe au moins trois :

- **Augmenter les investissements à fonds perdus associés à l'entrée sur un marché :** il s'agit des investissements nécessaires pour s'implanter dans un secteur, mais qu'une entreprise ne restant pas longtemps sur le marché ne peut récupérer à la sortie. Les coûts irrécupérables sont le signe de marchés imparfaitement contestables et fournissent les conditions nécessaires pour que les entreprises en place se livrent à des opérations ayant pour effet de dissuader l'entrée de nouveaux arrivants.
- **Produire des écarts de coûts entre les entreprises en place et les nouvelles venues :** cela consiste à placer les nouveaux arrivants potentiels en situation de désavantage concurrentiel manifeste, et à les dissuader ainsi de s'implanter sur le marché. Il peut s'agir

par exemple de « l'apprentissage » nécessaire pour respecter des réglementations complexes.

- **Ralentir la procédure d'entrée et de sortie :** Dans bon nombre de domaines, les formalités et les procédures (obtention de licences, certification, etc.) imposent des coûts financiers aux arrivants potentiels, mais risquent en outre de freiner leur entrée. Au minimum, elles retardent le moment où la concurrence commence à porter ses fruits, mais peuvent aussi diminuer les incitations à entrer sur un marché.

3.1 *La réglementation de l'environnement en tant que source de coûts irrécupérables*

La théorie de la contestabilité des marchés fait très clairement apparaître l'influence des coûts irrécupérables sur les conditions d'entrée. Cette théorie indique que les conditions d'entrée – par opposition à la concentration du marché – sont le facteur déterminant du comportement des entreprises en place et, partant, de l'évolution des marchés.

Les coûts irrécupérables existent dans la plupart des activités économiques. Par exemple, un équipement essentiel qui n'a pas d'autre emploi et pour lequel il n'existe pas de marché de l'occasion serait considéré comme un investissement à fonds totalement perdus. Si cet équipement pouvait par la suite être transformé et utilisé dans le cadre d'une autre activité productive (bien qu'il soit peut-être moins adapté à cette utilisation) ou vendu sur un marché de l'occasion, une partie seulement des dépenses non récupérables serait considérée perdue. Il en irait de même d'un savoir ou d'approbations réglementaires dont l'obtention est coûteuse, qui sont particuliers à un marché et n'ont pas de valeur négociable¹².

Un « marché parfaitement contestable » est un marché où les coûts irrécupérables sont nuls. Il est exposé à des comportements opportunistes. Si des profits exceptionnels sont réalisés dans le secteur, ou si la production n'est pas organisée de manière à minimiser les coûts sectoriels, un attaquant opportuniste peut s'y implanter, pratiquer des prix inférieurs à ceux des entreprises en place et se rendre maître du marché.

Dans un marché parfaitement contestable, l'entreprise ou les entreprises en place sont obligées de produire à moindre coût et de pratiquer des prix de Ramsey. Elles n'exercent pas de pouvoir monopolistique et ne réalisent pas de bénéfices exceptionnels¹³. Fait significatif, cela s'avère indépendamment de la concentration du marché. Le phénomène se vérifie que le secteur soit aux mains d'un monopole ou que des milliers de petites entreprises y opèrent.

Le degré de contestabilité d'un marché est ainsi déterminé par les conditions d'accès qui le caractérisent. La notion de contestabilité parfaite offre un critère au regard duquel on peut examiner les conséquences d'une liberté d'accès imparfaite.

¹² La distinction entre coûts « fixes » et coûts irrécupérables est floue dans la pratique, même si elle peut être clairement établie en théorie. Elle a trait en particulier à l'ampleur et à la durée du processus. Le processus d'amortissement du capital implique que les coûts fixes sont irrécupérables à court terme seulement. Le problème consiste donc à déterminer ce qu'est le court terme, et de comparer la durée des engagements d'investissement à l'horizon temporel des instruments de la concurrence sur le marché des produits, par exemple l'évolution des prix ; Tirole (1988:308), Besanko *et al* (2000).

¹³ Les prix de Ramsey sont les prix optimaux pour le bien-être social pour autant que le producteur atteigne un seuil de rentabilité. Notre analyse porte sur les entreprises ne fabriquant qu'un produit, mais elle s'applique également à celles qui en produisent plusieurs.

Si un marché n'est pas parfaitement contestable – dans la mesure où des investissements à fonds perdus sont associés à l'entrée sur ce marché – la discipline pesant sur les entreprises en place, tant sur le plan de l'efficience productive que de la fixation des prix, se relâchera. L'ampleur de ce relâchement sera directement fonction du montant des coûts irrécupérables. Ainsi la hausse de ces coûts, toutes choses étant égales par ailleurs, rendra l'accès au marché plus difficile, et la performance de ce dernier diminuera¹⁴.

3.1.1 *Données relatives aux coûts irrécupérables et à la réglementation de l'environnement*

Si la distinction théorique entre coûts irrécupérables et coûts fixes est assez claire (et malgré l'importance critique de « l'irrécupérabilité » pour l'évolution du marché), les économistes n'ont guère réussi à identifier la part des coûts fixes qui sont irrécupérables dans la pratique (à l'exception notamment de Klimek, 2004 ; Hausman et Stuart, 2000).

Cela dit, ce n'est pas parce que les coûts irrécupérables sont difficiles à définir en termes économétriques que leur ampleur n'est pas un déterminant significatif de la structure du marché, ni que le climat réglementaire ne peut les influencer sensiblement. Nous proposons deux hypothèses générales plausibles :

- Dans la plupart des cas, la réglementation de l'environnement augmente le capital fixe nécessaire pour participer à l'activité concernée et, toutes choses étant égales par ailleurs, une hausse du capital fixe s'accompagnera probablement d'une **augmentation des investissements à fonds perdus**¹⁵.
- Dans la mesure où les obligations réglementaires se « concrétisent » sous forme de capital, et que ces obligations sont particulières à chaque pays ou à chaque domaine d'activité, leur multiplication devrait en principe entraîner **une hausse du pourcentage des coûts fixes d'entrée qui seront irrécupérables à la sortie** (*fonds perdus*).

Ces deux hypothèses indiquent que le nombre de réglementations relatives à l'environnement est positivement corrélé avec une hausse des coûts irrécupérables (pas seulement fixes) d'entrée, ce qui implique un marché moins contestable, moins ouvert, et une diminution de l'effet disciplinaire que l'arrivée potentielle de nouveaux concurrents exerce sur les entreprises en place.

3.1.2 *Exemple: La loi américaine sur la pureté de l'air (Clean Air Act) et le marché du ciment Portland*¹⁶

Aux États-Unis, la loi sur la pureté de l'air confie à la Environmental Protection Agency la responsabilité de réglementer les émissions d'un large éventail de polluants atmosphériques. Elle lui impose aussi d'évaluer les coûts et bénéfices liés à l'application de cette réglementation.

¹⁴ Il existe une forte interdépendance entre les conditions d'entrée et de sortie. C'est l'impossibilité de quitter un marché, ou le coût élevé que cette sortie entraîne, puisque la part irrécupérable des investissements doit être abandonnée, qui diminue l'attrait d'un marché pour les entreprises extérieures et permet à celles qui sont en place de se livrer à des opérations visant à les dissuader d'entrer sur le marché.

¹⁵ De manière générale, on pourrait par exemple partir du principe qu'un pourcentage fixe des coûts d'investissement fixes est également irrécupérable – voir toutefois le point suivant.

¹⁶ L'analyse présentée ici est inspirée de Ryan (2004) et rend compte de ses déductions.

En général, l'analyse de coûts effectuée par l'EPA est une estimation technique des dépenses (fixes et variables) nécessaires pour mettre une usine en conformité avec les normes proposées.

Cette méthode ne permet pas de prendre en compte l'effet d'une norme sur les investissements à fonds perdus associés à l'entrée sur un marché, et donc sur la structure du marché dans les secteurs concernés. Ces études risquent ainsi d'omettre une part substantielle (voire l'essentiel) du coût économique total associé à la nouvelle réglementation. La modification des coûts d'entrée risque de créer des marchés où les entreprises seront moins nombreuses et la production plus faible. Ce renforcement de la concentration pourrait avoir des effets considérables sur le bien-être social, au-delà des coûts initiaux directs de mise en conformité.

Il sera très vraisemblablement très difficile d'évaluer ces effets indirects de manière empirique. L'évaluateur devra établir des projections pour les entreprises qui s'implanteront dans le secteur et qui le quitteront, ainsi que sur la croissance et le comportement des entreprises en place qui y resteront, dans l'hypothèse où la réglementation envisagée serait promulguée. Les résultats devront alors être comparés à une situation contrefactuelle « normale » ou, dans une étude plus fouillée, à des projections analogues réalisées pour d'autres cas de figure.

Dans ce domaine, l'étude peut-être la plus ambitieuse et complète sur le plan technique est une analyse rétrospective des conséquences des amendements de 1990 à la loi sur la pureté de l'air sur le marché du ciment Portland effectuée par Ryan (2004).

Ryan fait appel à des techniques économétriques pointues pour estimer un modèle d'oligopole totalement dynamique¹⁷. Il utilise des techniques d'estimation récemment mises au point qui lui permettent d'estimer la structure de coûts complète du secteur, y compris les coûts irrécupérables d'entrée et de sortie¹⁸. Cette évaluation peut servir à mesurer les coûts économiques d'une réglementation face à un pouvoir dynamique et commercial pour la première fois.

Aux États-Unis, le marché du ciment est moins concentré que bon nombre de grandes industries polluantes (industrie papetière, pétrochimie, aluminium, etc.) ; il affiche un indice Herfindahl-Hirschman (HHI) de 466 selon le recensement économique de 1997, mais cette mesure nationale sous-estime le degré de concentration puisque, en raison des frais de transport, l'industrie est en fait fractionnée en marchés régionaux.

L'estimation de Ryan indique que les amendements de 1990 à la loi sur la pureté de l'air ont augmenté de 35 % les coûts irrécupérables d'entrée (de 120 millions d'USD à 162 millions d'USD)¹⁹. Ainsi, le retrait du marché de nombreux petits producteurs indépendants (notamment ceux qui faisaient appel à la technique des fours à voie humide) au cours de la période étudiée n'a pas été contrebalancé par l'arrivée de nouvelles entreprises, malgré la plus forte rentabilité du secteur. Le ratio de concentration des

¹⁷ La méthode s'inscrit dans la tradition d'Erison et Pakes (1995), mais elle est adaptée aux grandes caractéristiques du marché du ciment, et développée de manière à pouvoir simuler l'effet d'autres innovations réglementaires. Ryan modèle l'interaction des entreprises sur des marchés régionaux spatialement séparés où elles sont différenciées en fonction de leur capacité de production et où elles rivalisent en termes de volumes sur des marchés (locaux) homogènes performants. Il prend explicitement compte des coûts fixes d'entrée, de sortie et d'adaptation de la capacité.

¹⁸ A la connaissance de l'auteur, c'est la première fois qu'une telle opération a été réalisée. Elle fait de cette étude l'une des plus importantes analyses récemment effectuée en matière d'organisation industrielle empirique.

¹⁹ Les *bénéfices* dérivés de l'entrée sur le marché ont également augmenté pour tenir compte de la concurrence plus modérée à laquelle un nouvel arrivant compterait être confronté par la suite ; ce paramètre est intégré à l'analyse, mais pas en proportion suffisante pour compenser la hausse des coûts d'entrée.

dix premières entreprises - qui avait affiché une tendance à la baisse durant des années 80 – a augmenté chaque année entre 1990 et 1995.

« Cette évolution de la répartition des coûts irrécupérables est le déterminant majeur de la structure du marché au cours de la seconde période (post-amendements)... Les paramètres expliquent clairement comment il est possible d'observer une baisse du taux d'entrée quand l'activité du secteur est plus rentable que jamais. » (Ryan, 2004:16).

En termes de bien-être social, on estime que les amendements ont entraîné un recul de 10 % de la rente du consommateur, essentiellement parce que la probabilité que trois entreprises au moins soient actives sur un sous marché donné est huit fois inférieure après l'adoption des amendements.

Pour une entreprise, la valeur actuelle associée à sa présence sur le marché a en revanche augmenté de 4 % compte tenu du renforcement du pouvoir de marché résultant de la moindre concurrence d'entrants potentiels. « Ainsi, non seulement l'analyse statique des coûts ne parvient-elle pas à tenir compte des effets d'un accès limité au marché et du renforcement du pouvoir de marché sur le bien-être des consommateurs, mais encore donne-t-elle un *signal erroné* lorsqu'elle en évalue le coût pour les entreprises en place. » (Ryan, 2004:50).

Cette étude – même si l'on ne met pas ses résultats en doute - ne signifie pas que les amendements à la loi sur la pureté de l'air ont forcément eu un effet défavorable en termes de bien-être. Pour évaluer cette question, il faudrait établir un arbitrage entre les avantages dérivant de la purification de l'air pour l'environnement et le coût économique complet du programme, y compris ses retombées sur la concurrence. Ce qu'elle montre bien, en revanche, est que ne pas prendre en compte les effets négatifs (dans ce cas) de la réglementation sur la concurrence peut donner lieu à une sous-estimation importante des coûts et, partant, biaiser les résultats probables des analyses coûts-bénéfices.

3.2 *La réglementation en tant que source d'avantage de coûts pour les entreprises en place par rapport aux nouveaux arrivants*

Les restrictions environnementales peuvent aussi constituer un obstacle à l'entrée et à la concurrence quand elles traitent les nouvelles arrivantes (qu'il s'agisse d'entreprises, d'usines ou de technologies) de manière systématiquement différente à celle dont elles traitent les entreprises, usines ou technologies en place ou existantes.

3.2.1 *Les réglementations différenciées selon l'année de création des entreprises (vintage-differentiated regulation/VDR) et le « biais envers les nouveaux établissements »*

Une caractéristique courante – voire prépondérante dans plusieurs pays, dont les États-Unis – de nombreux programmes de réglementation de l'environnement est que les normes applicables aux établissements réglementés sont fixées en fonction de leur date d'entrée en activité, les établissements les plus récents étant assujettis à une réglementation plus rigoureuse. Aux États-Unis, beaucoup de règles de protection de l'environnement, dont la loi sur la qualité de l'eau de 1975 et la loi sur la pureté de l'air de 1977, imposent une charge plus lourde aux nouvelles entreprises génératrices de pollution qu'aux entreprises existantes, qu'elles soient grandes ou petites (Liroff, 1986).

Une forme extrême de réglementation différenciée selon l'année de création est « l'antériorité », en vertu de laquelle les établissements entrés en activité avant une date butoir sont exemptés de certains règlements nouveaux ou sont assujettis à des obligations moins contraignantes²⁰.

Il existe plusieurs justifications à la réglementation différenciée selon la date de création. La première résulte de la simple application des critères de rentabilité à la promulgation de normes. Il est nettement plus onéreux d'aménager une usine existante pour qu'elle réduise ses émissions polluantes que de veiller à ce qu'une nouvelle usine soit équipée d'installations moins polluantes dès son entrée en activité. Des normes plus strictes satisferont peut-être aux critères d'évaluation des coûts et bénéfiques quand elles s'appliqueront à une usine nouvelle, mais pas quand elles seront appliquées rétrospectivement à des établissements anciens²¹. Une autre justification a trait à la notion d'équité envers les propriétaires des nouveaux établissements face à l'évolution des normes sociales et des connaissances scientifiques en matière de pollution et d'environnement.

Ce nouveau « biais envers les nouveaux établissements » devrait logiquement institutionnaliser l'avantage de coût des entreprises en place par rapport aux futures arrivantes.

3.2.2 Exemple : Le programme « New Source Review » aux États-Unis²²

Le programme New Source Review (NSR) en vigueur dans le cadre de la production d'électricité aux États-Unis est un exemple souvent étudié de réglementation différenciée selon la date de création des établissements. Le NSR établit les normes de réduction des émissions applicables aux nouvelles installations et à celles qui sont agrandies ou modifiées. Les installations existantes n'y sont donc pas assujetties, de sorte que les usines neuves ou modernisées doivent être moins polluantes que les usines de même nature plus anciennes.

Plusieurs études ont analysé les retombées du programme NSR sur divers aspects du comportement des entreprises du secteur. Logiquement, les distorsions les plus naturelles devraient être que les producteurs soient incités (a) à utiliser plus intensivement les équipements anciens (puisque les nouvelles installations ont des coûts d'exploitation supérieurs) et (b) à maintenir les usines existantes en exploitation

²⁰ Stavins (2005) présente un inventaire critique des études portant sur les retombées de la différenciation selon l'année de création. Voir également Hsu (2006).

²¹ Il en va de même dans d'autres domaines, notamment la certification professionnelle, les lois relatives à la sécurité des produits de consommation et les réformes fiscales. Les réglementations du bâtiment concernant par exemple la pente du toit, la largeur des escaliers et l'emplacement des conduits d'évacuation de gaz s'appliquent généralement aux constructions nouvelles. Il est beaucoup moins coûteux de les respecter dans un nouveau bâtiment que de mettre des constructions anciennes aux normes.

²² Il existe de nombreux autres exemples dans d'autres pays. En 1991, le gouvernement tchèque a promulgué la loi sur la pureté de l'air (loi 309/1991), qui imposait des limites plus strictes aux installations génératrices de pollution, nouvelles et existantes, mais de manière différenciée. Les restrictions appliquées aux nouvelles installations se fondaient sur les « meilleures technologies disponibles ». Pour les établissements existants, elles étaient basées (dans les premiers temps au moins) sur le « taux d'émission le plus faible réalisable dans des conditions d'exploitation optimales compte tenu de l'état des installations techniques et du combustible utilisé ». En d'autres termes, les entreprises en place pouvaient invoquer l'utilisation de technologies anciennes ou polluantes pour justifier leur niveau plus élevé d'émissions polluantes. On trouvera dans Earnhart et Lizal (2006) une excellente analyse empirique des conséquences des réformes réglementaires tchèques adoptées dans les années 90 sur le plan de l'environnement.

au-delà de la date à laquelle elles auraient normalement été fermées (puisque les équipements de remplacement serait assujettis aux nouvelles normes, plus rigoureuses)^{23,24}.

Le point qui nous intéresse ici (l'effet du NSR sur les conditions d'entrée sur le marché) n'a peut-être pas fait l'objet d'analyses spécifiques. Néanmoins, les distorsions de coûts décrites dans plusieurs études, y compris celles citées ici, ont été significatives et substantielles. On peut donc raisonnablement affirmer que le programme a probablement opéré une discrimination à l'encontre des entreprises susceptibles de s'implanter sur le marché avec des usines neuves, ainsi que des entreprises en place désireuses de construire des capacités nouvelles pour accroître leur production²⁵.

3.3 *Permis, certification et formalités administratives*

Dans de nombreux secteurs, l'entrée ou la sortie d'un marché sont elles-mêmes directement assujetties à des barrages réglementaires pour des motifs environnementaux.

Dans les secteurs qui ont des incidences sur l'environnement, l'entrée de nouveaux producteurs (ou l'introduction de nouveaux produits par des entreprises nouvelles ou existantes) sera souvent, à juste titre, soumise à un examen. Les procédures d'autorisation et de certification et les formalités connexes peuvent toutes créer des obstacles réglementaires que les candidats doivent surmonter s'ils veulent se poser en concurrents sur un marché (Lyon et Maxwell 2004). Elles entraînent parfois des coûts, en termes financiers et de temps. Elles peuvent également constituer un investissement hasardeux si l'aboutissement de la demande est imprévisible.

Il importe également de noter que la procédure d'autorisation/de permis risque d'augmenter le risque de captation réglementaire. Les instruments économiques peuvent avoir pour gros avantage de laisser peu de marge de discrétion aux organismes réglementaires, et de limiter ainsi les possibilités de captation. Cela se vérifie tout particulièrement dans les cas où il existe une forte asymétrie de l'information et où l'obtention d'une licence d'exploitation (et/ou les conditions régissant cette licence) résulte davantage d'une négociation que d'une simple formalité administrative²⁶.

²³ Du fait qu'ils incitent les producteurs d'électricité à (a) maintenir des usines en activité plus longtemps que prévu, et (b) concentrer leur production sur ces vieilles usines, les effets du NSR sur l'environnement ont été mis en question. Ceux qui s'intéressent explicitement au programme pour ces avantages environnementaux se sont demandés dans quelle mesure il a freiné le remplacement des équipements et, partant, maintenu le niveau des émissions au-dessus de ce qu'il aurait été en son absence.

²⁴ Nelson, Tietenberg et Donihue (1993) utilisent un échantillon de 44 entreprises de production d'électricité de 1969 à 1983 pour montrer que la réglementation a augmenté de 25 % l'âge des équipements. Stanton (1993) présente des données montrant que les normes d'utilisation sont sensiblement plus élevées. List, Millimet et McHone (2004) et Levinson (1999) apportent d'autres données empiriques.

²⁵ Dans une excellente étude synthétique et analytique, Stavins (2005) souligne le potentiel du NSR à constituer un obstacle à l'entrée, et note que si « ...il importe d'établir ici une distinction entre l'entrée de nouvelles entreprises et l'expansion d'entreprises existantes, les barrières à l'entrée érigées par la réglementation de l'environnement s'appliquent généralement aux deux cas de figure. »

²⁶ Nous ne traitons pas ici les questions politico-économiques en profondeur. Naturellement, celles-ci ont parfois leur importance, et de nombreuses études leur ont été consacrées.

3.3.1 Exemple : Homologation et enregistrement des pesticides aux États-Unis

Les critiques concernant ce type de procédure ont généralement porté non pas sur la *principe* de la nécessité d'un examen (même au détriment de la facilité d'accès) mais sur les mécanismes d'examen et d'homologation²⁷.

L'utilisation des pesticides aux États-Unis est assujettie à la loi sur les insecticides, fongicides et raticides (FIFRA) qui exige que tous les pesticides soient enregistrés (homologués) par l'EPA à seule fin d'assurer leur sécurité.

Logomasini (2003) s'appuie sur une analyse du marché des produits de préservation du bois pour affirmer que les entreprises en place qui introduisent de nouveaux produits peuvent se servir de la procédure d'homologation pour éliminer la concurrence des petites entreprises désireuses de rester sur le marché en utilisant des variantes existantes, même quand l'intégrité environnementale de ces variantes n'est pas remise en question.

C'est dans le contexte des « utilisations marginales » que les retombées de la réglementation américaine en matière de pesticides sur la disponibilité des produits et la concurrence ont été plus particulièrement critiquées (Competitive Enterprise Institute, 2004).

3.3.2 Exemple : le cadre législatif REACH de l'Union européenne

La Commission européenne a proposé en octobre 2003 un nouveau cadre réglementaire européen pour l'enregistrement, l'évaluation et l'autorisation des substances chimiques (REACH) dans l'objectif d'améliorer la protection de la santé humaine et de l'environnement grâce à la détection plus pointue et plus rapide des propriétés des substances chimiques.

Le cadre proposé vise à donner une plus grande responsabilité à l'industrie dans la gestion des risques liés aux produits chimiques et dans la communication d'informations sur la sécurité des substances, et oblige ainsi les fabricants et les importateurs à réunir des informations sur les propriétés de leurs substances. La clé de voûte du dispositif est une base de données centralisée et l'institution d'une agence européenne des produits chimiques faisant fonction de point central et chargée d'administrer les bases de données nécessaires au fonctionnement du système, de coordonner l'évaluation approfondie des substances chimiques suspectes et de gérer une base de données publique qui fournira aux consommateurs et aux professionnels des informations sur les dangers des substances chimiques.

Si ce dispositif présente des avantages évidents, les coûts qu'il ne manquera pas de créer pour les entreprises ont suscité des polémiques.

Le CEFIC, le Conseil européen des industries chimiques, s'est ainsi inquiété des retards et des coûts supplémentaires qui risquent de peser sur l'introduction de nouveaux produits. Il relève que « aujourd'hui déjà, l'introduction d'un nouveau produit chimique sur le marché européen prend trois fois plus de temps et coûte dix fois plus cher qu'aux États-Unis. »

Il y a en outre tout lieu de penser que la procédure constituera une charge plus lourde pour les petites entreprises que pour les grandes, de sorte qu'elle risque d'avoir des effets pernicieux sur la structure du marché – et sur son évolution.

²⁷ Des débats analogues ont lieu dans le cadre des procédures d'homologation de nouveaux médicaments, où le souci de mettre des médicaments efficaces sur le marché dans les meilleurs délais s'oppose clairement à celui de garantir leur sécurité.

3.4 Divers

Nous ne pouvons dresser ici une liste exhaustive des moyens par lesquels la réglementation de l'environnement peut avoir des effets délétères sur les conditions d'entrée sur un marché. On citera les suivants :

Planification de l'utilisation des sols : Dans de nombreux secteurs, comme le commerce de détail, une autorisation d'aménagement est parfois exigée à l'entrée. La planification de l'utilisation des sols est un instrument primordial pour protéger la qualité des environnements locaux.

Les obstacles à l'aménagement des sols peuvent constituer une obstruction à l'entrée en général, mais aussi avoir des répercussions particulières sur les petites entreprises indépendantes par rapport aux grandes chaînes. Au Royaume-Uni, par exemple, « les instances de réglementation se sont avérées incapables de résoudre le problème de la puissance des supermarchés... la guerre de tranchée nécessaire pour combattre certains aspects des demandes de permis épuise les autorités compte tenu de la disproportion des ressources. »²⁸

Dernièrement, l'Office of Fair Trading (Bureau de la concurrence), au Royaume-Uni, s'est inquiété publiquement de ce que les réglementations en matière d'aménagement risquaient de brider la concurrence et de faire obstacle à l'entrée de nouvelles entreprises sur le marché. Selon le Financial Times (« Focus on Planning Delights Tesco Rivals », 10 mars 2006) :

« Asda et Sainsbury se sont plaintes ces derniers mois de ce que les lois d'aménagement britanniques ont aidé Tesco, qui contrôle plus de 30 % des ventes en supermarché, à préserver sa position dominante. L'OFT s'est semble-t-il fait l'écho de cette opinion hier, son directeur, John Fingleton, ayant déclaré que « sa préoccupation majeure » quant à la situation actuelle du marché concernait les obstacles à l'entrée au niveau des supermarchés. M. Fingleton a indiqué que les lois d'aménagement créent des difficultés aux nouveaux entrants désireux d'ouvrir des magasins. » Par ailleurs, « ... à l'heure actuelle, un supermarché peut aménager un site dont il est déjà propriétaire sans l'autorisation des autorités de la concurrence. En revanche, il doit en obtenir une chaque fois qu'il essaie d'acheter un magasin à un concurrent. »

Dans le cas évoqué ici, les sites adaptés à l'implantation d'un supermarché sont rares – en raison des restrictions en matière d'aménagement du territoire, elles-mêmes en grande partie motivées par des préoccupations d'ordre environnemental–, et il existe des antécédents de grandes chaînes de supermarchés procédant à des achats massifs de sites appropriés.

Dans une étude de la procédure d'agrément des sites industriels aux États-Unis, Duerksen (1993) concluait que de nombreux États avaient apporté des modifications considérables aux règles pertinentes dans les années 70, ce qui avait rendu l'agrément de nouveaux sites très difficile et favorisé une fois encore les entreprises en place. Des examens partiellement communs et, parfois, contradictoires des permis, l'évolution des lois et des règlements, la longueur des examens judiciaires et l'affermissement du droit d'intervention des citoyens et des groupes d'intérêt sont les principales raisons avancées pour expliquer cette situation.

Complexité réglementaire et courbes d'apprentissage du respect des normes. Les réglementations en matière d'environnement ont un autre effet dissuasif à l'entrée sur le marché, qui tient à

²⁸ Andrew Sims, de la New Economics Foundation, cité dans le journal *The Observer* (29 janvier 2006) à propos de la publication d'un rapport du All Party Parliamentary Small Shops Group sur la puissance des supermarchés.

la complexité que les normes de mise en conformité introduisent dans le fonctionnement des entreprises. Les entreprises assujetties à ces réglementations se heurtent à divers problèmes d'ordre politique, technique, administratif et juridique qui compliquent leurs opérations.

« La notion de courbe d'apprentissage permet de comprendre en quoi la complexité agit sur l'entrée des entreprises sur un marché... Plus une entreprise a affaire aux organismes de réglementation de l'environnement et doit procéder à des opérations de lutte contre la pollution, plus elle apprend (1) quelles règles et quels organismes concernent ses activités et comment les gérer avec efficacité ; (2) quelles technologies antipollution s'appliquent et comment les utiliser de manière efficace ; et (3) comment modifier au mieux ses procédures structurelles et administratives pour effectuer ces tâches. En d'autres termes, l'apprentissage du respect des normes se traduit par une baisse des coûts unitaires de mise en conformité pour les entreprises en place (Monty, 1991), pénalisant ainsi l'entrée de nouvelles entreprises. » (Dean et Brown, 1995: 292).

Il est néanmoins possible d'atténuer ces obstacles si l'entrant a la possibilité d'engager des consultants ou des employés expérimentés sur un marché d'expertise concurrentiel afin d'acquérir les connaissances et les techniques nécessaires (Scherer et Ross, 1990).

D'autres auteurs ont réalisé des études de cas qui montrent que divers autres règlements et règles environnementaux sont utilisés pour ériger des obstacles à l'entrée sur le marché²⁹.

4. Réglementation environnementale et éviction

En exerçant une influence sur les exigences de la réglementation environnementale, une entreprise peut augmenter les coûts de ses concurrents.

Supposons qu'un projet de règlement entraîne des coûts supplémentaires pour l'entreprise A et l'entreprise B, deux concurrents. Cependant, les coûts supplémentaires de l'entreprise B sont plus élevés. La réglementation n'a pas le même impact sur les coûts de production des deux entreprises, en cela qu'elle donne un avantage concurrentiel à l'entreprise A. Selon les caractéristiques du marché, la réglementation pourrait avoir comme conséquence l'éviction de l'entreprise B. Il se pourrait également qu'elle cède sa part de marché à l'entreprise A, sans être évincée. L'entreprise A est donc favorisée par l'imposition de la réglementation.

Il s'ensuit que l'entreprise A sera disposée à faire des démarches, sur le plan politique notamment, afin d'accroître la probabilité de l'adoption du projet de règlement. Plusieurs commentateurs se sont fondés sur la théorie de l'augmentation des coûts des concurrents afin d'expliquer pourquoi les entreprises font

²⁹ Maloney et McCormick (1982), par exemple, mettent en avant le traitement appliqué par les aéroports américains à Concorde : « Il n'est pas difficile de trouver d'autres situations où la réglementation de l'environnement a dissuadé ou empêché l'entrée de rivaux sur un marché. L'atterrissage des Concorde d'Air France et de British Airways a été rigoureusement limité aux États-Unis pour des raisons de pollution acoustique. La réduction des émissions sonores directes de cette nature fait forcément monter les prix et doit augmenter la valeur des entreprises américaines dans l'industrie du transport aérien ». Il s'agit là d'un contexte différent, sur le plan conceptuel, de ceux que nous avons modélisés précédemment parce que les exploitants en place et les concurrents potentiels présentent des asymétries autres que leur présence initiale à l'intérieur ou à l'extérieur du marché. En particulier, ils font appel à des technologies distinctes (subsonique et supersonique) qui ont des retombées différentes en termes d'environnement.

souvent pression en faveur de l'entrée en vigueur d'un règlement qui entraînera vraisemblablement une augmentation de leurs coûts³⁰.

De telles activités peuvent être considérées comme une forme de **pratique d'éviction autre que par le prix**. « Une entreprise peut se comporter de la sorte pour se défendre ou passer à l'offensive. Les normes peuvent également empêcher l'arrivée de nouveaux concurrents ou ouvrir la voie à l'éviction des entreprises inefficaces ou des canards boiteux » (Klaasen et McClauglin (1996)).

La théorie originale de l'augmentation des coûts des concurrents a été formulée par Salop et Scheffman (1983). La notion de prix d'éviction est axée sur les pratiques qui diminuent les revenus. Une entreprise peut également évincer ses rivales en augmentant leurs coûts. Le modèle générique est facile à comprendre et a été utilisé pour expliquer le comportement stratégique non lié aux prix des entreprises dans divers contextes, notamment la recherche-développement, la publicité, le choix de l'emplacement, la conception de produits, le lobbying et les restrictions verticales hors prix telles que l'exclusivité et les restrictions territoriales.

À partir de cette notion, nous pouvons définir les conditions qui font qu'une entreprise dominante est plus susceptible d'adopter une stratégie d'augmentation des coûts des concurrents en vue de les évincer :

- Inélasticité relative de la demande du marché. La demande étant moins élastique, une réduction donnée de l'offre émanant de la marge du marché est associée à une augmentation plus forte du prix.
- La stratégie en question a un impact plus marqué sur les coûts des entreprises marginales que sur ceux de l'entreprise dominante ; concrètement, l'incidence est plus grande sur le *coût marginal* des entreprises marginales que sur le *coût moyen* de l'entreprise dominante.

Salop et Scheffman (1983) ont souligné les avantages de l'augmentation des coûts par rapport à la diminution des revenus pour le prédateur. À cet égard, ils ont mentionné que les stratégies d'augmentation des coûts peuvent souvent être irréversibles et sont donc plus crédibles (Salop et Scheffman (1983: 367)). La crédibilité de l'augmentation des coûts est certainement très grande lorsqu'elle est enchâssée dans une loi ou un règlement.

Ils ont également noté que « contrairement à ce que l'on observe avec la forme classique des prix d'éviction, il n'est pas nécessaire que l'entreprise qui adopte une stratégie d'augmentation des coûts dispose de capitaux importants ou puisse facilement en obtenir. En effet, alors que le prédateur qui fixe des prix d'éviction perd davantage d'argent que sa proie de plus petite taille à court terme, une forte majoration des coûts des concurrents peut représenter un déboursé relativement négligeable pour l'entreprise dominante. Par exemple, une norme obligatoire de produit peut se traduire par des coûts dérisoires pour le prédateur et des coûts prohibitifs pour ses rivaux » (Salop et Scheffman (1983: 367)).

Étant donné que la réglementation vise sans doute à remédier à l'inefficacité du marché – par exemple celle qui est associée aux externalités environnementales – l'impact d'un tel comportement abusif sur le bien-être n'est pas facile à déterminer.

³⁰ De nombreuses études ont été consacrées à l'économie de la réglementation environnementale. Il n'est pas rare que des groupes d'intérêts ayant des préoccupations diamétralement opposées – par exemple les entreprises visées par le projet de réglementation et les environnementalistes – forment une coalition. Pour les économistes, les coalitions ayant en apparence des intérêts divergents sont de type « baptists-bootleggers », les baptistes et les contrebandiers d'alcool ayant soutenu la prohibition aux États-Unis, pour des raisons très différentes cependant.

On trouve relativement peu d'exemples bien étayés d'utilisation de normes environnementales pour augmenter les coûts des concurrents, bien que de nombreux contextes soient éclairés par des informations anecdotiques.

4.1 Exemple : Règlement de la Californie sur l'essence reformulée de phase II

Brown (2005) prouve la thèse voulant que des entreprises ont utilisé le règlement de la Californie sur l'essence reformulée de phase II pour accroître les coûts de leurs concurrents. Certaines des conclusions provisoires qu'elle a publiées sont présentées ci-dessous.

En 1992, le California Air Resources Board (CARB) a adopté un règlement afin de réduire la pollution provenant des émissions d'essence. Ce règlement a visiblement augmenté les coûts de raffinage de tous les distributeurs d'essence du marché californien.

La Western States Petroleum Association (WSPA) – association représentant un grand nombre de sociétés de produits pétroliers de l'ouest du pays – s'est opposée au règlement, alors que le plus gros détaillant de produits pétroliers de la Californie, ARCO, y était favorable.

Deux catégories possibles de coûts-avantages peuvent être définies, bien qu'il soit vraisemblablement difficile de dissocier ces impacts sur le plan économétrique.

Innes et Bial (2002) font ressortir la relation verticale étroite entre ARCO et l'ex-Lyondell Chemical, ARCO Chemical, un des plus grands producteurs d'éther méthyltertiobutylique aux États-Unis « Cette relation verticale conférait à ARCO un avantage comparatif en tant que producteur d'essence reformulée, tout en lui en donnant la possibilité d'augmenter ultérieurement les coûts de ses concurrents. Il s'agit là d'une position enviable, car cela permet d'augmenter les coûts des concurrents avec plus de crédibilité que par l'établissement de prix d'éviction » (Brown (2005: 4)). En somme, les coûts d'une entreprise (ARCO) pourraient être plus bas que ceux de ses concurrents.

La deuxième catégorie renvoie à la possibilité que les coûts des entreprises d'un secteur augmentent dans les mêmes proportions, mais que l'impact de la hausse sur leur rentabilité varie. La réglementation de l'essence de phase II se traduisait par une forte majoration des coûts fixes et marginaux de tous les fournisseurs. On pouvait s'attendre à ce que l'augmentation de l'échelle minimale d'efficacité évince certains petits producteurs du marché de l'essence et entraîne une hausse des prix. Même en faisant abstraction de la possibilité d'un accès à meilleur coût pour ARCO, la croissance généralisée des coûts était censée donner un avantage aux grandes entreprises sur leurs petits concurrents.

Brown (2005) a analysé l'impact de la phase II sur la situation du marché, notamment la concentration et les parts de marché. Elle a décrit une forte diminution du nombre de petits producteurs : le pourcentage de petites raffineries pouvant produire de l'essence conforme aux normes californiennes est passé de 12.5 % en 1994 à 1.3 % en 2003. L'indice Herfindahl-Hirschman (HHI) a augmenté, passant de quelque 1200 points (concentration modérée) en 1993 à plus de 2000 (grande concentration) en 1999.

Ce sont les plus grandes sociétés qui ont le plus accru leur part de marché : ARCO, Chevron, Ultramar et Exxon. Durant la période 1995-1999, Ultramar et ARCO ont enregistré le plus fort pourcentage d'augmentation de la part de marché, respectivement 42 % et 34 %.

Durant la période, l'augmentation des écarts de prix entre la Californie et le groupe témoin était non seulement statistiquement significative, mais également supérieure à l'estimation du coût variable moyen de la mise en œuvre de la nouvelle réglementation (4 à 5 cents le gallon). En d'autres termes, l'impact sur le prix allait au-delà du coût marginal de la production de l'essence plus propre. Par conséquent, même si

le coût avait été refilé intégralement au consommateur, on peut présumer qu'un impact additionnel était associé à l'augmentation de la concentration.

4.2 Exemple : Le lait UHT à Porto Rico dans les années 80

Le deuxième exemple est international. Selon Lyon et Maxwell (2004), au milieu des années 80, les producteurs de lait de Porto Rico ont volontairement effectué des investissements considérables afin de rendre leurs procédés de production conformes à la réglementation des États-Unis, et se sont employés à convaincre l'administration portoricaine d'adopter les normes et procédures américaines.

Il s'agissait de toute évidence pour les producteurs portoricains d'avoir accès au marché des États-Unis, puisque la législation américaine interdit la vente de produits laitiers étrangers provenant de pays ou de régions qui n'ont pas exactement les mêmes normes ou procédures officielles. Cependant, la modification des réglementations a aussi eu pour effet d'éliminer pratiquement l'entreprise canadienne Lactel du marché portoricain, dont elle occupait jusqu'à 88 % dans les années 80.

Rugman, Kirton et Soloway (1999) présentent une analyse détaillée de cette modification de la réglementation. Lyon et Maxwell (2004) en ont fait la synthèse dans un cadre économique formel et ont conclu que :

« ... l'interdiction des produits laitiers UHT de Lactel suite à l'adoption de la nouvelle réglementation portoricaine constitue un exemple extrême d'augmentation des coûts des concurrents. Si les producteurs locaux ont dû eux aussi investir pour se conformer à la nouvelle réglementation, les coûts de Lactel étaient infinis dans les faits. Nous n'avons pas pu déterminer si les nouvelles règles ont permis aux entreprises portoricaines de pénétrer avec succès le marché américain. Toutefois, il est clair que ce sont principalement ces sociétés qui ont tiré parti de l'interdiction des produits de Lactel. »³¹ Lyon et Maxwell (2004: 90-91)

4.3 Exemple : Dupont et le protocole de Montréal³²

Le protocole de Montréal, un des accords internationaux sur l'environnement les plus connus, prévoyait l'interdiction progressive de la production et de l'utilisation des chlorofluorocarbures (CFC), des gaz à effet de serre. Les CFC étaient utilisés couramment comme agents frigorifiques dans les climatiseurs et les réfrigérateurs, ainsi que dans la fabrication de nettoyants liquides et d'autres produits usuels.

Depuis la commercialisation du fréon dans les années 30, Dupont a toujours détenu une part importante du marché mondial, bien que l'arrivée de petits concurrents l'ait fait reculer et ait entraîné une baisse des prix.

Dupont et ICI avaient investi massivement dans la mise au point de produits de remplacement (d'après le *Wall Street Journal* du 9 mars 1993, les investissements de Dupont atteignaient alors 400 millions d'USD). « Selon les analystes, Dupont croyait que le protocole de Montréal lui donnerait la possibilité de regagner le terrain perdu. » La société a donc donné son appui à l'accord, même si cela se

³¹ Les auteurs affirment également (page 91) que dans le cas contraire, il aurait été très peu probable que l'administration portoricaine ait tardé à émettre un certificat attestant l'équivalence des produits de Lactel sur le plan de la santé et de l'innocuité. Cependant, on ne sait pas vraiment pourquoi il devrait en être ainsi, à moins que l'on présume que l'industrie laitière nationale s'est appropriée le pouvoir de réglementation au détriment des intérêts des consommateurs locaux.

³² Cette section a été rédigée à partir de la section 4.2 de Puller (2005), « The Strategic Use of Innovation to Influence Regulatory Standards ».

traduisait par l'interdiction de certains de ses produits. Ainsi, « le nouveau marché des produits de remplacement était plus concentré et se démarquait du marché des CFC » (Puller (2005: 16)).

4.4 *Répercussions sur la réglementation environnementale qui s'appuie sur la technologie*

La possibilité d'augmenter des coûts des concurrents est enchâssée dans plusieurs pratiques de réglementation, surtout lorsque la réglementation s'appuie sur la technologie.

Les principes voulant que la performance environnementale de l'entreprise soit tributaire de l'utilisation des meilleures techniques disponibles ou de la meilleure technologie disponible n'entraînant pas de coûts excessifs, ou de variantes de ces dernières, sont monnaie courante³³.

Lorsque les transformations techniques sont endogènes, une entreprise peut mettre au point une technologie plus écologique et la présenter à l'organisme de réglementation, sachant que, à tout le moins en principe, elle s'appliquera à l'ensemble du secteur³⁴.

Si, d'un point de vue purement environnemental, de telles dispositions sont rationnelles, l'impact potentiel sur les facteurs d'incitation au comportement abusif à l'endroit des concurrents doit être reconnu. Les répercussions sur le bien-être associées aux différents mécanismes doivent être comparées de façon explicite.

On peut tirer un « enseignement » plus général de ces exemples : les organismes de réglementation environnementale doivent être prudents. Dans les exemples susmentionnés, on ne peut pas forcément conclure que l'augmentation des coûts des concurrents ne contribue pas au mieux-être – pour tirer cette conclusion, il faudrait effectuer une analyse complète du bien-être qui intègre les valeurs environnementales et l'excédent du marché. Cependant, il convient de mettre en balance les considérations statiques et l'incitation au développement de nouvelles technologies propres.

De plus, « ... les études antérieures donnent à penser que les activités antipollution collectives réalisées par l'industrie n'ont pas toujours été inoffensives. Hackett (1995) a constaté que la R-D réalisée par les membres de l'industrie afin de réduire le coût d'une technologie permettant d'appliquer des normes antipollution sévères peut occulter une autre motivation : les entreprises novatrices espèrent ainsi faire pression en faveur de l'adoption de normes plus rigoureuses, ce qui augmenterait les coûts de leurs concurrents. Afin de contrer leurs efforts, des membres de l'industrie peuvent créer une coentreprise de recherche sur la lutte contre la pollution afin de ralentir le développement de technologies antipollution novatrices à faible coût » (Lyon et Maxwell (2004: 66))³⁵.

³³ Par exemple, de 1984 à 1996, la réglementation de la pollution atmosphérique industrielle au sein de l'Union européenne était régie par le concept général de la meilleure technologie disponible n'entraînant pas de coûts excessifs, qui a été remplacé par l'utilisation des meilleures techniques disponibles au terme de l'adoption de la Directive relative à la prévention et à la réduction intégrées de la pollution (IPPC). Sorrell (2002) a recensé certaines des études qui traitent de la question.

³⁴ Le modèle théorique présenté par Innes et Bial (2002) analyse avec précision cet ensemble d'incitatifs dans un cadre formel, et tente de voir comment les instruments peuvent favoriser l'innovation socialement désirable.

³⁵ Par exemple, le ministère de la Justice des États-Unis a fait prononcer un jugement convenu à l'endroit de l'Automobile Manufacturers Association, confirmant que cette dernière avait eu recours à une coentreprise de recherche créée dans les années 50 pour ralentir l'installation de dispositifs antipollution sur les voitures américaines. Du point de vue de l'*intention*, Lyon et Maxwell (page 66) font remarquer que les actions antitrust doivent être complexes de manière à distinguer les différents objectifs des activités collectives de lutte contre la pollution réalisées par l'industrie.

5. La politique environnementale, source de subventions

Dans un autre ordre de préoccupations, les différences observées entre les pays ou les secteurs concurrents nationaux d'un pays au chapitre de l'application de la réglementation environnementale peuvent constituer une **subvention** ou une **aide publique** pouvant avoir comme conséquence une concurrence réduite ou déloyale.

Le concept de la subvention n'est pas simple. Ce terme est employé couramment pour désigner les transferts, paiements, soutiens, assistances (telles que les exemptions fiscales) ou protections associés à la politique de l'État. L'expression générique « mesures de soutien » est souvent utilisée.

Les diverses approches pouvant être employées pour évaluer les subventions environnementales ont été recensées par Barde et Honkatukia (2005). Ces subventions sont parfois élevées (OCDE (2003)). De nombreuses études empiriques – notamment la plupart des études citées par Barde et Honkatukia – mettent l'accent sur l'impact environnemental. Cet impact peut être positif (par exemple les subventions au développement de technologies qui consomment peu de carburant) ou négatif (par exemple les dispenses réglementaires ou les exemptions fiscales accordées au transport aérien).

Cependant, il n'est pas difficile de concevoir les effets des mesures de soutien découlant de la réglementation environnementale sur la concurrence et le marché dans des secteurs névralgiques.

Par exemple, les permis d'émissions négociables – en prenant pour hypothèse qu'ils se négocient à un prix non nul – sont des biens de grande valeur. Nombre de systèmes de permis négociables respectent le principe des droits acquis, c'est-à-dire que les permis sont attribués à des entreprises en fonction des niveaux de pollution antérieurs, alors qu'une vente aux enchères constituerait une bonne pratique. Ainsi, dans le contexte des engagements de l'Union européenne envers la réduction des gaz à effet de serre, qui sont répartis entre les États membres en vue de leur réalisation, un analyste chevronné a fait remarquer ce qui suit :

« En général, on peut procéder de deux façons pour attribuer les permis : on les vend aux entités privées (vente aux enchères) ou on leur cède gratuitement (principe des droits acquis). Il est possible qu'un État membre organise une vente aux enchères (par exemple pour augmenter ses recettes) et qu'un autre État applique le principe des droits acquis (par exemple pour récolter des appuis dans les industries énergétiques). La Commission craint que les différences observées entre les États membres dans l'allocation des permis aux entités privées entravent la concurrence et constituent une aide publique. » (Woerdman (2001: 4)).

Si, dans cet exemple, la cession gratuite constitue sans l'ombre d'un doute un transfert à l'entreprise titulaire du permis, la question de savoir si le transfert entraîne une grave distorsion de la concurrence mérite un examen approfondi. La subvention est un don en capital à l'entreprise, mais il s'agit d'un montant forfaitaire, qui est déterminé en fonction des niveaux de pollution antérieurs. Du point de vue de l'efficacité, il n'y a pas de distorsion du marché des produits, puisque la subvention n'a pas d'impact sur le coût *marginal* de la réduction des émissions, ni sur les décisions de production et de prix des entreprises³⁶.

On peut croire que les permis négociables obtenus selon le principe des droits acquis constituent une des formes de « subvention » qui entraîne le moins de distorsion, car le coût d'opportunité de la pollution est exactement le même que si le permis avait été vendu aux enchères.

³⁶ En supposant que le marché des permis est concurrentiel – une hypothèse raisonnable puisque la participation directe des entités privées au système de réduction des émissions de gaz à effet de serre, le cas échéant, devrait (finir par) créer un vaste marché constitué de nombreux petits négociateurs.

On s'est penché sur l'impact de la méthode d'allocation – et de révocation – des permis sur la motivation à adopter les divers types de comportement. Johnson et Pikelney (1996) ont analysé la réduction des coûts d'observation attribuable à la possibilité de négocier les permis dans le cadre du programme RECLAIM en Californie. On s'est interrogé à savoir s'il fallait révoquer les permis alloués (annuellement) selon le principe des droits acquis aux usines qui avaient cessé leurs activités. Les auteurs soulignent que cela pourrait inciter certaines sociétés à maintenir « opérationnelles » des usines fantômes uniquement pour obtenir le permis annuel.

La distorsion de la concurrence est plus marquée lorsque les réductions imposées ou les taxes environnementales varient selon l'administration, par exemple, car elles influent sur le coût de production marginal et, par conséquent, sur les décisions de production et de prix des entreprises touchées³⁷. En général, les exemptions des taxes environnementales, l'utilisation de permis négociables « relatifs » (comme aux Pays-Bas) et les dispenses réglementaires peuvent être une importante source d'inefficience économique.

5.1 Exemple : Plafond de responsabilité en cas d'accident nucléaire aux États-Unis et au Canada

La subvention environnementale peut être attribuée implicitement à un sous-groupe de producteurs en vertu de certaines décisions ou dispenses légales ou réglementaires.

Par exemple, aux États-Unis, la *Price-Anderson Act* (1957) plafonne la responsabilité d'un opérateur de centrale nucléaire à l'égard des dommages extérieurs causés par un accident survenu dans ses installations. Des dispositions similaires sont en vigueur dans d'autres pays, par exemple au Canada, aux termes de la *Loi sur la responsabilité nucléaire* (1970).

Bien entendu, ce plafonnement de la responsabilité équivaut à une subvention implicite de l'activité des bénéficiaires³⁸.

On peut s'attendre à ce que ce plafond (a) confère à l'énergie nucléaire un avantage concurrentiel sur les autres formes d'énergie ; (b) incite moins les opérateurs de centrale à se préoccuper de la sécurité. Nous nous attarderons à l'avantage concurrentiel : d'après l'analyse de Heyes et Liston, la subvention pourrait représenter de 2 à 3 cents le kilowatt-heure, ce qui est considérable. Cependant, il ne faut pas oublier qu'il

³⁷ Woerdman (page 6) met en relief la différence entre la diversité des taux de taxation (sous forme d'exemptions fiscales) et la cession de permis de polluer selon le principe des droits acquis : « Certains croient que les permis d'émission accordés selon le principe des droits acquis ont le même effet de distorsion sur la concurrence que les exemptions fiscales accordées à certaines entreprises. L'exemption fiscale est inefficace, car elle entraîne une variation selon l'entreprise des prix par unité de gaz à effet de serre. » Ce n'est pas ce qui se produit avec les permis – qu'il soit attribué selon le principe des droits acquis ou non – en cela que, pour tous les pollueurs, le coût marginal de l'émission correspond au prix du marché du permis.

³⁸ Il est difficile de déterminer le *montant* de la subvention, et les estimations ont fait l'objet d'un examen critique lors d'audiences du Congrès américain et de la Cour fédérale du Canada (où la constitutionnalité du plafond de responsabilité avait été contestée, notamment par la Ville de Toronto).

Dubin et Rothwell (1990) ont mis au point une approche très ingénieuse pour calculer le coût de l'assurance dommages hors site que les opérateurs de centrale nucléaire devraient souscrire en l'absence du plafond établi par la *Price-Anderson Act*. La technique consiste à réaliser une extrapolation à partir des primes actuellement payées par les opérateurs pour la tranche de risque qu'ils doivent assumer en vertu de la *Price-Anderson Act*. Selon les auteurs, la subvention implicite représenterait quelque 22 millions USD (de 2001) par année-réacteur, ce qui équivaut à environ la moitié des coûts en capital de l'énergie nucléaire. Dans une autre étude, Heyes et Liston (1998) ont corrigé une erreur dans leur méthodologie et ont démontré que la subvention implicite était bien inférieure à leur calcul, mais demeurait importante.

s'agit là d'une des nombreuses mesures que l'on prend pour subventionner la consommation d'énergie dans des pays comme les États-Unis et le Canada³⁹.

6. Impact sur la concurrence de certains instruments de réglementation – exemples

Comme nous l'avons affirmé à la section 1, nous avons assisté ces dernières années à une augmentation non seulement de l'intensité de la réglementation environnementale dans la plupart des pays, mais également de la diversité des instruments utilisés à cet égard.

En général, nous n'avons pas établi de distinction entre les différents instruments depuis le début de l'analyse. Cependant, il convient de réfléchir à certaines questions pouvant avoir une incidence sur la concurrence suite à l'adoption de certaines approches de réglementation environnementale.

6.1 *Permis de polluer négociables*

Les permis de polluer négociables sont devenus un important instrument de réglementation environnementale ces dernières années, à l'échelon national ou international. Les arguments liés à l'efficacité en faveur de l'adoption d'une approche de réglementation ont été étudiés avec soin dans l'hypothèse où le marché des permis est concurrentiel.

Il convient de souligner que cet instrument est utilisé dans le cadre de la création d'un marché et est donc directement assujéti à la politique de la concurrence, alors que les autres instruments ne le sont qu'indirectement (la mise en œuvre de cette politique pose problème lorsqu'il y a des retombées indirectes sur les marchés de produits). Par conséquent, la concurrence peut être entravée sur le marché des permis négociables et le marché des produits pour lesquels le permis a été accordé (voir Johnstone (1999), ENV/EPOC/GEEI(99)1/Final). En effet, c'est lorsque les mêmes entreprises se disputent les deux marchés que la situation est la plus problématique, car le marché des produits pourrait se retrouver en situation de concurrence imparfaite sous l'influence du marché des permis.

Plusieurs auteurs ont fait remarquer que de grandes entreprises pourraient avoir intérêt à manipuler le marché des permis.

Les détracteurs de l'utilisation des permis négociables en tant qu'instruments de réglementation environnementale dans des marchés relativement concentrés redoutent généralement la **manipulation par exclusion**. Lorsque les permis sont essentiels à la production et que leur mise en réserve est autorisée, une entreprise peut explicitement utiliser le marché des permis afin de « payer » pour évincer un concurrent actuel ou potentiel⁴⁰.

³⁹ On pourrait donner bien d'autres exemples, bien qu'il soit plus difficile de trouver des estimations quantitatives de la subvention implicite. Les autres régimes de responsabilité environnementale qui peuvent être envisagés ont d'autres répercussions sur l'économie et la concurrence. Auer et autres (2001), par exemple, ont effectué une analyse intéressante de la responsabilité rétroactive de la contamination des sols, ainsi que des mesures destinées à encourager l'investissement direct étranger dans les nouvelles démocraties d'Europe centrale et orientale.

⁴⁰ Misiolek et Elder (1987) soulignent qu'une entreprise dominante peut acheter des permis pour augmenter les coûts des concurrents, et ainsi faire du marché des permis un instrument d'éviction. Newberry (1990: 344-345) note que, dans certaines conditions, un oligopole constitué de deux entreprises identiques qui déterminent les quantités réduit le bénéfice global (mais optimise le bien-être social) si elles détiennent le même nombre de permis. Cela indique que les entreprises sont encouragées à négocier les permis, éventuellement aux dépens du bien-être. Von der Fehr (1993) montre que la négociation des permis peut

À notre connaissance, aucune analyse empirique – par opposition à numérique ou expérimentale – de l'existence d'une position dominante sur le marché des permis d'émissions négociables n'a été effectuée. Plusieurs auteurs ont réalisé des simulations numériques qui les ont amenés à créer des modèles de négociation et à les calibrer sur un contexte particulier. Certains ont également tenté d'analyser la structure de la négociation des permis et de la manipulation par exclusion du marché dans un cadre expérimental. Cependant, il est difficile de tirer des conclusions générales à partir de ce corpus naissant⁴¹.

6.2 *Gestion des déchets et responsabilité élargie des producteurs*

Dans le contexte de la gestion des déchets, la responsabilité élargie des producteurs est un instrument de politique environnementale de plus en plus populaire.

Cette politique élargit la responsabilité des producteurs jusqu'à la fin du cycle de vie du produit, par exemple en les obligeant à reprendre leurs produits ou à planifier l'élimination ordonnée de ceux qui ne servent plus. La Directive relative aux véhicules hors d'usage de l'Union européenne, par exemple, oblige les États membres à prendre les mesures nécessaires afin que les opérateurs économiques portent le taux de réutilisation et de revalorisation à 85 % en poids moyen par véhicule au début de 2006.

Dans le cadre de la mise en œuvre d'une telle politique, les importantes économies de réseau, le cas échéant, favoriseraient la collaboration de l'industrie ou seraient propices à l'offre monopolistique de services de collecte, de traitement et de revalorisation.

Outre la préoccupation habituelle concernant la position dominante sur le marché, l'offre monopolistique suscite également de l'appréhension en raison de la diminution de la concurrence qu'elle pourrait entraîner sur le marché du produit original. De tels régimes peuvent créer deux catégories d'entreprises – selon qu'elles sont hors marché ou non – et paver la voie à la manipulation par exclusion. Il en va de même de la coopération entre les membres de l'industrie. À cet égard, dans son étude *Concerning Issues of Competition in Waste Management Systems* (2004, paragraphe 163, page 39), la DG Competition mentionne que les systèmes collectifs devraient établir les critères d'adhésion et les droits qu'ils exigent avec objectivité et transparence, sans faire de discrimination.

Peu d'analyses économiques ont démontré l'existence d'une relation entre les régimes de responsabilité élargie des producteurs et la concurrence sur les marchés de produits.

créer un monopole sur le marché de produits. Hahn (1984), ainsi que Hagem et Westkog (1998), ont également apporté un éclairage important sur le rôle des permis en situation de concurrence imparfaite.

⁴¹ Les permis vendus aux enchères se distinguent nettement des permis cédés gratuitement selon le principe des droits acquis, car dans des circonstances plausibles, elles peuvent être en interaction avec les décisions d'entrée et de sortie. Dans une étude de longue date qui a eu un grand retentissement, Carlton et Loury (1980) démontrent que, pour qu'un secteur concurrentiel soit efficient à long terme, l'organisme de réglementation doit contrôler le niveau de pollution de chaque entreprise *et le nombre d'entreprises*. Il est peu probable que les deux objectifs seront atteints au moyen d'un seul instrument de politique (le nombre total de permis). Toutefois, la proportion de permis attribués gratuitement peut devenir un deuxième instrument de politique. Kling et Zhao (2000) livrent une analyse formelle de l'effet incitatif de différentes combinaisons de permis et font état de ces interactions (page 235) : « Lorsque les permis négociables influent sur les décisions d'entrée ou de sortie des entreprises en concurrence, la répartition efficiente des permis vendus aux enchères et des permis gratuits dépend de la nature du polluant. Tous les permis d'émissions de polluants mondiaux devraient être vendus aux enchères et certains permis d'émissions de polluants locaux devraient être gratuits. »

6.3 Accords volontaires

L'auto réglementation est pratiquée dans de nombreux cadres. Par exemple, les accords volontaires sur l'environnement ont été mis en relief aux États-Unis et ailleurs durant les années 90, conséquence de la sensibilisation accrue des décideurs aux enjeux environnementaux⁴².

Bien qu'ils puissent prendre diverses formes, tous les accords volontaires supposent que les entreprises signataires s'engagent à atteindre des seuils vérifiables de performance environnementale, ou à suivre des procédés non obligatoires. L'USEPA reconnaît plus de 20 accords de ce genre dans le cadre de son programme *Partners for the Environment*.

Les motivations des entreprises qui adhèrent à un accord volontaire ont éveillé l'intérêt des économistes. On a fréquemment affirmé ou laissé entendre que la réduction de la concurrence sur un marché de produits était un facteur important à cet égard.

Tout comme les solutions négociées entre un sous-groupe d'entreprises polluuses et l'État, les incidences éventuelles sur la concurrence sont innombrables. Si elles ont retenu l'attention des autorités publiques (par exemple la Commission européenne (1997), l'Agence européenne pour l'environnement (1997)) et de certains théoriciens, elles n'ont pas été analysées en profondeur. Pour ainsi dire, aucune analyse empirique ne leur a été consacrée.

Dans une analyse juridique des aspects des accords volontaires sur l'environnement qui pourraient aller à l'encontre de la politique antitrust, Luxton et autres (2002) soumettent plusieurs cas hypothétiques qui pourraient avoir des répercussions sur la concurrence. Par exemple :

« Soit le Projet XL qui permet aux producteurs d'un bien donné de s'entendre sur les "meilleures" méthodes de traitement des flux des déchets dans leur secteur. L'EPA s'engage à accorder aux entreprises qui adoptent ces pratiques un traitement préférentiel dans le cadre de l'allocation des permis ou de l'application de la réglementation⁴³. Et si cet accord permet aux signataires d'exclure une technologie utilisée par des concurrents et, par conséquent, de bénéficier d'un avantage marqué sur ces derniers ? » (Luxton et autres (2002: 5)).

Les accords volontaires peuvent paver la voie au partage des informations et à d'autres activités qui facilitent la coordination et ainsi entravent la concurrence. Videras (2005: 2) souligne que « en général, les programmes volontaires multiplient les occasions de contact et de communication entre les membres de l'industrie, et la normalisation des technologies facilite également la coordination du produit. »

L'Agence européenne pour l'environnement (1997) fait remarquer que « les expériences réalisées en Autriche, par exemple dans le secteur des déchets, montrent que, dans une économie de marché, les programmes volontaires peuvent être à l'origine d'une distorsion des structures de prix si la concurrence n'est pas protégée par l'État. » Dans le cadre d'une expérience similaire, le programme de l'Association

⁴² Les accords volontaires sont généralement divisés en trois catégories : les engagements unilatéraux pris par l'industrie, agissant de son propre chef sans aucune intervention d'une autorité publique (le programme *Responsible Care* de l'industrie chimique américaine en est un bon exemple) ; les programmes volontaires publics, qui comportent des engagements énoncés par l'organisme de réglementation que les entreprises sont invitées à prendre (par exemple le système de management environnemental et d'audit mis en œuvre par l'Union européenne en 1993) ; les accords négociés, qui comportent des engagements définis par une autorité publique de concert avec l'industrie.

⁴³ Bien que les accords soient volontaires, l'organisme de réglementation s'engage généralement à se montrer indulgent envers les signataires ou à leur accorder un traitement préférentiel.

néerlandaise des sociétés indépendantes de stockage en réservoir, qui visait à réduire la pollution atmosphérique, s'est traduit par la fixation concertée des prix et la conclusion d'un accord par le Conseil européen des constructeurs d'appareils ménagers (CECED) qui a limité la production et augmenté les prix (selon Vedder (2000)).

On en sait trop peu sur la nature exacte de l'interaction probable entre les programmes de réglementation volontaires et les marchés de produits. D'ici à ce que l'on dispose de plus d'informations, les autorités publiques doivent faire preuve de vigilance lorsqu'elles négocient les accords et déterminent quelle attitude elles doivent adopter à l'égard des ententes unilatérales⁴⁴.

6.4 Étiquetage écologique

Les programmes d'étiquetage écologique (écolabels) se sont multipliés et développés au cours des 20 dernières années. Désormais, l'étiquetage est considéré comme un élément important du régime de protection de l'environnement dans nombre de pays. L'étiquette du produit vise à informer le consommateur que l'entreprise s'est à tout le moins conformée à un ensemble déterminé de normes ou de pratiques environnementales⁴⁵.

Il faut tenir compte d'au moins deux dimensions relatives à la concurrence et à la protection du consommateur dans ce contexte :

- **Information et facteur de différenciation des produits** : Suivant un principe de base de la théorie économique, la capacité des marchés d'atteindre l'efficacité sociale dépend de la qualité de l'information mise à la disposition des intervenants ; dans le cas présent, il s'agit de l'information que les consommateurs reçoivent sur le bien qui leur est offert.
- Les défenseurs de l'étiquetage écologique affirment que les étiquettes informent les consommateurs des caractéristiques environnementales des biens offerts, ce qui leur permet d'exprimer leur préférence à cet égard, et que la variation de la demande qui en découle amènera

⁴⁴ Lehmann (2005) livre une analyse détaillée et éclairante du système volontaire de double gestion mis en place en Allemagne pour la collecte et le recyclage des déchets d'emballage (DSD). Il met en évidence certaines caractéristiques de la structure de gestion de cet organisme qui sont censées atténuer l'effet anticoncurrentiel de la centralisation.

⁴⁵ Au nombre des programmes les plus connus, mentionnons l'Ange bleu en Allemagne, le Cygne blanc dans les pays scandinaves et le Sceau vert aux États-Unis. De nombreuses analyses économiques théoriques ont tenté de caractériser l'impact des programmes d'étiquetage écologique sur le marché (notamment Kirchoff (2000), Swallow et Sedjo (2000)). L'efficacité des étiquettes dans ces modèles repose sur une hypothèse fondamentale, soit qu'il existe des consommateurs « verts » et que tous les consommateurs ou certains d'entre eux sont disposés à payer un prix plus élevé pour réduire l'impact de leurs achats sur l'environnement⁴⁵. Les éléments probants que l'on peut présenter à l'appui de l'hypothèse des consommateurs verts ne manquent pas. Premièrement, mentionnons les données d'enquête. Par exemple, en 1996, 35 % des consommateurs allemands se disaient disposés à acheter les produits affichant l'étiquette écologique malgré leur prix plus élevé (OCDE, 1997) ; Roe et autres (2001) font état d'une forte proportion de répondants désireux d'acheter de l'électricité certifiée écologique dans un marché hypothétique aux États-Unis. Deuxièmement, les données du marché : à partir de données sur un échantillon de produits norvégiens, Bjorner et autres (2004) estiment que la volonté marginale d'acheter le papier hygiénique ayant la certification Cygne blanc représente de 13 à 18 % du prix du produit ; Tiesl et autres (2002) démontrent qu'un grand nombre de consommateurs américains accepteraient de déboursier davantage pour du thon en conserve portant la mention *Dolphin-Friendly* (sans danger pour les dauphins) aux États-Unis.

les produits et les procédés verts à supplanter leurs homologues classiques verts à supplanter les produits classiques.

Cependant, les producteurs peuvent recourir à la différenciation des produits pour assouplir la concurrence par les prix. On se rappellera que le modèle de Bertrand de base prédit que deux entreprises ou plus qui se concurrencent par le prix fixeront celui-ci au coût marginal et réaliseront un bénéfice normal si les coûts unitaires sont constants et que les produits offerts sont identiques. Par conséquent, pour chaque entreprise, la différenciation du produit est fortement motivée par la recherche du bénéfice et la réduction de l'intensité de la concurrence par les prix. Cette motivation peut faire place à une **différenciation socialement excessive** (Shaked et Sutton (1982), Tirole (1988)). L'étiquetage écologique peut être un facteur de différenciation du produit lorsqu'il pourrait être difficile de faire ressortir des éléments distinctifs au moyen de la marque (par exemple des produits génériques en apparence comme le bois d'œuvre et le café sont désormais différenciés par les méthodes de production). L'impact sur le bien-être de cette diversification est ambigu : les consommateurs peuvent déterminer quels biens correspondent le plus à leurs attentes, mais doivent déboursier davantage pour se les procurer.

Surabondance d'information et étiquetage fallacieux : Il est encore plus difficile d'évaluer l'impact sur le bien-être des programmes lorsque l'on tient compte de la capacité des consommateurs de reconnaître et de comprendre les étiquettes. La problématique est particulière du fait que les programmes d'étiquetage qui se chevauchent prolifèrent, dans un contexte où la production a des multiples répercussions complexes sur l'environnement. Le fardeau cognitif et informationnel que la multitude d'étiquettes impose aux consommateurs est vraisemblablement lourd.

L'analyse standard postule a priori que les consommateurs comprennent les étiquettes écologiques. Or, une masse de faits confirment que (a) de nombreux consommateurs, voire la plupart d'entre eux, ne reconnaissent pas les étiquettes écologiques ; (b) que même ceux qui les reconnaissent ont généralement du mal à les interpréter⁴⁶.

L'interaction entre le libellé de l'étiquette, le comportement du consommateur, la concurrence et le bien-être est complexe (Hansen et Kull (1994)). Aucun test de marché n'a été réalisé récemment afin de déterminer dans quelle mesure les producteurs ont sciemment recours à l'étiquetage fallacieux pour semer la confusion dans l'esprit des consommateurs et/ou pour réaliser une fausse différenciation du produit.

Il convient également de mentionner qu'il n'y a pas forcément de relation entre l'étiquette qui renvoie à l'impact des procédés de production (par opposition aux caractéristiques du produit), et les préférences environnementales et le milieu naturel de la communauté touchée. La demande de qualité environnementale peut varier radicalement selon que la communauté consomme ou produit les biens,

⁴⁶ Plusieurs études ont déterminé dans quelle mesure les consommateurs reconnaissent les étiquettes écologiques. En 1996, 80 % des Allemands de l'Ouest et 56 % des Allemands de l'Est pouvaient reconnaître et nommer l'étiquette bleue (OCDE 1997). Au Danemark, 31 % des répondants ont spontanément mentionné l'étiquette apposée pour identifier les aliments biologiques, un pourcentage bien supérieur à celui des autres pays nordiques (16 % en Suède et 5 % en Finlande). La « Fleur », l'étiquette écologique de l'Union européenne, est venue spontanément à l'esprit de moins de 2 % des répondants en Suède, contre 18 % aux Pays-Bas (Palm et Jarlbro (1999)).

Bien entendu, ce n'est pas parce que l'on reconnaît une étiquette que l'on comprend tout ce qu'elle sous-entend. Van Dam et Reuvekamp (1995) ont demandé à des consommateurs néerlandais d'interpréter des étiquettes qu'ils avaient reconnues. Selon l'étiquette qui leur était soumise, de 9 à 91 % des répondants avaient une connaissance « adéquate » ou supérieure de sa signification. Aux États-Unis, 85 % des répondants à une enquête menée en 2005 par la Consumers Union croyaient que la mention « biologique » signifiait que l'aliment ne contenait aucun agent artificiel (ce qui est inexact), et 65 %, que le poisson « bio » était libre de contaminants tels que le mercure ou les BPC (ce qui est tout aussi inexact).

surtout dans le cas des biens exportés ou importés. Par conséquent, l'étiquetage pourrait réduire l'efficacité économique.

7. Fixation des prix en fonction des coûts sociaux : application à l'air pur aux États-Unis

Dans la présente section, nous ne nous intéresserons pas à l'impact de la réglementation environnementale sur les marchés à proprement parler, mais nous tenterons plutôt de voir comment la mauvaise application de la réglementation environnementale peut exacerber la distorsion en raison du manque de concurrence dans des secteurs fortement réglementés tels que les services publics. Ce faisant, nous illustrerons la codépendance de la réglementation environnementale et de la réglementation économique, en cela que la pratique adoptée dans un secteur fait ressortir l'absence d'une bonne pratique dans un autre secteur.

On a souvent exprimé l'avis que les décideurs devraient fixer les prix en fonction des coûts sociaux pour intégrer les externalités environnementales à l'évaluation des investissements, des modifications de taux, etc. dans les secteurs réglementés (par exemple voir Freeman, Burtraw, Harrington et Krupnick (1992) et les citations présentées dans cette étude).

L'instrument de politique qui a suscité le plus d'intérêt et qui convient le mieux au calcul d'estimations quantitatives des externalités est l'utilisation d'**additionneurs** en analyse financière. Les additionneurs sont similaires aux taxes ; cependant, étant donné qu'ils ne sont pas perçus, il n'y a pas de transfert de revenus. Ils tiennent lieu de paramètres fictifs permettant d'intégrer les coûts sociaux, par opposition aux coûts privés, au processus décisionnel.

L'utilisation des additionneurs par les Public Utility Commissions (PUC), qui sont responsables de la réglementation économique de la production d'électricité, s'est particulièrement répandue aux États-Unis, une trentaine d'États ayant adopté cette pratique.

À plusieurs reprises, on a tenté d'évaluer les avantages de cette approche pour l'intégration des questions environnementales à la réglementation économique. Bien entendu, la meilleure solution, l'utilisation de paramètres fictifs qui laissent supposer que les externalités sont internalisées contribuerait au mieux-être. Toutefois, les PUC doivent très souvent se contenter de solutions de pis-aller.

« Une PUC est bien mal placée pour effectuer une telle évaluation, et ce, pour plusieurs raisons. Premièrement, elle doit s'appuyer sur la réglementation fédérale ou, généralement, la réglementation de l'État qui cible ces externalités. Deuxièmement, la PUC doit forcément adopter une approche fragmentée pour régler le problème de l'internalisation des externalités, car ses pouvoirs sont restreints. Chaque PUC réglemente uniquement l'électricité (et parfois le gaz naturel, les communications et l'eau) dans un État alors que le problème est beaucoup plus vaste, les externalités chevauchant de nombreux secteurs et plusieurs États. Troisièmement, l'imposition de la PUC a créé un écart entre le coût privé marginal et le prix, qui *pourrait* être modifié par la fixation du prix en fonction des coûts sociaux. » (Burtaw, Palmer et Krupnick (1995: 2).

De nombreuses études ont été consacrées à ces solutions de pis-aller, par exemple Dodds et Lesser (1994) et Ottinger (1990). Parmi les conséquences non voulues possibles, il convient tout particulièrement de mentionner la substitution, en cela que la hausse des tarifs de l'électricité peut amener les consommateurs à se tourner vers des formes d'énergie polluantes non réglementées telles que le bois et le fioul domestique.

Fait intéressant à souligner, à l'heure actuelle, le prix de marché de l'électricité n'est généralement pas concurrentiel – il ne correspond pas au coût marginal. Par exemple, selon Gilbert et Henley (1991), les écarts entre le coût marginal et le prix dans le nord de la Californie ont des répercussions négatives sur le bien-être des consommateurs qui représentent environ 7 % du coût de l'électricité.

Pour les décideurs, il est important de préciser que les additionneurs pourraient accroître – ou corriger – cette inefficience, en fonction de diverses circonstances, sur un territoire de services. Burtraw, Palmer et Krupnick (1995) ont effectué une analyse éclairante de l'impact des additionneurs sur le bien-être dans ce contexte. Ils ont explicitement retenu la solution de pis-aller en tenant compte de l'effet de distorsion de la réglementation en vigueur et des lacunes du cadre de réglementation (par exemple la compétence restreinte).

Soit un additionneur qui équivaut au dommage environnemental marginal. Les auteurs présentent leurs résultats dans l'optique du facteur d'ajustement qui devrait être appliqué aux additionneurs dans différents cadres hypothétiques afin d'obtenir le meilleur pis-aller⁴⁷. Un facteur d'ajustement « neutre » aurait une valeur de 1 – ce qui suppose que l'additionneur constituant le meilleur pis-aller équivaut à l'estimation de l'externalité. Une valeur supérieure à 1 signifie que l'additionneur devrait être plus grand que l'estimation de l'externalité, etc. Les meilleures estimations émanant de l'étude se situent entre 0.88 et 1.8 ; par conséquent, l'application du meilleur additionneur dans un contexte où l'on doit se tourner vers les solutions de pis-aller serait loin d'être la meilleure politique et pourrait également entraîner une diminution du bien-être.

En général, les relations entre la réglementation économique et la politique environnementale sont importantes et parfois complexes. Joskow (2001), par exemple, a souligné que, dans le secteur californien de l'électricité (et tout particulièrement de la « crise énergétique » que cet État a connue), les ratés d'une politique avaient tendance à exacerber les ratés de l'autre politique.

8. La réglementation en situation de concurrence imparfaite : prix ou quantité

Il ressort de l'analyse dans son ensemble que, pour évaluer un programme de réglementation, il ne suffit pas d'en examiner l'impact sur la concurrence ; il faut également analyser ses caractéristiques qualitatives, soit l'instrument ou les instruments utilisés pour sa mise en oeuvre.

Si la dernière section met en relief un ensemble de questions soulevées par certaines pratiques, on peut présenter le même argument dans un contexte beaucoup plus général. En économie de l'environnement, le débat classique oppose les instruments prix (tels que la fiscalité) et les instruments quantité (tels que les contingents)⁴⁸. Mansur (2005) résume comme suit les caractéristiques de l'interaction entre le choix de l'instrument et les décisions de production des entreprises – et le bien-être – dans un marché de produits en situation de concurrence imparfaite :

Dans un marché assujéti à la réglementation environnementale, le comportement stratégique d'une entreprise influe sur les décisions de production et d'émission des autres entreprises. Si la réglementation prend la forme d'une taxe de Pigou (taxe sur les émissions), la variation des émissions n'aura pas d'incidence sur le coût marginal de la pollution. Par contre, dans un système de permis négociables, les décisions des pollueurs se répercutent sur le prix des permis. Le présent document démontre que l'effet de rétroaction augmente la production de l'entreprise,

⁴⁷ Les services publics hypothétiques ont des caractéristiques génériques qui sont différenciés par la capacité, l'emplacement, etc.

⁴⁸ Dans son analyse phare publiée en 1974, « *Prices versus Quantities* », qui compte parmi les études les plus citées dans ce domaine, Martin Weitzman a jeté les bases du débat (Weitzman (1974)).

Par conséquent, par comparaison à une taxe, les permis négociables contribuent au mieux-être dans un marché en situation de concurrence imparfaite. (Mansur (2005: 1)).

L'intuition est simple. L'entreprise qui décide d'accroître la production dans un régime de permis devra acheter un autre permis. Cela exercera une pression à la hausse sur le prix des permis, augmentera le coût marginal des concurrents et, par conséquent, les incitera à réduire l'offre. En raison de l'effet de rétroaction dont il est question dans la citation, pour une entreprise marginale, il est plus intéressant de produire dans un régime de permis que dans un régime de taxation ayant la même intensité de réglementation. L'offre étant insuffisante dans un marché de produits en concurrence imparfaite, ce facteur d'incitation à l'accroissement de la production améliore le bien-être.

8.1 Exemple : Les producteurs d'électricité en Pennsylvanie, au New Jersey et au Maryland

Mansur (2005) a également estimé l'impact du choix de l'instrument sur le bien-être à partir de l'interaction de cette décision avec l'exercice du pouvoir sur le marché de gros de l'électricité de trois États américains : la Pennsylvanie, le New Jersey et le Maryland.

Ses simulations donnent à penser que l'exercice du pouvoir sur le marché a diminué la pollution locale d'environ 9 % et, par conséquent, a considérablement réduit le prix des permis de polluer dans la région. De plus, si les autorités de réglementation avaient eu recours à une taxe en remplacement des permis, la perte de poids mort attribuable à la concurrence imparfaite – comme le décrit la citation ci-dessus – aurait été plus grande d'environ 7 %.

9. Conclusions

Cette étude n'est pas exhaustive. Nous voulions présenter certains des principaux instruments de réglementation environnementale qui peuvent influencer sur la concurrence et le comportement du marché. Nous avons formulé les conclusions et les affirmations suivantes :

- La protection de l'environnement et la compétitivité des marchés constituent deux axes prioritaires de l'action des pouvoirs publics. Si ces politiques semblent parfois diamétralement opposées, leurs objectifs sont en fait complémentaires. Elles visent toutes deux (comme toutes les politiques publiques en principe) à optimiser le bien-être social.
- Des éléments convaincants de la théorie économique et des données tirées d'études de cas et d'analyses économétriques permettent de conclure que la réglementation environnementale peut constituer un important **obstacle à l'entrée** sur certains marchés, donner lieu à des **comportements d'éviction** sur d'autres, et porter atteinte à la concurrence et au bien-être social par **d'autres moyens**.
- En raison des effets énumérés ci-dessus, les réglementations de l'environnement peuvent, en réduisant la concurrence, se traduire par une hausse des prix pour les consommateurs. Toute évaluation des coûts et des avantages d'une réglementation de l'environnement, en vigueur ou en projet, est donc incomplète si elle ne comporte pas d'analyse des coûts générés par la diminution de la concurrence susceptible de résulter de la réglementation.
- Les effets de distorsion de la concurrence d'une grande partie des politiques mentionnées dans ce rapport sont des conséquences involontaires des mesures environnementales. Il peut d'ailleurs être possible dans certains cas de modifier ces mesures pour que les objectifs de protection de l'environnement comme ceux du maintien de la concurrence soient mieux assurés.
- Cependant, il peut exister des situations dans lesquelles l'obtention d'avantages environnementaux par des interventions réglementaires se traduit inévitablement par une réduction de la

concurrence sur le marché. Il est important dans ce cas de choisir les mesures les moins créatrices de distorsions et de veiller à ce que les avantages environnementaux compensent les coûts économiques apparents, y compris ceux qui résultent de la réduction de la concurrence.

Enfin, il faut souligner que les données empiriques dont on dispose sur la relation entre les questions environnementales et la concurrence ne sont pas concluantes.

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CZECH REPUBLIC

1. Introduction

State environmental protection in the Czech Republic is regulated by the **Ministry of the Environment**. The current environmental policy will be in effect until 2010. It complies both with the sixth EU Environment Action Programme of July 2002 and the OECD Environmental Strategy for the First Decade of the 21st Century of May 2001.

The legal regulation in the Czech Republic distinguishes two possible forms of abusing participation in competition. The first of them consists in prohibited infringing of competition, the second one dwells in activities of unfair competition. Throughout the existence of the Office for the Protection of Competition (hereinafter referred to as “the Office”), dealing with entities that have had a direct connection with the environment protection has been rather seldom, and such cases did not involve serious distortion of competition. Nevertheless, the Office has regularly taken into consideration environmental aspects of all the cases that have been dealt with, especially in the area of antitrust and state aid. Since the beginning of its activity, the Office has considered the effect of the competition conduct on environment not only within the framework of its decision-making activity, but also in application of the entire range of competitive advocacy instruments.

The interest of the Office in resolving competition issues with environmental background has been recently expressed by its activity aimed at reconsideration of the emission allowances trading system within the European Union.

2. Antitrust

The Act on the Protection of Competition does not contain any provisions specifically relating to environment protection. However, the legislation in effect allows the Office, when assessing individual cases, to take potential beneficial effects for environment into account. As an example, the following table shows the frequency of the argument of supporting environmental protection, introduction of ecologically acceptable products and better waste management in concentration notifications submitted to the Office until 2001:

Year	1996	1997	1998	1999	2000	2001
Number of concentrations /number of proposed ecologically friendly measures	74/13	58/12	57/7	51/18	57/4	148/8

2.1 Case study - Concentration of competitors *KOVOŠROT GROUP and Firemet*

KOVOŠROT GROUP is a prominent actor on the market of metal waste and waste paper purchasing and processing with a network of purchasing storehouses and processing plants. Firemet was established to implement this transaction. It is associated with company Scholz, involved in the purchase of several types of ferrous and non-ferrous metal waste and waste paper. Both companies are also processors and sellers of secondary raw materials.

This case consisted in a horizontal concentration on several relevant markets which has been defined by the Office on the basis of types of waste in question. Implementation of the assessed concentration resulted in strengthening the position of the secondary raw materials sellers vertically integrated by the parties to the proceeding.

Markets involving the purchase and sale of secondary raw materials are dependent on the need of processors and on the supply of these commodities by their producers. As a rule, there are no long-term agreements either on the purchase or on the sales side. In terms of secondary raw materials sales, no special sales networks are built up, processed raw materials are supplied to legal entities which utilise them for subsequent metallurgical, steel-working or paper-making production. On the other hand, a network of purchasing points varying in size and equipment has been created. Purchasing from legal entities and natural persons is not in itself a technically or financially demanding activity. This finding is supported by a large number of entities involved in this activity. Along with this fact, the Office took account also the fact that the concentration would not lead to a raising of the entrance barriers, which were low in this sector, and approved the transaction.

Competition advocacy

Another area, where the Office has been interacting with the issue of environmental protection was the competition advocacy. The Office dealt with the issue of environmental protection within the framework of passive legislation, when it submitted comments on bills and government policies concerning this area.

2.2 Case study - Electronics Waste Disposal Decree

In September 2005, the Office received a proposal from a group of lamp producers operating in the Czech Republic to investigate a possible breach of the rules of competition indicating the creation of an electronics waste disposal monopoly as a result of a decree issued by the Ministry of the Environment (hereinafter referred to as “the Ministry”). Other producers associated themselves with this complaint as the issue was being investigated. The Act on Wastes now imposes an obligation on all producers (as well as on importers and distributors) of electronics to **create** for the electronics placed on the market before the set date (“historical electronics”) **a system to which all business entities must contribute to an extent corresponding with the volume of their production.** This obligation is regulated in greater detail by a decree, which came into effect in September 2005.

The Office sees the main problems in the fact that under the relevant provision of the Decree the state administration body – the Ministry of the Environment – created a **monopoly** for administration of the joint performance of financing the management of historical electronics. As a result, the access to this market for other parties interested in participating in this field was restricted. The obligation to communicate information on the volume of production to the collective system managed by the company whose partners are competitors to the obligated parties **results also in a prohibited exchange of information between competitors**, which may have a negative effect on the electronics waste market, as well as the electronics market. Although the Office has warned about these anticompetitive effects, a measure ensuring that exchange of the sensitive information did not take place was not taken.

For this reason, the Office commenced **discussions with the ministry** and requested a legislative change aimed at rectifying the current state, particularly to allow more entities meeting the legal requirements manage joint financing of the electronics waste management. The Office also established a requirement that the decree transparently set out precise and non-discriminatory conditions for gaining authorisation to operate the collective system for the sake of ensuring efficient competitive environment on the relevant market. The Office held the standpoint that once other entities had been allowed to operate the

collective system, **a competitive environment would be created, which could subsequently lead to a reduction in the number of contributions made by individual lamp producers to the collective system, as a result of which even the final consumers would be less financially burdened.**

The representatives of the electronics producers presented their complaints to members of Parliament. After a series of discussions, to which the Office contributed by its own standpoint, a group of deputies launched an initiative in 2006, which resulted in submission of a petition to the Constitutional Court to repeal the decree.

3. Unfair Competition

Business conduct placing the environment in jeopardy may constitute also **unfair competitive practices**, which are regulated by the general provisions of the Commercial Codes. Under these general provisions, prohibited unfair competition is any conduct, which contravenes correct competitive practices and which is liable to cause harm to other competitors or consumers. Persons whose rights have been affected by unfair competitive practices, whether competitors, consumers or other affected persons, may only have recourse to a court of law with their civil suits. The court is the only institution which has the authority to rule on such suits.

4. State aid

The Office for the Protection of Competition is also active in the field of state aid. In May 2004 the powers of the Office were altered, when its decision-making authority was assumed by the European Commission. The Office now has the role of a central, consultation, monitoring, coordinating and advisory body. Its aim is to **ensure the transparency and legal certainty of the providers and recipients of state aid.**

State policy of Czech Republic provides aid for environmental investments to protect clean air, to treat and clean waste water, to treat and dispose of waste and to introduce "cleaner" technologies. Expenditure from public budgets is made in priority areas while economic efficiency is retained. **Aid that is provided must comply with EU competition protection rules.** The effectiveness of expended aid is monitored by the competent bodies both from economic and environmental standpoints, both criteria having equal weight.

The following in particular represent the main types of environmentally related state aid provided in the Czech Republic:

- *investment aid* – environmental investment aid rules in effect cover aid for investments which help to reduce pollution that the aid recipient caused himself.

The most frequent types of investment aid are:

- temporary aid to help small and medium-sized enterprises adapt to new standards.
- subsidies to small and medium-sized enterprises.
- decontamination of polluted industrial areas.
- aid for the restructuring of enterprises;
- *aid for small and medium-sized enterprises involving environmental consultation services*

- *operational aid* involving waste management and energy savings – under normal circumstances enterprises should bear the costs of managing industrial waste on the basis of the "polluter pays" principle

5. The emission allowance issue

Under EU directives in effect, the emission allowances trading system is based on the "cap and trade" principle. A limited total number of allowances has been set within the European Union, and these were divided among the individual Member States. On the basis of national allocation plans, the allowances assigned to a particular state are divided amongst individual greenhouse gas producers. Each allowance represents the right to emit one ton of CO₂ emissions for a particular calendar year and the system is principally based on the fact that the operator of facilities which come under the trading system must discard the number of allowances corresponding to his carbon dioxide emissions.

This system gives individual greenhouse gas producers the opportunity to decide whether to reduce their emissions or to buy allowances for the emissions which they produce over and above their limit. It may justifiably be presumed that this decision-making will be based primarily on an economic analysis of both alternatives.

In connection with the system set in this manner, however, the Czech Republic has in practice paradoxically seen a reduction in production (primarily in electricity generation), a reduction in the number of competitors and thus a reduction in competition as such, primarily in the energy industry. For with the current extent of electricity generation costs and sales prices in the Czech Republic, it is more advantageous for certain producers to restrict production, rather than to effectively reduce greenhouse gas emissions, and to sell the excess emission allowances to other market participants.

However, this means that in terms of equal conditions and the efficient operation of competition, these producers gain **advantages which are not enjoyed by all market participants**. The producers receive allowances for free (basically involving a "sui generis" subsidy) and so have an unjustified competitive advantage over those producers who do not receive these emission allowances. Thus in competitive terms, this may be a case of **distortion of equal conditions for competition**.

The current system does not seem to meet the basic objectives set out in the Directive, especially the reduction of greenhouse gas emissions with simultaneous maintaining economic growth and complying with the rules of competition.

A solution of this situation may be seen e.g. in Europe-wide taxation of CO₂ production which could be a suitable alternative to the current system. A system of this kind would be more transparent, less administratively demanding and more equitable to all market participants. Nor can we ignore the other aspect of emission taxation, as it can justifiably be anticipated that such taxation would be reflected in the prices of products and services of individual greenhouse gas producers and so their competitiveness would diminish. This risk would compel them to gradually reduce emissions and the energy costs of production.

FINLAND

1. *Is there an inevitable conflict between the objectives of environmental policy and those of competition policy? What institutional or procedural adjustments could be made to reduce any such conflict?*

There is no inherent conflict between environmental policy and competition policy. The point of departure must be that negative environmental impacts impose a cost on society and lower welfare. And vice versa positive environmental impacts (typically reductions in negative environmental effects) lower the social cost imposed on society and thereby increase welfare. Environmental effects in fact constitute a special kind of efficiencies for competition policy. There is no reason, in principle, to exclude efficiencies of this kind from competition policy assessment, provided that they have been created specifically through the practises by the respective firms. The practical difference between the environmental and other kind of efficiencies is that the price system does not, by itself, signal the extent of environmental efficiencies created if no particular institutional arrangements are not made to establish environmental benefits or costs. Environmental effects are in fact not the only category of efficiencies where substantiation constitutes a major hurdle to the proper application of competition law. For example, innovative activities are also very hard to substantiate, and therefore tend to be left out of the competition policy assessment although in theory they should certainly be considered. What was said above is the natural consequence of that the main objective of competition policy is increasing the overall economic welfare, which is why there is no essential conflict.

2. *Barriers to entry - To what extent – and through what channels – do current environmental regulations constitute barriers to entry in key sectors? How can we quantify the welfare impacts of such barriers and trade those welfare losses off against the welfare gains of environmental improvements?*

Barriers to entry are largely dependent on the industry in question. Whether the market is an end product market, input market or an ancillary market is also of significance. In addition to entry barriers, there may also be barriers related to exit (expenses). For example, in waste management, barriers to entry may be observed in collection, sorting, treatment, recycling and recovery of waste. It is also true that barriers in one level of the industry may create additional impediments to the other levels of the industry.

In several cases, environmental impacts of varying degrees are related to entry. The standards in the environmental field may in principle, cause artificial entry barriers. For example, the noise standards applied in the aviation industry may act as entry barriers. For competitive reasons, incumbents may also have incentives to overemphasise the environmental impacts caused by the new entrants. In Finland, the FCA has e.g. paid attention to the entry barriers caused by the tax treatment of recycled beverage packages and disposable cans. The FCA has drawn attention to the distorting effects of the beverage packaging tax collected for environmental reasons.¹ The Finnish recycling system will expand in the next few years so as to also incorporate a recycling system for disposable bottles.

¹ Exemption from packaging tax or lower tax rates can only be obtained if the package is part of a returnable deposit system. The packaging tax is at the moment 0,51 €/litre. If the package is refillable there is no package tax. If the package (e.g. can), which is part of a returnable deposit system, is used as raw material

The assessment of welfare impacts related to entry barriers and environmental impacts requires a cost-benefit analysis. Overall, the economic efficiency of environmental regulation should be assessed particularly in relation of benefits to costs and potential requirements set by legislation. Quantifying welfare impacts is challenging, however. We should be able to assess the direct and indirect impacts of the different regulatory options on some level, however, so as to obtain a clear picture of the overall impacts of different policy options.

3. *Non-price predation - What examples exist of firms lobbying government to enact competition-restraining environmental rules?*

Examples are likely to be found from various sectors. In our experience industry associations often assume this kind of activity.

4. *Compliance costs and firm size – What evidence is there that the cost of compliance with environmental requirements falls disproportionately on small firms? If that is the case, what are the implications for market outcomes, and when might there be a case for regulatory relief on small firms?*

We are not aware of any situations where small firms have to bear the lions share of the total compliance cost of environmental compliance. Instead, the relative cost burden borne by small firms may and in many cases is greater than borne by large firms.

The more rigid environmental legislation has generally resulted in considerable investments being made to e.g. waste management and utilisation. The investments may be challenging particularly for SMEs. In Finland, e.g. the demands imposed by producer responsibility may be relatively harder on small companies. Producer responsibility, which is too severe, may thus threaten the fulfilment of environmental goals in the long run. The FCA has also paid attention to this and has pointed out that particular attention should be paid to the non-discriminatory treatment of small producers and to the transparency of the market mechanism in general.

5. *Regulatory complexity – Apart from the stringency of environmental regulation, is there evidence that those regulations are too complex, and that that complexity might hinder competition?*

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6. *'New source bias' – whereby new sources are subjected to more stringent environmental standards than existing ones – exist explicitly or implicitly in many jurisdictions. How does this affect entry and exit dynamics and market outcomes?*

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7. *Environmental policy as subsidy – When do environmental regulations constitute subsidy or state aid and lead to unfair or reduced competition?*

It is possible in principle that funding/subsidy aimed at environmental activity is used to support other businesses. Particularly discretionary subsidies may cause competitive problems. Particular attention

the surtax is 8,5 cents/litre during three years transition period (2005-2007), after which the packages in question are also tax-free. The FCA's opinion has been that the main objectives of the packaging directive are best met if the taxation of the refillable bottles and those recycled for raw material is the same.

should thus be paid to the transparency of state aid. As regards the emissions trade, over-allocation of emission rights might be deemed to constitute state aid.

8. *How do waste management issues and recycling policies impact competition in product markets, and more generally what are ways in which markets for waste products and other markets interact?*

Environmental regulation creates demand for new types of business. Different types of waste may be recycled or are increasingly used in energy production. There is thus a strong demand pull for innovative business activities that can effect both the input markets and the energy markets. The environment sector can take advantage of the development of technology which enables far more effective utilisation of waste for economic purposes. The FCA has systematically attempted to influence the current environmental laws and regulations so as to create room for environmentally innovative business activities without compromising environmental objectives.

It is also increasingly possible to reach environmental goals by implementing effective and efficient market-based instruments. Needless regulation should be dismantled. Competition authorities have an important role particularly at the early stage of the market when potential competition problems may be taken into consideration.

9. *Instrument-specific considerations - What particular competition concerns are thrown up by the choice of particular instruments of environmental policy? For example, are tradable permit markets subject to exclusionary manipulation by large firms wishing to exclude competitors? What are the implications of social cost pricing in the regulated power sector? Can programmes aimed at extending producer responsibility (e.g. for take-back of used products) serve as 'clubs' and create industry 'insiders' and 'outsiders', to the detriment of competition? Do eco-labelling programs allow firms to artificially create product differentiation so as to relax the intensity of price competition?*

The emissions trade and forms of allocation may cause competition neutrality problems between different companies (e.g. different treatment of incumbents and potential entrants).

In issues related to the extension of producer responsibility, it should be ensured that the possible cooperation between market parties does not lead to collusive or artificially exclusionary consequences in view of competition. In Finland, producer responsibility organisations are likely to assume dominant market position. Therefore non-discrimination and transparency of their activities is an important precondition for workable competition in the respective industries. For example, in the waste paper market investigation of the FCA led in to the clarification of the pricing scheme by the producer responsibility organisation Paperinkeräys Oy so as to prevent price squeeze. As a result of the investigation, Paperinkeräys Oy made business arrangements necessary to prevent hence forth the possibility of the abuse of dominant market position in advantage.

10. *What are the implications of all of these considerations for the conduct of competition policy? When conflicts have arisen between competition and environmental policies, how have they been settled in particular cases? And how have environmental concerns affected, if at all, merger analysis in particular cases or the analysis of horizontal or vertical agreements?*

The FCA has acted proactively as regards e.g. the management of municipal waste, and recycling systems of beverage packages. The FCA's activity in the environmental sector has increasingly consisted of advocacy – there have been few actual antitrust cases. The FCA has sought to contribute to opening up

legal monopoly activities to competition and creating functional markets for different environmental sectors.

As regards waste management, the FCA has found it important to create workable market conditions. Municipal waste management companies have de facto legal monopoly status, which is why particular attention should be paid to the transparency of their activities and their competitive behaviour. The FCA has deemed important to open up a certain part of their monopoly business (waste created by the business community) to open competition. The working group proposed this kind of amendment to the legislation and the government bill on this score is expected to be published soon.

As to recycling systems for beverage packages, the FCA has sought to increase transparency of the activities and competition neutrality among various market actors. The FCA sought to influence the Ministry of Finance to amend the markedly discriminatory environmental tax law on disposable beverage packages. New legislation, which implied decisive improvement on this score was indeed enacted.

FRANCE

Is there an inevitable conflict between the objectives of environmental policy and those of competition policy? What institutional or procedural adjustments could be made to reduce any such conflict?

Il va de soi que le droit de la concurrence et le droit de l'environnement poursuivent des objectifs distincts.

Admettre que la satisfaction des préoccupations environnementales peut engendrer des restrictions de concurrence ne veut cependant pas dire que la conciliation nécessaire de ces deux droits n'autorise pas une certaine convergence.

C'est en premier lieu le cas parce que les mécanismes de marché peuvent directement constituer des instruments utiles pour la réalisation des objectifs de progrès environnementaux.

Ainsi, et d'une manière générale, la compétition contribue à l'efficacité des industries réparant les atteintes à l'environnement. La satisfaction des préoccupations environnementales n'engendre des restrictions qu'en tant qu'elle interdit les modes de compétition coûteux pour l'environnement. La monétisation des coûts environnementaux permet à la concurrence de porter sur ces coûts et de les diminuer, in fine, s'il n'y a pas d'accord pour les répercuter intégralement sur le consommateur final.

Plus avant, l'organisation récente d'un marché d'échange des permis d'émission de CO₂, constitue une illustration éloquente de la participation des mécanismes de marché à la réalisation de certains objectifs environnementaux.

C'est en second lieu le cas dans la mesure où le contrôle du respect des règles de concurrence peut contribuer à une bonne application des règles environnementales.

Ainsi, protection de la concurrence et protection de l'environnement vont de pair, quand il s'agit de sanctionner les manquements aux obligations environnementales qui faussent la loyauté du jeu de la concurrence au détriment d'entreprises réellement impliquées dans le domaine de l'environnement. C'est ce que l'on appelle parfois la lutte contre le « dumping environnemental ».

De même, l'application du droit de la concurrence peut concourir à la performance des dispositifs de protection de l'environnement lorsqu'elle permet de lutter efficacement contre les modes collusifs de répercussion des coûts environnementaux.

Barriers to entry - To what extent – and through what channels – do current environmental regulations constitute barriers to entry in key sectors? How can we quantify the welfare impacts of such barriers and trade those welfare losses off against the welfare gains of environmental improvements?

En matière de protection de l'environnement, il s'agit avant tout d'orienter les entreprises vers une activité plus économe en matière d'exploitation des ressources énergétiques, respectueuse de la biodiversité et du cadre de vie. Ces précautions sont, le cas échéant, incorporées par les pouvoirs publics au socle législatif et réglementaire que tout acteur économique doit respecter. Ceci peut entraîner un coût net pour la société que les objectifs d'amélioration du bien être collectif justifient.

Mais les dispositions qui tendent à rationaliser certaines filières peuvent avoir aussi pour effet de segmenter les marchés géographiques ou bien, le cas échéant, favoriser l'instauration de modes de régulation collectifs qui ne répondent pas directement aux finalités du droit de la concurrence. Il peut en résulter le maintien de rentes de situation et une transparence absolue des marchés qui ne débouchent pas nécessairement sur la fixation des meilleurs prix.

Les pouvoirs publics doivent donc veiller à préserver le jeu concurrentiel sur ces marchés en s'assurant d'une égale application des règles environnementales à tous les opérateurs et en évitant qu'elles puissent être utilisées pour faire obstacle à l'arrivée de nouveaux entrants.

Non-price predation - What examples exist of firms lobbying government to enact competition-restraining environmental rules?

La France ne s'est pas heurtée récemment à ce genre de problème.

Compliance costs and firm size – What evidence is there that the cost of compliance with environmental requirements falls disproportionately on small firms? If that is the case, what are the implications for market outcomes, and when might there be a case for regulatory relief on small firms?

Cette question doit être appréhendée dans sa dimension technico-économique.

Ainsi, dans les secteurs de l'eau, des déchets et de l'énergie, le renforcement de la protection de l'environnement requiert le développement de technologies de pointe que seules des entreprises de grande taille peuvent maîtriser. Certaines de ces activités se caractérisent par l'existence d'effets de série très importants (ainsi, la production d'électricité par les centrales nucléaires ; on peut également mentionner certaines techniques de purification de l'eau). Cela accélère les processus de concentration économique, tout en créant des barrières à l'entrée sur les marchés correspondants, barrières que la réglementation, notamment dans ses aspects environnementaux, vient consacrer et renforcer. Au final, la concurrence sur ces marchés peut apparaître insuffisante.

Face à de telles situations, des mécanismes correcteurs existent.

Ils résident par exemple dans l'attribution aux PME d'aides à la recherche-développement, comprenant un volet environnemental. D'une manière générale, lorsque l'introduction de technologies innovantes constitue un facteur privilégié d'animation de la concurrence en présence d'opérateurs puissants, il appartient aux autorités de concurrence de faire échec aux pratiques abusives qui peuvent entraver l'exercice de cette concurrence. De même, il pourrait être fait application du concept « d'infrastructures essentielles » lorsqu'il est de l'intérêt de la concurrence que les PME puissent avoir accès aux équipements de « réparation environnementale » mis en place par les grandes entreprises.

Regulatory complexity – Apart from the stringency of environmental regulation, is there evidence that those regulations are too complex, and that that complexity might hinder competition?

L'excès de réglementation constitue, en tout domaine, un facteur potentiel de risque d'atteinte au bon fonctionnement du marché. Toutefois, il n'y a pas lieu de penser que la complexification du droit de l'environnement puisse nécessairement être une source de perturbation pour la concurrence.

En effet, le droit de l'environnement a évolué d'un simple droit de police à un véritable droit économique. Le fait que les pouvoirs publics organisent certaines activités et les nouvelles obligations qui incombent aux opérateurs à désormais pour corollaire que les politiques environnementales intègrent la gestion des coûts induits (elles en établissent la réalité, la valeur et les opérateurs exposés à la couverture de ces coûts).

En outre, ces politiques suscitent l'apparition de nouveaux marchés et donc d'un mode de pression concurrentielle.

En définitive, l'essentiel est que les règles environnementales s'appliquent de la même façon à l'ensemble des acteurs économiques afin d'éviter des effets d'aubaine ou des distorsions de concurrence, ce qui pose en réalité le problème de leur harmonisation, en premier lieu au plan communautaire.

'New source bias' – whereby new sources are subjected to more stringent environmental standards than existing ones – exist explicitly or implicitly in many jurisdictions. How does this affect entry and exit dynamics and market outcomes?

La France n'a pas d'éléments d'informations sur cette question.

Environmental policy as subsidy – When do environmental regulations constitute subsidy or state aid and lead to unfair or reduced competition?

La question a pu se poser s'agissant, par exemple, de certains mécanismes d'aides d'État destinés à soutenir le développement des énergies renouvelables, lorsque ces aides sont utilisées par des opérateurs sur des territoires nationaux où de tels dispositifs n'existent pas. Encore faudrait-il que l'impact de ces aides sur le jeu de la concurrence soit suffisamment significatif pour justifier un examen particulier.

How do waste management issues and recycling policies impact competition in product markets, and more generally what are ways in which markets for waste products and other markets interact?

En matière de traitement des déchets, la réglementation environnementale poursuit préférentiellement des objectifs de valorisation et de recyclage et fixe des objectifs contraignants.

En fonction d'un état de la technologie et des contraintes réglementaires, il est possible pour le marché de prendre en charge ces modes de traitement dans des conditions économiques raisonnables. Indépendamment même de la commercialisation des matières recyclables, l'offre de valorisation des déchets, notamment industriels, s'appuie sur la demande des entreprises soucieuses de trouver les formules les moins onéreuses d'élimination de leurs déchets.

Un conflit peut alors survenir entre l'application des politiques environnementales et de concurrence.

A titre d'exemple, le dispositif actuel d'indemnisation du ramassage et de l'élimination des huiles usagées en France mis en place pour des raisons environnementales fait l'objet d'une refonte soumis au Conseil de la concurrence. En effet, le système se caractérisait par une rigidité de fonctionnement et une opacité des mécanismes d'économie administrée qui excluait toute possibilité de concurrence entre ramasseurs et éliminateurs, ne serait-ce que pas les prix de reprise. Il en résultait des barrières à l'entrée de ces marchés qui excluait toute nouvelle entreprise notamment européenne. Par ailleurs en aval l'apport de ces produits régénérés constituent une source de concurrence non négligeable face aux producteurs d'huiles neuves.

Un autre exemple peut être tiré de la réglementation nationale portant sur la gestion des déchets d'emballages ménagers. Celle-ci impose aux conditionneurs (producteurs ou distributeurs) de participer à l'élimination des déchets d'emballages issus de la consommation des ménages, principalement en s'acquittant d'une contribution (sous la forme d'un « point vert ») auprès d'organismes agréés par les pouvoirs publics. Ces organismes reversent des soutiens financiers aux collectivités locales qui s'engagent dans la voie du tri sélectif.

Se pose alors la question de la détermination du prix de reprise des matériaux triés et de la destination de ces matériaux, dans un contexte économique marqué par l'envol du cours des matières recyclables sur le marché mondial (notamment ferraille et polymère).

En principe, les collectivités responsables de la collecte et du tri des déchets ménagers ont le choix entre trois formules contractuelles. Elle peuvent adhérer à la « garantie de reprise » proposée par les organismes agréés en relation avec les filières dédiées, avec des prix indexés sur des mercuriales ou des indices divers. Elle peuvent souscrire une « reprise garantie » auprès des interprofessions du recyclage à des prix marchands. Elles peuvent également céder les matériaux triés directement à un recycleur ou à un intermédiaire à des prix libres mais sans bénéficier d'un régime de reprise garantie.

L'opportunité d'encourager la conclusion de contrats plus profitables auprès de recycleurs et d'intermédiaires isolés pose débat et se heurte au souci de protéger les atouts du dispositif géré par les organismes agréés. En effet, la « garantie de reprise » offre une sécurité aux collectivités en matière de débouchés, lisse les prix de reprise et permet d'appliquer des prix de reprise identiques sur l'ensemble du territoire.

D'un point de vue organisationnel, si la concurrence devait jouer trop largement, il y aurait un risque que les formules concurrentes n'écrèment le marché, en contractant de préférence avec les collectivités les plus importantes, et n'en viennent par contrecoup à « tuer » le système de la « garantie de reprise », avec le rôle de service public qu'il peut exercer.

Pour autant, d'un point de vue concurrentiel, aucun obstacle ne devrait empêcher les collectivités de bénéficier des avantages financiers résultant d'une demande internationale importante en matières recyclables. La limite de ce raisonnement est toutefois de s'assurer que le recyclage des matériaux ainsi exportés s'effectue dans de bonnes conditions, respectueuses des normes sociales et écologiques édictées par les autorités communautaires.

D'une manière générale, l'orientation des déchets vers les utilisations les plus efficaces économiquement peut entraîner des risques environnementaux (émission de gaz à effet de serre, dissémination de rejets polluants). Pour autant, il convient de vérifier que les entraves institutionnelles au libre développement de ces marchés (telles que des procédures d'autorisation ou d'agrément pour l'exercice de ces activités économiques, l'affirmation d'un principe de proximité territoriale et d'autosuffisance nationale pour la gestion des déchets), demeurent proportionnées aux buts environnementaux poursuivis.

Au final, une insécurité pèse sur le devenir de certains marchés émergents pour lesquels les opérateurs manquent de visibilité quant à l'opportunité d'investir. A contrario, la requalification des déchets en produits peut faire échapper les activités économiques concernées à des volets importants de la réglementation environnementale propre aux déchets.

Instrument-specific considerations - What particular competition concerns are thrown up by the choice of particular instruments of environmental policy? For example, are tradable permit markets subject to exclusionary manipulation by large firms wishing to exclude competitors? What are the implications of social cost pricing in the regulated power sector? Can programmes aimed at extending producer responsibility (e.g. for take-back of used products) serve as 'clubs' and create industry 'insiders' and 'outsiders', to the detriment of competition? Do eco-labelling programs allow firms to artificially create product differentiation so as to relax the intensity of price competition?

La mise en place en France des permis d'émission des gaz à effet de serre et des mécanismes d'échanges de quotas d'émissions, découlant du protocole de Kyoto, est en phase de démarrage.

Les autorités françaises sont attentives à ce que les marchés de transfert et de négoce de ces droits soient librement accessibles pour les opérateurs concernés, sans contraintes techniques ou financières et sans discrimination. La vigilance porte particulièrement sur l'organisation collective de ces marchés avec pour souci d'éviter des phénomènes de capture au profit de certains opérateurs.

S'agissant de la responsabilité élargie du producteur dans le respect des règles environnementales, sa mise en œuvre suppose naturellement d'instaurer des instruments efficaces de traçabilité des produits, dès lors qu'il apparaîtrait que les marchés géographiques de production et de consommation desdits produits sont substantiellement différents.

En matière d'éco label, les autorités françaises encouragent les démarches de normalisation qui s'inscrivent dans une perspective de responsabilisation sociétale des entreprises tout en permettant de répondre aux exigences de marchés ouverts. Ceci favorise l'instauration d'un climat de confiance propice au développement des pratiques de consommation inspirées du souci de contribuer aux objectifs environnementaux. Bien entendu, il convient alors de protéger les consommateurs d'actions trompeuses en matière d'allégations environnementales et de contrôler que les informations apportées aux consommateurs offrent des garanties suffisantes de sérieux et d'objectivité.

What are the implications of all of these considerations for the conduct of competition policy? When conflicts have arisen between competition and environmental policies, how have they been settled in particular cases? And how have environmental concerns affected, if at all, merger analysis in particular cases or the analysis of horizontal or vertical agreements?

Il n'existe pas dans tous les cas une harmonie magique entre le droit de la concurrence et le droit de l'environnement. L'application des règles environnementales peut conduire à des situations de marchés infra optimales.

Mais ce dilemme peut être résolu si la contribution au progrès environnemental est associé au critère qualitatif de la compétition. Tel est le cas en matière d'appels d'offres émanant de collectivités publiques puisque le code des marchés publics admet désormais la sauvegarde de l'environnement comme critère de sélection.

Par ailleurs, le droit français de la concurrence prévoit d'exonérer certaines situations de l'application des règles de concurrence lorsque ceci est nécessaire pour assurer le progrès économique. Ces dispositions peuvent être appliquées dans le cas d'un progrès qui contribue à la protection de l'environnement. Le législateur, conscient du conflit entre les différentes facettes de l'intérêt général, a toutefois posé des conditions, et notamment la nécessité de réserver au consommateur une partie équitable du profit qui en résulte, ainsi que celle de ne pas éliminer la concurrence pour une partie substantielle des produits en cause. Le droit national de la concurrence prévoit même des exemptions inconditionnelles pour l'application de textes législatifs voire réglementaires, mais cette possibilité reste la plupart du temps théorique, en conséquence de la primauté du droit communautaire et des dispositions sur la concurrence qui figurent dans le Traité.

GERMANY

Introduction

The responsible use of natural resources is a cornerstone of future-oriented social policy. Since the 1970s, it has increasingly been realised in Germany, but also worldwide, that it will be impossible to maintain in the long term the massive level of consumption of natural resources, in particular of primary energy. In particular in the industrialised countries there is a need to dramatically improve the efficiency of use and consumption of resources. Although the future scarcity of resources can be alleviated by process and product innovation such innovations cannot be predicted with certainty. A „principle of caution“ therefore urges the economical use of natural resources. It is the task of the state and society to provide the necessary behavioural incentives for this.

On the other hand, competition as an organising principle of the economy is also a cornerstone of future-oriented social policy. Sometimes it can be difficult to reconcile the demands of competition and environmental protection. This conflict of interests raises the question of how much weight should be attached to competition as an organising principle in the protection of resources and the environment.

1. The dichotomy between competition and environmental protection – the example of the waste disposal industry

In Germany in recent years the question of the relation between competition and environmental protection has been raised particularly in connection with the waste disposal industry.

The waste disposal industry is mainly regulated by the Waste Avoidance, Recycling and Disposal Act (*Kreislaufwirtschafts- und Abfallgesetz*) and by several specific provisions such as the Packaging Ordinance (*Verpackungsordnung*) or the Electrical and Electronic Equipment Law (*Elektro- und Elektronikgerätegesetz*). The legislator wants to make full use of all possibilities to avoid and recycle waste in order to reduce the amount of waste which needs to be disposed of to a minimum and to make the disposal itself as environmentally friendly as possible. The recycling sector is meant to significantly reduce the amount of waste. At the same time it is meant to defuse the issue of supply with natural resources by prolonging the availability of mineral and fossil resources through recycling measures. This essentially corresponds to a use of natural resources according to the principle of caution.

1.1 The dual system in Germany

The Bundeskartellamt has repeatedly dealt with the position and market behaviour of “Der Grüne Punkt – Duales System Deutschland GmbH (DSD)” (The Green Dot) which was established in 1990 to implement the Packaging Ordinance.

According to the Packaging Ordinance manufacturers and distributors have a direct product responsibility for sales packaging. Due to this responsibility they are obliged to take back used sales packaging and to use it for the manufacture of new packaging or for other purposes (take-back and recycling obligations). For most manufacturers and distributors it would be very time-consuming and costly to meet these obligations themselves. However, they have the possibility to fulfil their take-back and recycling obligations by participating in a so-called dual system which ensures nationwide a regular collection of waste from consumers and a subsequent recycling of it.

DSD was the first undertaking to offer such a dual system in Germany. Most manufacturers joined the dual system of DSD in the early 1990s.

1.2 *The contract system of DSD AG*

To organise the taking-back and recycling of used packaging DSD concludes a multitude of contracts with different partners.

- The so-called *Zeichennutzungsverträge* (contracts governing the use of the DSD trademark) regulate the assumption by DSD of the take-back and recycling obligations of manufacturers and distributors. The fees paid by manufacturers and distributors ensure the financing of DSD. The *Zeichennutzungsvertrag* grants the right to place the “green dot“ on packaging. The fees are generally calculated on the basis of the actual utilisation of DSD’s disposal services.
- The so-called *Leistungsverträge* (service contracts) or, as they are now also called, *Entsorgungsaufträge* (disposal mandates) regulate the collection, transport and sorting of sales packaging by disposal firms mandated by DSD.
- The recycling of the collected sales packaging is regulated by so-called *Garantieverträge* (guarantee agreements). In these agreements so-called guarantee companies undertake to properly recycle the material collected by DSD. These guarantee companies are usually waste disposal firms or groups, as well as companies that are linked to the manufacturing industries. In the meantime the guarantee agreements have lost significance because DSD partly allows for the self-marketing of the collected material by the collector itself or because DSD takes on the recycling of the material itself.

This contract system in conjunction with the corporate structure of DSD led to a bundling of demand for disposal services. Until the end of 2004 the DSD partners were large companies from trade and industry, companies which brought sales packaging into circulation and were under a take-back and recycling obligation. In the committees of DSD these partners agreed on essential issues such as licence fees. As a consequence the partners no longer demanded the relevant disposal services on the competitive market but cooperated with DSD instead.

Due to these structures, providers of alternative dual systems hardly had any possibility to offer their services on the market. In addition, even the disposal industry held an interest in DSD as a dormant partner. Since it is hardly possible or feasible to duplicate waste collection systems, alternative collectors were forced to use collection facilities provided for by DSD. DSD used its influence on the disposal firms to hamper as much as possible the commissioning of alternative dual systems and thus prevented even the market entry of such alternative suppliers.

1.3 *The Practice of the Bundeskartellamt and the European Commission with regard to DSD AG*

Despite competition concerns the Bundeskartellamt had at its own discretion tolerated DSD’s activities initially against the background that this system was created to put in practice the objectives set forth in Section 1 of the Packaging Ordinance.

However, over the course of time it became apparent that the system led to considerable competition restraints. The result was excessive licence fees which filling companies and the retail trade could pass on in full to the consumer. Possible cost reductions were not undertaken in the interests of the disposal firms. DSD’s competitors, i.e. rival dual systems or providers of self-management solutions, were considerably hindered from entering the market. In particular the last point prompted the European Commission to take

its decisions of 20 April 2001¹ and 17 September 2001², which aimed at improving market entry possibilities for alternative providers. Due to DSD's corporate structures such possibilities still remained extremely limited for these providers.

In 2001 the Bundeskartellamt initiated administrative fine proceedings against DSD and others on the suspicion of calling for a boycott against their competitors. However the competent court revoked the orders imposing the fines in this particular case because it did not consider the letters issued by DSD as a call for boycott but as a legitimate means of safeguarding its own business interests.

Against this background in 2002 the Bundeskartellamt informed DSD that it would discontinue its previous practice of toleration. DSD did not make use of the possibility to apply for exemption from the prohibition of cartels under Section 7 ARC.

As part of the 6th Amendment to the ARC the lawmaker had introduced a new exemption rule in Section 7 of the ARC which related i.a. expressly to cooperations for the purpose of meeting take-back and disposal obligations under the law on the protection of the environment. Accordingly, agreements and decisions which contributed to improving the taking back or disposal of goods, while allowing consumers a fair share of the resulting benefit, could be exempted from the prohibition of cartels provided the improvement could not be achieved otherwise by the participating undertakings and was of sufficient importance when compared with the restraint of competition connected with it, and the restraint of competition did not result in the creation or strengthening of a dominant position.³ The aim of this regulation was not least to bring a certain amount of transparency and legal certainty into the conflict between competition objectives and environmental protection objectives.

In order to prevent a prohibition decision under competition law DSD implemented extensive restructuring measures. The holdings of companies in the waste management sector were dissolved and seats on the supervisory boards abandoned. In December 2004 a financial investor took over DSD and its previous companies from the trade and industry represented in the company resigned as partners. This ended the cartel-like structure of DSD as illustrated above, making it possible to discontinue the prohibition proceedings against the company.

1.4 Recent Developments

It is expected that as a result of the dismantling of DSD's cartel-like corporate structure the competition situation will change and the market will open up. The Bundeskartellamt is aware of the fact that a change to the shareholder structure will alter the cartel-like character of the company but not automatically alter the dominant position which DSD still holds in the market for taking back used sales packaging. DSD thus remains subject to abuse control under competition law. The Bundeskartellamt can take action against the unfair hindrance of competitors. However the Bundeskartellamt assumes that with the change to the shareholder structure the structural conditions for more competition in this market will have considerably improved. For it is likely that the demand side will base their choice of disposal system first and foremost on purely economic aspects. The function of DSD's shareholders with their possibilities of taking influence and thus pursuing their own interests will no longer play a role in the future. This

¹ EC OJ L 166/1 of 21 June 2001.

² EC OJ L 319/1 of 4 December 2001.

³ With the 7th Amendment to the ARC and the adaptation of German to European law this exemption, which was modelled on Art. 81 (3) EC, has been abolished. The content of the previous section has now been relocated in Section 2 (1) ARC (new version).

should open up improved opportunities for competition for newcomers to the market, release additional cost-cutting potential for DSD and thus ultimately also benefit consumers.

The positive effects of competitive market behaviour which is not burdened by vested interests could already be witnessed from the new invitation to tender for service contracts put out by DSD. In order to meet the requirements of the non-discriminatory awarding of public contracts by a dominant company DSD has since 2003 carried out award procedures in close cooperation with the Bundeskartellamt. As a result, from 2005 the costs of collecting and sorting, in comparison to the charges paid up to 2003, could be reduced by approx. 200 million €, which corresponds to a reduction of more than 20 per cent.

These developments clearly show that the environmental requirements of the Packaging Ordinance can be harmonised with competition rules and can now be more efficiently fulfilled.

2. The dichotomy between competition and environmental protection – Example: The energy sector Emissions trading

With the implementation of the Kyoto Protocol⁴, the trading of emission rights for pollutants in the European Union began on 1 January 2005. The system for trading greenhouse gas emission certificates within the European Union was prepared for by a Commission Green Paper⁵. At European level its legal basis is Directive 2003/87/EC on a scheme for greenhouse gas emission allowance trading within the European Community⁶. In Germany this European Directive was implemented by the Law on greenhouse gas emissions trading ("*Gesetz über den Handel mit Berechtigungen zur Emission von Treibhausgasen (Treibhausgas-Emissionshandelsgesetz – TEHG)*") and the Law on the national allocation plan for greenhouse gas emission allowances in the allocation period 2005 – 2007 ("*Gesetz über den nationalen Zuteilungsplan für Treibhausgas-Emissionsberechtigungen in der Zuteilungsperiode 2005 bis 2007 (Zuteilungsgesetz 2007 – ZuG 2007)*").

The emissions trading system is to serve as an economic basis for reducing the emission of greenhouse gas by those companies which are in a position to achieve this aim at the lowest possible cost. The economic sectors and each production facility concerned have been set concrete targets for the reduction of pollutants; corresponding to these volumes emission allowances are granted free of charge. The crucial argument in favour of allocating emission allowances free of charge was that the burden of costs and competition distortions vis-à-vis competitors outside Europe were to be avoided in the interests of the German economy. Furthermore, the allocation of emission certificates is generally based on historical data or notified emissions.

As stipulated by the law the emission allowances are tradeable. If, due to effective measures taken to reduce its greenhouse gas emissions, a company's emission volume is lower than the volume originally allocated, the company may sell emission allowances it no longer requires on the market. If a company does not possess the number of emission allowances required for its greenhouse gas emissions, it has to purchase further allowances on the market. The companies concerned are required to return emission rights corresponding to their volume of greenhouse gas emissions of the previous year. If a company does not

⁴ The Kyoto Protocol has been in force since 16.2.2005: <http://unfccc.int/resource/docs/convkp/kpeng.pdf>.

⁵ Green Paper on greenhouse gas emissions trading within the European Union, COM (2000) 87 final of 8 March 2000; see Bundesrat publication 206/00 of 5 April 2000.

⁶ Cf. the following brochures issued by the European Commission: "Die EU im Einsatz gegen den Klimawandel"; http://europa.eu.int/comm/environment/climat/pdf/emission_trading3_de.pdf; und „Questions & Answers on Emissions Trading and National Allocation Plans“, <http://europa.eu.int/rapid/pressReleasesAction.do?reference=MEMO/05/84&format=HTML&aged=1&language=DE&guiLanguage=en>.

possess enough emission allowances to cover its emissions at this point, sanctions will be imposed, i.e. 40 Euros per tonne of carbon dioxide equivalent in the first trading period from 2005 to 2007. The obligation to provide the emission allowances required remains even after payment of this sum.

The Bundeskartellamt has received a number of complaints with regard to the introduction of emissions trading and its effect on electricity prices. According to the complainants the market leaders E.ON, RWE and other producers of electricity include the current stock market prices of allowances allocated to them in their electricity supply prices. The complainants basically accuse the suppliers of achieving “opportunity gains” by including these costs in their supply prices, thus generally inflating electricity prices. According to the complainants, the emission allowances allocated free of charge represent imputed costs which cannot be accounted for by any actual costs.

A WWF (World Wide Fund for Nature) survey conducted in this context⁷ has found that emissions trade has become a multi-billion business for the five major German electricity providers, to the detriment of the consumer. The allocation of emission allowances free of charge is providing E.ON, RWE, Vattenfall, EnBW and Steag with total annual windfall gains of between 3.8 and 8 billion Euros. According to WWF estimations the earnings of the electricity companies from this additional source of income could amount to 31 to 64 billion Euros by 2012, reaching a volume of four times the announced investments of 11.6 billion Euros.

The Bundeskartellamt is examining the complaints and is investigating in particular whether E.ON and RWE as dominant companies are abusing their dominant position on the electricity market for major customers.

⁷Available at <http://www.wwf.de/imperia/md/content/klima/14.pdf>.

JAPAN

1. Environmental problems and issues of competition policy

As environmental conservation and other related issues became increasingly important and active efforts concerning the environment were sought in terms of competition policy, in FY2002 the Japan Fair Trade Commission (JFTC) commissioned the Kansai Institute for Social and Economic Research to survey an interface between environmental problems and the issues of competition policy. This report, “Market Externality Problems Arising in Connection with the Environment and Competition Policy – Consideration of Framework for Theoretical and Empirical Research –” (released on May 27, 2003), shows the following basic ideas on means for environmental policy and market mechanism.

- Environmental destruction leads to various costs, including pollution. Appropriate environmental policies to internalise such market externality – namely where the various costs of environmental destruction are not reflected in the prices of products and services – in the market need to be implemented.
- Appropriate environmental policies can improve the effectiveness of the market mechanism and restore trust in the market through the correction of the market externality caused by environmental destruction. Furthermore such implementation promotes technological innovation and the development of related industries.
- There are many policy means for internalising the disadvantages of environmental destruction in the market, including regulations, taxes and subsidies, granting of property rights such as patents and emission credits, contracts between municipalities and companies, voluntary regulations by businesses or trade associations, compensation systems and so on. Therefore, it is necessary to select the most suitable policy means after comparing the costs and benefits of each policy means, for which it is effective to combine multiple policy means, including competition policy (policy mix).

Based on these views, this report suggests that the main issues of competition policy are as follows:

- strict enforcement of the Antimonopoly Act regarding the environment sector;
- clarification of the Antimonopoly Act’s idea on joint activities related to environmental problems;
- necessity of investigations and proposals for means of implementing environmental policy in terms of competition policy;
- necessity of actively enforcing the Act against Unjustifiable Premiums and Misleading Representations (Premiums and Representation Act), etc. with regard to environmental representation.

Item 2 describes how the JFTC handles each issue.

2. JFTC's handling of environmental problems, etc.

2.1 *Strict enforcement of the Antimonopoly Act regarding the environment sector*

The JFTC has actively dealt with anti-competitive conduct in the markets related to the environment, including hard-core cartels (bid-riggings, price/quantity cartels, etc.), private monopolies, and mergers that substantially restrain competition. In the environment field, the JFTC took legal measures in the cases described below:

2.1.1 *Bid-rigging case relating to the business of measuring and analysing dioxin (Case against Environmental Control Centre Co., Ltd. and ten other companies)*

Dioxin, which is produced when materials are burned, etc., is discharged from a waste incineration facility together with exhaust gases, fly ash, incinerated ash and discharged water. Waste incineration is estimated to account for 90% of dioxin emissions. For this reason, the Enforcement Order of the Waste Disposal and Public Cleansing Law and the Enforcement Regulation of the Waste Disposal and Public Cleansing Law, which went into effect on December 1, 1997, oblige municipalities, etc. to measure, at least once a year, the dioxin levels in exhaust gases released from incinerators having more than a prescribed disposal capacity. Municipalities, etc. managing and operating waste incineration facilities usually commission private companies to measure and analyse the dioxin level.

Each year since 1994, Chiba city has commissioned the measurement and analysis of dioxin through a designated competitive bidding system for each waste incineration facility in the city. However, the JFTC found that eleven such companies undertaking this work had colluded and decided a successful bidder in advance. The JFTC considered that this conduct violated the provision of Section 3 (Unreasonable Restraint of Trade) of the Antimonopoly Act and, on April 28, 1999, issued a recommendation to those companies (Decision issued on May 25, 1999).

2.1.2 *Bid-rigging case related to the construction of a waste incineration facility (Case against Hitachi Zosen Corporation and four other companies)*

A waste incineration facility incinerates waste and trash from general households and contains waste-supplying devices, ash removal equipment, exhaust-gas treatment equipment, etc., in addition to the combustion equipment at the heart of the incinerator. Most waste disposal facilities have stoker-fired equipment which supplies waste and trash over the stoker, or fire grate, for combustion.

The JFTC found that five companies manufacturing machines and equipment for waste incineration facilities using a stoker-fired furnace's combustion equipment conspired to determine which company could be expected to be a successful bidder. The JFTC considered that this conduct violated the provision of Section 3 (Unreasonable Restraint of Trade) of the Antimonopoly Act and, on August 13, 1999, issued a recommendation to those companies (Hearing procedure initiated on September 8, 1999; this case is ongoing).

2.1.3 *Bid-rigging case relating to the environmental measurement and analysis of water or soil (Case against Metocean Environment Inc. and 14 other companies)*

The JFTC found that 15 companies engaging in environmental measurement and analysis of water or soil, in connection with environmental measurement and analysis of water or soil ordered by Osaka prefecture through its civil engineering division under its designated competitive bidding system, had conspired to determine a successful bidder. The JFTC considered that this conduct violated the provision of Section 3 (Unreasonable Restraint of Trade) of the Antimonopoly Act and issued a recommendation to those companies on June 2, 2005 (Decision issued on June 23, 2005).

2.2 *Clarification of the approach to joint activities relating to environmental problems under the Antimonopoly Act*

2.2.1 *“Guidelines Concerning Joint Activities for Recycling under the Antimonopoly Act”*

To implement environmental policies, given that companies’ voluntary efforts and regulations are highly significant, the JFTC published, on June 26, 2001, “Guidelines Concerning Joint Activities for Recycling under the Antimonopoly Act¹.” These guidelines, which clarify the approach to entrepreneurs’ joint efforts for recycling under the Antimonopoly Act, are expected to promote smooth recycling by entrepreneurs without impeding competition and thereby to help build and promote a recycling-based society.

The development of recycling systems in joint operations by entrepreneurs is unlikely to be a problem under the Antimonopoly Act, provided that the ratio of the cost for recycling the product compared to the selling price is small. However, joint recycling could become a problem under the Antimonopoly Act in the following cases:

1. Cases where entrepreneurs jointly develop a recycling system which covers a broad scope, such as including the collection and transportation of waste and the process for recycling, as a result of which the prices of products sold by these entrepreneurs are likely to become a standardised figure according to the status of competition in the product market, thus affecting competition in the market.
2. Cases where, even though it is difficult to independently develop a recycling system for no rational reason such as by denying or restricting the use of a recycling system which entrepreneurs have jointly developed for entrepreneurs newly entering the market or specified existing entrepreneurs, entrepreneurs obstruct the entry of other entrepreneurs into the product market, or hinder the activities of existing entrepreneurs.
3. Cases in which, when the costs of joint recycling, etc. are added to the existing price of products sold by participating entrepreneurs, such entrepreneurs jointly decide on the amount added to the price.

2.2.2 *Prior consultation cases relating to joint activities concerning environmental problems*

The JFTC offers prior consultations for specific acts to be carried out by businesses, etc. related to the Antimonopoly Act. Consultations have been received by the JFTC regarding joint recycling efforts by businesses on the following:

- Prior consultation on the voluntary regulation of emission levels of dioxins (Collection of prior consultation examples as of FY1998)

The JFTC replied that, in a case in which a trade association of industrial waste disposal companies invites interested member companies and summarises the findings of their efforts to restrict the level of dioxin emissions discharged from their industrial waste disposal facilities to provide a summary of findings for their customers, this poses no problem under the Antimonopoly Act, but that if the trade association sets a standard fee for disposing of industrial waste, this constitutes an act of price restriction under the Antimonopoly Act.

¹ <http://www.jftc.go.jp/e-page/legislation/ama/recycle.pdf>

- Prior consultation on establishment and certification of voluntary standards for nitrogen oxide emission levels (Collection of prior consultation examples as of FY1999)

The JFTC replied that, although a case in which a trade association of companies manufacturing, selling, etc. water heaters, etc. in order to actively tackle environmental problems, establishes its own emission standards for nitrogen oxide emissions and gives guidance to its member companies poses no problem under the Antimonopoly Act, the trade association must be careful not to force its member companies to comply with such voluntary standards.

- Prior consultation about the establishment of a recycling centre and the raising of management money (Collection of prior consultation examples as of FY1999)

The JFTC's replied that in a case in which a trade association comprised of raw material producers, processing companies and molding equipment manufacturers of reinforced plastic establishes a recycling centre for recycling reinforced plastic to be scrapped in response to environmental problems and for implementing the recycling business, does not pose a problem under the Antimonopoly Act. However, if the association decides that a certain margin is added to the selling price of makers of raw materials of reinforced plastic, this constitutes an act of price restriction under the Antimonopoly Act.

- Setting by a trade association of a voluntary standard for the method of charging the recycling fee (Collection of prior consultation examples as of 2001)

The JFTC replied that a case in which, in order to facilitate the reuse of parts of used products in accordance with the provisions of the Law for the Promotion of Effective Utilization of Resources, a trade association of office equipment manufacturers, etc. sets a voluntary standard that its member companies should charge the taking-over fee separately in picking up used products and should inform users, etc. thereof, poses no problem under the Antimonopoly Act unless its member companies are forced to comply with such voluntary standards.

- Coalition to use a recycling system by a trade association (Collection of prior consultation examples as of FY2004)

The JFTC replied that while, with the implementation of the Law Concerning Recycling Measures of End-of-life Vehicles, automobile manufacturers' joint processing, recycling, etc. of chlorofluorocarbons, airbags and ASR (Automobile Shredder Residue) does not constitute a problem under the Antimonopoly Act, the manufacturers must take care not to set specific recycling fees, etc. that unreasonably exclude new entrants from the business of breaking down chlorofluorocarbons and recycling airbags, ASR, etc.

2.2.3 *Investigations and proposals on means of implementing environmental policies in terms of competition policy*

Under the Law Concerning the Promotion of the Measures to Cope with Global Warming, a framework was introduced, in which large emitters who emit more than certain level of greenhouse gases (GHGs) including CO₂ are mandated to calculate and report the sum of the amount of GHGs emissions, and central government is required to publicly announce it.

Specific method for calculating GHGs emissions is to be specified in the enforcement ordinance of the Law Concerning the Promotion of the Measures to Cope with Global Warming and relevant ministerial ordinances. Emission factor applied in calculating CO₂ emissions emitted through the use of electricity is considered to show the potential of CO₂ saving of electricity, and the factor is projected to be one of the competitive conditions among electric business operators. In this regard, after conducting necessary

adjustment, the JFTC and the Ministry of the Environment authorise the user to use emission factor if the user comprehends actual emission factor of electricity it consumes. Emission factor, stipulated under ministerial ordinance and is used when actual emission factor is not known, shall be uniform regardless of types of electric business operators. Minister of the Environment and Minister of Economy, Trade and Industry are required to collect the information on emission factor of each electric business operators, to review the information, and to release it if the emission factor is below the levels of the emission factor stipulated in the ministerial ordinance.

2.2.4 *Necessity of active administration of the Premiums and Representations Act, etc. with regard to environmental representations*

To correct any asymmetry of information on the environment, the regulation of false representations, etc. which prevent consumers, etc. from selecting appropriate goods in connection with the environment is of great significance. The JFTC has sought to administer the Premiums and Representations Act while conducting surveys of problems concerning environmental representation.

“Surveys of Situation of Advertised Representations of Green Goods”

Environmental problems are attracting a great amount of attention in today’s society, and therefore the JFTC surveyed the situation of advertised representations that suggested environmental conservation. It organised its views, etc. on advertised representations under the Premiums and Representations Act and summarised its future efforts by publishing, on March 21, 2001, “Surveys of Situation of Advertised Representations of Green Goods.” The contents of this report are outlined below.

- Contents of advertised representations and consumers’ evaluation

The JFTC asked its consumer monitors (1000 people) to collect advertised representations concerning environment conservation on the packages, labels, containers, etc. of familiar goods in daily life. Most of the goods collected were soaps and detergents, sponges, garbage bags for draining, food cling-wrap, etc. Among these items, common advertised representations that indicated consideration for environmental conservation were: 1) the item was produced with recycled components or materials; 2) the item itself is recyclable after use; 3) the item is non-polluting on disposal such as when burned; 4) the item curbs the generation of garbage such as by being refillable and having simple packaging; and 5) the use of marks, etc. certified by an independent organisation. An awareness survey of the consumer monitors revealed that 96.9% of them were interested in green goods and when selecting goods, they consider whether the item is eco-friendly.

- Points of concern about advertised representations of green goods

The JFTC, looking at the advertised representations of eco-goods, found problems common to all conditions and expressed its concerns as follows:

1. Making the coverage indicated by a representation clear

With regard to whether the description of an advertised representation relating to the effect of environment conservation concerns a part of the item such as packaging or the entire item, it is necessary to make a clear representation without causing consumers’ misinterpretation.

2. Emphasis of clear indication on the proportion of raw material, etc. used

To indicate clearly that a raw material or eco-material is used in an item, it is necessary to clearly specify the proportion used such as “Made with 60% recycled paper,” etc.

3. Need for supporting indication with demonstration data, etc.

To indicate clearly in an advertisement that the constituents of an item help preserve the environment, the basis for suggesting such an effect when using the item under normal conditions must be shown, such as with demonstration data.

4. Non-use of vague or abstract representation alone

To use “eco-friendly” and other vague representations, the basis for claiming environmental conservation should be compiled.

5. Concerns about eco-marks

With regard to marks which suggest that the item considers environmental conservation, if an independent organisation certifies its mark, the organisation is required to make the mark clearly express the basis for certification. Entrepreneurs should include an explanation close to the mark that shows the basis for this certification.

- JFTC’s response

The JFTC strictly deals with misleading representations which emphasise consideration for environmental conservation that may cause misinterpretation among general consumers. In addition, the JFTC expects entrepreneurs to set voluntary standards as an effective means, and supports the Fair Trade Council’s efforts to promote environmental conservation issues in the Fair Competition Codes. The JFTC also has requested the Japan Environment Association to review the product types for which certification standards have not been reviewed and to make clear and specific indications for such products according to the effect of such products on environmental conservation, and it has requested entrepreneurs to thoroughly indicate proper eco-marks.

Cases relating to environmental representation

Warnings to five companies selling cooking oil disposers flushed into drains after being mixed with used cooking oil

With regard to representations made by five companies selling cooking oil disposers flushed into drains after being mixed with used cooking oil, suggesting that the products will minimise the adverse effects of cooking oil on the environment, the JFTC found that the environmental impact is not reduced because of water contamination caused by organic matter, thereby causing a misunderstanding among general consumers. Therefore, the JFTC issued warnings on April 21, 2004, to the five companies that they may be violating Section 4 (Prohibition of Misleading Representations) of the Premiums and Representations Act.

KOREA

1. Introduction

2. Environmental policies pursue “environmental protection.” To achieve this goal, government agencies sometimes directly intervene in the market or utilise policies advantageous to environmentally-friendly companies. Therefore, conflicts between environmental policies and competition policies are natural as the latter pursue fair and free competition in the market.

3. This report will explore the following issues:

- (i) What conflicts are generated between the two sides due to the discrepancy in their goals and how to reconcile such conflicts?
- (ii) In what channels can environmental regulations affect competition in the environment industry? (Especially, entry barriers will be looked at in detail.)
- (iii) Reviews on competition issues raised by instrument to implement environment policies.
- (iv) Major cases where the KFTC enforced competition policies in the environment sector.

2. Conflict & Balance between Environment Policies & Competition Policies

2.1 *Goals of Environment Policies & Competition Policies stated in Relevant Laws*

According to Article 1 of the Framework Act on Environmental Policy, environmental laws & policies are aimed at preventing environmental pollution & degradation and maintaining and protecting the environment in a sustainable manner to help people lead a healthy and pleasant life.

Meanwhile, under the Article 1 of the Monopoly Regulation and Fair Trade Act (MRFTA), competition policies are aimed at facilitating free and fair competition to protect consumers, to promote creativity in business activities and ultimately to achieve a balanced development of the national economy.

2.2 *Conflicts arising from Discrepancy between the Two Policies*

Environment policies sometimes allow the government to directly intervene in the market to correct market failure and to protect the environment and also provide companies with economic incentives to induce them to align their behaviours with the goal of environment policies. To this end, eco-friendly companies are given positive incentives, while those that do damage to the environment are given negative incentives.

From the perspectives of competition policies, environmental regulations can erect entry barriers. Moreover, developing & implementing environmental policies advantageous to environmentally-friendly companies will have direct or indirect influences on competition in the relevant market.

When limiting competition is inevitable to achieve the public interest of sustainable development of the environment, environmental policies would be sometimes allowed to limit competition. However, even in this case, these policies should not restrict the minimum amount of competition necessary for the

market, and among various policy measures, those that have the least impact on competition should be chosen.

2.3 Mechanisms for Conflict Resolution in Korea

In Korea, conflicts between the environment policies and competition policies are resolved through inter-government agency talks, the cabinet meeting, regulation reviews by Regulatory Reform Committee and so on.

Consultation on Laws & Regulations between the KFTC and the Ministry of Environment

Article 63 of the MRFTA stipulates that government agencies should confer with the KFTC prior to enactment of or revision to any potentially anti-competitive laws & regulations. When a government agency either enact or revise laws & regulations without prior consultation with the KFTC, the KFTC can provide its opinion that the agency should eliminate anti-competitive factors in the concerned laws or regulations. Pursuant to the article, the Ministry of Environment and the KFTC have consulted and resolved their differences.

For example, when the Ministry of Environment enacted the Act on the Purchase of the Promotion of Environmentally Friendly Products” in 2004, it tried to incorporate a provision that obligates public agencies to purchase eco-friendly products in procurement. However, the KFTC judged the provision to be limiting consumer options and have the potentials to undermine competition in the market. So, the Commission suggested to the Ministry that, in principle, the provision should be either deleted or, if the provision was really indispensable to the Act, citing the provision should be limited to the minimum extent that efficiency in the market would not be undermined. Since then, the Ministry and the KFTC had consultation meetings on several occasions to reach a final agreement that, while the provision would be incorporated in the Act, to prevent side effects from forcing public agencies to purchase eco-friendly products only, some exceptions would be allowed to release government agencies from the purchase obligation.

Regulation Impact Analysis & Regulation Reviews by Regulatory Reform Committee

When enacting or strengthening laws & regulations, a government agency is required to conduct impact analysis of such laws & regulations on its own followed by the agency’s internal reviews. After this, the results of the analysis will be subject to Regulatory Reform Committee’s reviews. As “anti-competitive factor” is included among the items to be considered in the impact analysis, environmental regulations will be also considered in this respect. Furthermore, the chairman of the KFTC, as ex officio member of the Regulatory Reform Committee, reviews regulations for their potentials to restrict competition. When an environmental regulation is judged to have the potentials to severely undermine competition, adjustments can be made to the regulation.

Vice Ministers’ Meeting & Cabinet Meeting

4. The Vice ministers’ meeting and the cabinet meeting are one of the mechanisms through which conflicts between the environment policies and the competition policies are resolved.

3. Environmental Regulations & Entry Barriers

Environmental regulations that set ceiling on pollutant emissions or that mandate businesses to install pollution reduction equipment can raise entry barriers in the relevant industry. The higher the cost necessary to cut down pollutant emissions, the higher the average production cost. As the fixed cost necessary to install pollution-reduction equipment increases, the industry’s minimum efficient scale also

increases. As a result, entry barriers in the industry will get higher than they were when such regulations didn't exist. When environment authorities have the right to issue authorisations in specific industries, such authorisations form entry barriers directly.

3.1 Cases in Korea

As part of the Ministry of Environment's water-saving drive, to create so-called "Investment Service to Promote Water Saving Facility¹," the Ministry wanted to insert the following provision in *the Enforcement Decree of the Water Supply and Waterworks Installation Act*: "The minister of the Ministry of Environment can designate companies that are allowed to make investment on behalf of building owners in activities to install or improve their water saving facilities such as installing wastewater reclamation & recycling system or replacing old pipes."

However, the KFTC was concerned that the designation could possibly hamper latecomers' entry into the business. So, the KFTC asked the Ministry not to insert the provision, arguing that, if what the provision wanted to achieve is to encourage businesses to install water saving facilities, then it would be more desirable to create an environment where companies could freely enter the market and compete with one another. In the end, the Ministry accepted the opinion and give up the idea of creating the provision.

4. Impact of Waste Management & Recycling Policies on Competition

4.1 Regulations on Use of Disposable Products

When a regulation is in place to discourage use of disposable products with a view to reducing waste generation, it can affect competition between disposable products and non-disposable products. For example, if restaurants become subject to penalty for using disposable paper cups, they will replace paper cups with non-disposable plastic ones. This will dramatically decrease the demand for paper cups. Though there could be controversies surrounding market definition – that is, whether to define only the disposable paper cup market as the relevant market or to use the entire cup market including both disposable and non-disposable cup markets as the relevant market – the regulation will do have influence on competition in the relevant market.

4.2 Policies on Reducing Packaging Waste

When a regulation restraining use of hard-to-recycle packaging materials is enforced to reduce environmental degradation, this could impact the competition between recyclable packaging materials and non-recyclable ones.

For instance, if the Ministry of Environment sets a certain quota every year for companies to replace pollution-causing packaging materials made from synthetic resins with environmentally-friendly ones, the demand for alternative packaging materials will go up and this will affect competition in the packaging material market.

¹ Due to budget constraints, many building owners have difficulties in installing water saving facilities such as water saving equipment and wastewater reclamation & recycling system to cut down their large water consumption. However, under the new system, the designated companies will be allowed to make investment in their clients' water saving facilities and recoup their investment and profits from savings in water rate and other operation costs.

5. Competition Issues by Instrument to enforce Environment Policies

5.1 *Extended Producers Responsibility (Take-back of used products)*

Extended Producers Responsibility in Korea

Extended Producers Responsibility obligates producers to recycle more than a certain amount of recyclable waste. If they fail to fulfil the obligation, they are charged with a penalty equivalent to or more than the actual cost required for recycling.

In Korea, the system has gone into effect since 1st Jan 2003, and as of May 2006, 25 items are subject to the system. Every year, producers of these items have to collect and recycle more than their recycle quota².

Producers can (i) set up and operate their own recycling factories, (ii) commission recycling to recycling companies or (iii) pay charges to a “recycling business mutual aid association” to commission the recycling work to the association.

Recycling business mutual aid associations are set up by producers to fulfil their recycling obligation. They can save producers a lot of time and energy since producers don't need to collect & recycle waste on their own or to sign individual contracts with recycling companies every time. By commissioning recycling work to the association, producers will be able to fulfil their recycling obligations more easily.

Competition Issues raised by Recycling Business Mutual Aid Associations

However, from the perspectives of competition laws, there exist concerns that recycling business mutual aid associations could be used to restrain competition in the relevant market. For instance, let's assume a hypothetical situation where we have product A that requires producers a lot of costs in collecting and recycling. To make things worse, there is no suitable recycling company to which the producers can commission the collection & recycling work. Recycling business mutual aid association B is the only instrument by which producers can fulfil their recycling duty. In this situation, the association raises the two competition issues in the following:

- i. The association can limit new entries into the product A market. If the association, a business association of incumbents, increases the membership fee for joining the association or toughens requirements for membership, this will block latecomers' joining of the group, thereby possibly frustrating their attempts to enter the product A market.
- ii. When membership of the association is indispensable for a company to do business in the market, the association is essential facility. If the association meets the requirements to be an essential facility as stipulated in competition laws, the association's unjustified hampering of latecomers' joining could be regulated as abuse of market dominance involving denial of access to essential facility.

² For example, let's assume that a brewery company has put a thousand bottles of beer on the market and that the recycling quota for the company is 80%. It managed to collect just six hundred empty bottles. As the company collected just 60%, it has to pay up to 115~130 % of all costs required to collect and recycle the rest 20% (two hundred bottles).

Status of Recycling Business Mutual Aid Associations in Korea

There are 11 recycling business mutual aid associations in Korea. Most companies subject to Extended Producers Responsibility have chosen to pay charges to recycling business mutual aid associations to commission the recycling work to them. Out of the total mandatory recycling quota of 1.087 million tons for 2004, 93 % (1.013 tons) was the mandatory recycling quota for producers that were members of mutual aid associations.

There has been no competition law violation detected involving recycling business mutual aid associations. This is probably because, first, just two years have passed since the enactment of Extended Producers Responsibility and, second, as products collected and processed by the association fall under multiple categories of product markets at the same time, therefore, it is hardly likely for such an association to serve as a body for a specific industry only. However, if more and more items become subject to Extended Producers Responsibility and recycling business mutual aid associations become more and more segmented, competition law violations involving these associations could possibly increase in volume. For this reason, competition authorities need to pay close attention to this sector.

5.2 Environmental Labelling

Environmental labelling refers to attaching logos or indications on the surface of products to deliver information to consumers on the environmental characteristics of goods & services. This system is designed, on the one hand, to provide consumers with information on the environmental characteristics of labelled products to encourage consumers to adopt environmentally-friendly purchase patterns and, on the other hand, to encourage producers to develop and produce eco-friendly products. All these will work together to protect the environment.

5. ISO categorises environmental labelling into the following three types:

1. Type I: Environmental labels and declarations. Certification is issued by a third party to products that are judged to generate less pollution or save more energy than others in the same usage categories throughout the entire lifecycle starting from manufacturing and distribution to application and disposal.
2. Type II: Self-declared environmental labels and declarations. Producers argue their products' eco-friendliness through advertisement, logos, instructions, etc.
3. Type III: Environmental performance evaluation. Products' quantitative life cycle environmental inventory and impact assessments are developed and communicated through number and graphs.

Type I: Eco-labelling & Competition issues

Eco-labelling was adopted in Korea in 1992 and as of Apr 2006, 790 companies in 107 product categories are employing eco-labels for 3,176 products. Though the number of companies that adopt this system is increasing every year, still, consumers' awareness of the system is not sufficient. However, as consumers are having more and more interest in environmental protection and eco-friendly products are enjoying huge popularity thanks to the so called "well-being boom," eco-labels will have more and more influence on consumers' purchase decisions.

If an eco-label greatly affects consumer choice and products' price elasticity is not so big, the price discrimination is feasible by increasing the price of products that have an eco-label, while decreasing the price of those without one.

Type II: Self-declared environmental labels and declarations and Competition Issues

Type II can be used as a useful marketing tool for companies. Companies can attract consumers who are deeply interested environmental protection by indicating or advertising eco-friendliness on the surface of their products. Here, competition issues can arise when companies place false or exaggerating advertisement to unduly lure customers away from their competitors.

When the KFTC is concerned that fair competition can be distorted by false or exaggerating advertisement, the commission can issue remedies such as corrective measures or surcharges. Especially, there is a guideline on detailed standards for environment-related indications & advertisements. The guideline sets out general rules that environment-related indications & advertisements should follow. It also contains rules on using specific terms or expressions in environment-related indications & advertisements.

6. *Competition Law Enforcement in the Environment Sector*

In the environment sector, competition laws have been enforced mostly in cartel cases, and most of these cases involved waste-processing companies. In these cases, business associations formed by waste-processing companies either led cartels or unintentionally provided the starting point for cartels. In the environment sector, companies often form business associations to collectively respond to environmental standards & regulations and these associations usually have huge influence. Therefore, competition authorities should keep this point in mind when enforcing competition laws in the environment sector.

6. From now on, we are going to take a look at some cases on competition law enforcement in the environment sector.

6.1 *Collusions by four companies in the business of ocean disposal of waste in Incheon*

Executives of four companies in the business of ocean disposal of waste in Incheon agreed on jointly increasing waste processing price and also on evenly sharing the bids for 32 projects for ocean disposal of sludge by public agencies in the metropolitan area. These agreements were actually put into practice. The KFTC recognised them as anti-competitive cartels and issued a surcharge of 1.9 billion Won.

6.2 *Collusion by fourteen companies in the business of Infectious waste disposal*

Infectious waste refers to sanitary tissues, synthetic resins, human tissues and others coming from medical facilities and test institutions. Across the country, there are fifteen companies in the business of infectious waste disposal and among them, fourteen agreed on increasing their service fees identically. They applied the new price to the contracts they signed with hospitals. The price agreement was made on the Board of Directors of KIWAA (Korea Infectious Waste Treatment Neutral Aid Association) that the fourteen companies belonged to as members. The KFTC imposed a total of 12.29 million Won in surcharge on the cartel participants.

6.3 *Restriction of competition by the association of construction waste processing companies*

The business association set up by construction waste processing companies in Jeonbuk drew up a price table for waste processing services, distributed the table to its members and forced them to follow the table when signing contracts. Its members signed contracts with constructing companies according to the table and this had the effect of maintaining the processing charges at the same level in the region. In response to this, the KFTC ordered the association to destroy the price table immediately and to publicly announce the fact that it received such corrective measure from the KFTC.

NORWAY

1. Background

As the Norwegian Competition Authority (NCA) has carried out an extensive study on environmental regulation and competition issues within recycling, we would like to focus on these issues in our contribution to the roundtable on environmental regulation and competition.

Since the early 1990s, Norway's environmental authorities have implemented a pro-active policy aimed at reducing the volume of waste, based on the polluter pay principle. The pragmatic solutions adopted entail industry-organised collection, in which responsibility for handling industry waste rests with the producer (so-called extended producer responsibility).

Producers and importers have typically established joint ventures – so-called recycling companies – to undertake waste collection and recycling. The various wastes may have some positive value and be sold; or they more often carry negative value, in which case the recycling companies must pay for further processing. The recycling companies finance their operations by levying so-called “*environmental fees*” on their members as payment for the services of the joint ventures. Recycling companies' members recover their payments via the price of the products they sell. These waste management systems represent significant sums: the recycling companies studied by the NCA in 2001 had aggregate annual revenues of more than NOK 1 milliard.

Such agreements on extended producer responsibility have been entered into between Norway's Ministry of the Environment and organisations representing producers and importers in various industries. Systems set up pursuant to extended producer responsibility have been introduced for the following industries: packaging (including corrugated cardboard, cartons, glass, metal, beverage cartons, plastic packaging, one-way beverage containers (cans and one-way PET bottles), lubricants/recovered oil, electric, electromechanical, and electronic goods (separate systems for so-called white goods, grey goods, and brown goods), equipment with CFC refrigerants, batteries, automobiles, tires, and PCB-embedded windows. Gradually, regulations have been issued pursuant to law governing producer responsibility for most areas, whereas the specific recycling goals are set forth in industry agreements.

As a rule, the various waste management systems investigated by the Norwegian Competition Authority have been established as a single collection system, and thus as a single recycling company for each industry or product group. Industry participants, or, alternatively, industry organisations, own and operate the recycling company.

2. Restricted competition in the waste markets

By establishing recycling-companies as monopolies waste collection, sorting and recycling do not benefit from the potential efficiencies of competition. Monopolies generally result in higher costs and higher prices (i.e. higher “*environmental fees*”) than what would be the case in competitive markets. If the compensation payable by members of the recycling system is too high, a consequence may be that fewer participants join the system, which fosters free-riding problems. This problem arises because the government stipulates certain threshold for the return rate of waste in the various industries, and the free-riders may leave it to the recycling companies to achieve the thresholds.

The recycling companies are non-profit companies (thus achieving tax exemption). Accordingly, the “environmental fee” should merely reflect the costs of the recycling system. For many products, the fee constitutes such a small price component that consumers disregard it when making a purchase. Market participants that are able to recover any loss through higher fees, will have no incentive to minimise their costs and optimise operational efficiency. The companies are non-profit organisations, meaning that instead of monopoly profits we may see excessive investments leading to higher costs than necessary. For example, the plastics recycling company has included in its statutes that any profit is to be invested in “developing the company and furthering its purpose.” Another example is that of the tire recycling company, which uses profits to “improve services.” There are also examples of recycling companies that operate extensive activities beyond their core business activities. For example, the cardboard recycling company has used its surplus to acquire 49 percent of Hippopotamus, a company that sells office supplies made from recycled paper.

Although, generally, there are no formal barriers to entry for competing recycling companies, potential new competitors find it difficult to enter. In some instances, the authorities have granted first mover advantages in the form of direct economic support or other services, which later competitors do not enjoy. Further, the requirement that recycling systems be nationwide increases entry costs. Typically, recycling systems must reach a certain size to be competitive due to economies of collection. Although projections may indicate that the market may be large enough to accommodate two equal-sized systems, it will be difficult for a new market participant to win customers if most turnover in the market is already linked to an existing recycling system. The agreement between the Ministry of Environment and an industry to establish a recycling system also tends to favour the industry-initiated recycling system.

Further, an existing market participant may employ various strategies to prevent potential competitors from entering. For example, the monopolist may build excess capacity so as to convince potential newcomers that any attempt at market entry will be countered by aggressive pricing. The NCA is currently investigating a complaint against one of the few recycling systems that faces some competition, where it is alleged that a 75 % reduction in “fees” by the industry-owned dominant company constitutes predatory pricing.

Most recycling companies have very few employees, and do not perform collection or recycling activities themselves. Their task is to enter into contracts with waste management subcontractors on behalf of an entire industry. A major market participant, such as a recycling company, will thus be able to exercise buyer power against suppliers of collection, sorting, and recycling services. This situation entails a sub-optimal market solution, as a dominant purchaser squeezes prices by curtailing their demand. This may cause higher concentration on the supply side as well. The tire recycling company, for example, has chosen to sign a contract for seven years with only one nationwide contractor. The NCA has pointed out that it might be an advantage to contract with multiple suppliers, and/or to operate with shorter contract periods.

Although in most cases, recycling companies must pay for an environmentally sound treatment of waste, it is sometimes possible to convert waste into products that can be sold at a profit; for example, as raw material for manufacturing. Reuse of brown paper, aluminum cans, and lead-acid batteries is common. Should a recycling company constitute a major seller, it may also be able to exercise abusive market power against purchasers of recycled materials. Dominant producers of products employing new materials may also benefit from controlling access to recycled material, which could be used as substitutes and, thus, represent a competitive threat. Such market examples are discarded tires, waste oil reprocessed into heating oil, and recycled HCFC refrigeration gases, all of which can compete on a par with imports from major manufacturers and petrochemical firms.

3. Restricted competition in the product markets

The fact that recycling companies have been established and are operated as joint ventures among competitors, may restrict competition in the product markets as well. The arena for cooperation and exchange of information established via recycling companies can undermine competition and thereby harm consumer welfare.

Recycling company owners are generally also that company's customers. Thus, they should be concerned with keeping the costs of collection and recycling as low as possible, so that the price they pay (the "environmental fee") is kept to a minimum.

If demand for the products in question is relatively insensitive to price fluctuations, the potential is great for passing on the entire fee to consumers. An industry-wide agreement stipulating such conduct may easily be attained, as the market participants also are recycling company participants. Several recycling companies have had more or less explicit agreements with their members to identify the "environmental fee" on a separate line on invoices.

Such a practice is particularly attractive if it is possible, directly or indirectly, to transfer the recycling-company's surplus to its owners. The NCA has seen examples of recycling companies retroactively returning earnings to their owners (typically when there is no longer a need to further build up the company's financial credits), despite the company's policy not to pay dividends. For example, three such instances have been identified with respect to the company recycling batteries. Payment of funds to members according to their paid-in amounts functions as a "rebate" on services provided. If the entire, original cost of the environmental service has been passed on to consumers, then consumers are experiencing a price increase that *exceeds* the costs of the recycling plan. Alternatively, a recycling company can indirectly transfer its earnings to its owners by assuming tasks that members would otherwise have to perform, such as lobbying or joint marketing of an industry's environmental profile.

At the outset of the NCA's investigation several recycling companies had built up considerable funds without a clear reasoning as to why this was necessary. The NCA has recommended limiting the financial reserves to avoid conflict with competition rules.

In general, organising industry-wide recycling companies will facilitate exchanges of information that harm competition, as well as facilitating joint understanding among participants in product markets. Recycling companies may have access to information about production and import volumes and other types of data on members' business activities. Thus, the conditions are in place for participants to coordinate their market conduct, for example by agreeing to maintain product prices above a certain level. Such cooperation is more likely to be effective and stable if participants have access to information on each others' market shares and similar data; so that they are able to verify that the agreed-upon price level is maintained. Several of the markets discussed in the report have oligopolistic features. Many of the products are relatively homogenous, which strengthens the incentives for coordination of market conduct because the alternative may be fierce competition on prices and thus, low profitability. The investigation by the NCA showed a relatively high awareness with respect to avoiding exchange of concrete market information among the participants.

Product market participants do not compete solely on price; they may also compete as to "environmental friendliness". The environmental impact of products and packaging is a matter of concern to consumers — and they are willing to pay a premium to lessen that impact. Thus market participants could compete by offering the most environmentally friendly technologies, using the most environmentally sound material and demonstrating that their products are part of an efficient system for collection and recycling. Projecting a pro-environment profile may be an important aspect of competition, and a featured

aspect of product marketing. An industry-wide recycling company will only conduct *joint* marketing efforts, and there will be no competition in this area.

To encourage producers to develop new and more environmentally sound products and packaging, which are less costly and easier to recycle, there must be a system in place that rewards such efforts. If an independent organisation operates a recycling company, the latter is likely to differentiate prices based on the costs of collecting and recycling various materials. Recycling companies owned by an industry, on the other hand, will typically find it difficult to set anything but a reasonable and non-discriminatory fee for all products. This inflexibility manifests itself even when a recycling company's co-owners use different technologies or materials in their production.

Comprehensive cooperation in an industry will also make it more difficult for new participants to enter the market and establish parallel import or production. Often participation in a recycling system is mandatory for producers and importers. In such cases, access to participation in existing recycling systems on the same terms and conditions that apply to established competitors, is vital for market entry. The recycling companies investigated by the NCA are formally open to all, including those that do not participate in industry associations, and are not recycling company shareholders. However, it is conceivable that newly established companies seeking to join a system might be met with terms and conditions poorer than those of established members. There seems to be no significant external monitoring as to whether all participants in a recycling system are treated equally, particularly in areas such as access to and level of services provided. In the NCA investigation, examples of potential abusive conduct were identified with respect to the joint collecting system set up by the different packaging recycling companies. The NCA is currently investigating a complaint against the tariff structure in a (not government-induced) recycling system for reusable PET bottles, allegedly favouring the dominant producers that are also the owners.

4. An alternative approach

The arguments put forward *in favour* of industry-wide, industry-owned recycling companies typically include economies of scale, operational efficiency, and avoidance of non-participating products free-riding on the recycling system. In many instances, there are better ways in which environmental authorities could reach their objectives. In fact, several recycling systems failed to fulfil the goals set by public authorities. One key reason appears to be insufficient incentives, including an absence of sanctions if goals are not achieved. Interestingly, the achievements of the companies with respect to fulfilling recycling goals improved during the period NCA carried out its investigation.

Through their regulation of recycling systems, public authorities are responsible for facilitating that waste management takes place through efficient utilisation of society's resources. First and foremost, public authorities must specify target collection/return rates for various environmentally harmful materials. The rates should be based on the cost of recycling the various types of waste, relative to the environmental gain. The optimised return rates can be modified over time, as technologies, production methods, and materials are improved. In most instances, public authorities' regulation of waste markets has not been based on identifying optimal return rates. Generally, requirements for recycling are based on the decisions of politically appointed authorities or requirements pursuant to EU regulations.

By facilitating each industry's organisation of its own recycling company, public authorities may preclude solutions that exploit potential joint operations for collection and recycling. Consumers and retailers must relate to an unnecessary number of recycling systems, while artificial and inappropriate market divisions are fostered. This is certainly the case for multi-faceted and complex products that typically contain a number of different components and several environmentally harmful materials. Coordination with various other recycling companies may yield efficiency gains. There is reason to believe

that industry-independent collection and recycling providers would show greater imagination as to efficient solutions of this type. Splitting the waste-management value chain and differentiating the various recycling sub-markets can resolve the problems of today's waste recycling systems.

The "environmental" fee determined by recycling companies is meant to cover the costs of recycling. Market participants are insulated from the costs arising from the proportion of waste that is *not* being properly treated, but rather ends up as deposits or releases to the natural environment. Thus, the fee does not contribute to efficient fulfilment of environmental objectives. Ideally, environmental authorities should consider replacing the current system by introducing an environmental *tax* on environmentally harmful products. An environmental tax should reflect the damage wrought on the environment unless the products or materials are recycled or otherwise properly processed after being discarded. Such an environmental tax can be viewed as pre-payment of the "right to pollute." If discarded products are treated properly, public authorities may refund a portion of the tax.

A problem that remains to be solved is that producers or importers of products do not control their items or materials once they are discarded. On the consumption side, consumers lack financial incentives to return waste.

An environmental tax, which is reimbursed to those who are able to prove that they have processed the waste in question according to applicable rules and regulations, will make it attractive to compete on purchasing discarded products. Each end processor has the option of collecting discarded products or purchasing them from collectors. In turn, collectors will purchase discarded products from consumers by offering payment or other services. Incentives can be refundable deposits or environmental certificates. If consumers are offered the refunding of a deposit, they will choose to deliver their waste to the highest paying market participant. Typically, this participant will be the most efficient one.

Taxes that are payable at the introduction of a product to the market, would also eliminate the problem of non-participating producers getting a free ride. The amount recyclers are willing to pay to get hold of waste, will, as a point of departure, correspond to the size of the refund *minus* a requirement for return on equity and recycling costs. Consumers, on the other hand, will want to offer collectors their discarded products if they receive a suitable price. In other words, natural market mechanisms should ensure that collection and final processing will take place as long as the cost of these actions is lower than the environmental tax, which, as a starting point, reflects the environmental cost of the products in question. Public authorities will achieve their environmental goals as long as the tax is correctly determined. A rate of product returns that is too low may be countered through higher taxes or an increase in the refunded amount.

The idea of a refundable environmental tax is, for practical purposes, a deposit that follows each product throughout its lifecycle, and thus generates a value chain for discarded products, from consumers to final processor. Over time, those market participants that offer the most efficient solutions will attract the most waste and process it at the lowest costs. The market will give rise to appropriate ways of resolving problems. For some products, using stores as collection points is natural, as is the case for today's system for collecting beverage containers, whereas for other products it may be better if market participants collect discarded products at user or owner locations.

One key challenge is to offer producers incentives to develop more environmentally friendly products. The introduction of taxes will initially offer producers and importers incentives to develop and use products and raw materials that carry lower or no environmental taxes. Over time, however, the proposed system will also provide incentives to develop products with lower collection and recycling costs. If product A is more easily recycled than product B, and both cost the same to produce, then product A will

be more valuable than B when it is discarded; thus, the net value of product A is higher than that of product B.

A key advantage of a system as sketched above is that it establishes a distance between producers/importers and the waste-market participants that collect and provide final processing. The product market and waste markets are thus disconnected. This separation will make it significantly harder to abuse a recycling system to engage in price-fixing among market participants and other anti-competitive behaviour.

5. Implications for competition policy

The main implication for competition policy based on our experience in investigating the recycling companies, is the need for cooperation between environmental and competition authorities. It is difficult to enforce competition rules on cooperative arrangements that have been induced and promoted by another part of the government. An important outcome of the process is that there is now a clearer understanding that recycling companies have to adhere to competition rules, both within environmental authorities and among the companies.

The idea of a radical, new approach, as sketched above, did not receive a great deal of enthusiasm by environmental authorities. Problems in estimating harm to the environment for all the different products, and administrative costs in a refundable tax system were pointed out as main problems. The advantage of a strategy based on “voluntary” agreements among the government and industry 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.

However, a certain influence on policy may be hoped for. Though it is difficult to estimate exactly the harm to the environment of waste products, there are in fact goals for recycling that imply a certain degree of harm. The Pollution Control Authority has declared that if new recycling systems are to be established in the future, priority will be given products that have potential to cause serious environmental harm. More generally, the Government in its report on the environment to the parliament in 2005, declared as its intention to consider how a greater degree of competition can be introduced within this area.

ANNEX 1.

COMPETITION CONCERNS RELATED TO RECYCLING IN NORWAY

Foreword

An important facet of the Norwegian Competition Authority's work is to monitor various markets and propose measures to improve competition.

In 2002, the Authority appointed a project group to scrutinize markets associated with waste, waste treatment, and recycling. The following Competition Authority advisors participated in the project group: Christian Wold Eide, Espen Sjøvoll, Gro Holst Volden, and Marie Wiersholm.

The project group findings were presented in a report exceeding 100 pages, in July 2004. The report was printed and released in September 2004.

As the report has attracted some degree of international interest, the Norwegian Competition Authority has publishing this abbreviated version for English-speaking readers. The report's introductory summary has been translated in its entirety, while the remaining chapters have been summarized and compiled for the English-language edition.

Oslo, April 2005.

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Report summary

- Today's policy for waste collection and recycling - which to a great extent is based on cooperation among competitors - raises concerns regarding competition. Insufficient competition makes the recycling systems expensive, both for society at large and consumers.
- Many companies that conduct waste collection and recycling - so-called recycling companies - currently enjoy positions of market dominance. The consequences of this are inadequate incentives to reduce costs, and a risk that recycling companies' services are priced too high.
- This report includes ideas as to how public authorities may facilitate open, competition based "deposit" solutions using deposits or environmental certificates that are refundable.

The Norwegian Competition Authority has assessed the activities of recycling companies that organize waste collection and recycling. The aggregate annual revenues of the companies covered in the report exceed NOK 1 billion. The Authority identifies competition-related problems of today's systems, and proposes some remedies to improve the situation. An alternative approach to resolving waste problems, featuring greater use of markets and competition, is also presented.

Since the early 1990s, Norway's environmental authorities have implemented a pro-active policy aimed at reducing the volume of waste. An important principle of this policy has been that those who pollute must pay for the environmental costs incurred. The pragmatic solutions adopted entail industry-organized collection, in which responsibility for handling waste rests with the producer (so-called producer responsibility). From paper packaging to CFC refrigeration gases and batteries with environmentally harmful contents, producers of various types of products have been charged with the responsibility for providing the means by which the goods they produce are collected and recycled at the end of their lifecycles. As a result of this policy, recycling companies have been established via cooperation among participants in an industry. In terms of the effects on competition, cooperation among competitors plays far too great a role in the waste policy.

Insufficient competition makes today's recycling systems expensive for Norwegian society and its consumers. For many products, the recycling cost, often referred to as an "environmental fee," constitutes such a small price component that consumers disregard it when making a purchase. When the "environmental fee", for all practical purposes, is the same for all competitors, the surcharge does not affect consumers' product choices. A product's "environmental fee" is set at a level that allows recycling companies to cover their expenses. Because there is no real market competition, recycling companies need not operate at the lowest possible cost.

Systems that rely on industry-organized recycling companies limit the potential for effective competition both in the value chain for discarded products and in the sale of products before they are discarded. For recycling companies set up to handle returned products, the effects of the system in place today are a lack of incentives to minimize costs and a risk that recycling companies' services are over-priced. The activities of such recycling companies may also, depending on circumstances, be in violation of competition legislation.

The organization of industry-wide recycling companies may also facilitate the exchange of information among product market participants, which can be detrimental to market competition. Further, comprehensive cooperation within an industry may make it difficult for new participants to enter the market via parallel import or production. Effective competition depends on the existence of few or low barriers to market entry.

The report questions the method selected by public authorities to reach the goals set for product returns and recycling. Facilitating competitive market mechanisms can be a means for achieving the desired goals in the lowest-cost manner. Once environmental requirements have been determined, markets can be allowed to arrive at how best to organize collection and recycling; rivalry among competitors will ensure that the costs associated with such systems are as low as possible.

The introduction of environmental taxes as payment for avoiding anticipated pollution should be considered. Market participants able to document that a discarded product has been recycled or processed in accordance with environmental rules and regulations, could have a “deposit” refunded to them. Such a solution would provide market participants with an incentive to compete for obtaining or purchasing discarded products, and end users would have a stronger incentive to return products covered by such systems.

The Norwegian Competition Authority recommends that environmental authorities consider the suggestions set forth in the report, and implement waste market regulations that facilitate greater competition.

1. The waste problem and how Norway has addressed it

Consumption of goods generally gives rise to waste. In Section 27 of Norway’s pollution act, waste is defined as “...discarded items or materials. Also defined as waste are superfluous items and materials from services, manufacturing, waste treatment facilities, etc.” This report by the Norwegian Competition Authority focuses on the negative environmental effects caused by packaging waste and discarded products, and to a lesser extent on the negative environmental effects arising from manufacturing and general consumption. The environmental effects of waste and waste treatment may include noise, radiation, odors, and environmentally harmful emissions to air and water.

The society as a whole benefits from reducing the amount of waste that ultimately enters the natural environment. However, from a socio-economic perspective, if no costs are associated with depositing waste in nature, the market will produce more waste than desirable. If there is no monetary impact on persons or enterprises from waste entering the natural environment, market participants will not be concerned about harm caused by production and consumption on our environment. Such environmental damage is often referred to as the negative externalities or the negative external effects of market participants’ actions. Over-production and excessive consumption of goods, or, alternatively, too much waste being deposited, compared with what is socio-economically desirable, are consequences. Such external effects generally give rise to socio-economic losses.

To offset this market failure, Norwegian public authorities have introduced a so-called *extended producer responsibility*, according to which producers carry the physical and/or financial responsibility for their products once their use has been discontinued. In Norway, extended producer responsibility has been introduced from 1995 through agreements between the Ministry of the Environment and various industry associations. Pursuant to such extended producer responsibility, business and industry are responsible for the handling and recycling of waste from products they have put on the market. The costs associated with this are typically included in the price of the product.

Such agreements on extended producer responsibility, which have been entered into between Norway’s Ministry of the Environment and organizations representing producers and importers in various industries, provide for the establishment of recycling companies to assume responsibility within each industry for collection and recycling of used products and waste. In 2001, systems set up pursuant to extended producer responsibility (as described in the next paragraph) were introduced for the following industries: packaging (including corrugated cardboard, cartons, glass, metal, beverage cartons, plastic

packaging, one-way beverage containers (cans and one-way PET bottles), lubricants/recovered oil, electric, electromechanical, and electronic goods (separate systems for so-called white goods, grey goods, and brown goods), equipment with CFC refrigerants, batteries, automobiles, tires, and PCB-embedded windows. Gradually, regulations have been issued pursuant to law governing producer responsibility for most areas, whereas specific recycling goals are set forth in industry agreements.

It is recycling companies that typically undertake to meet producers'/importers' obligations as to waste treatment and recycling. Although some recycling companies do the collection and recycling themselves, most purchase such services from subcontractors. The subcontractors perform the collection, transportation, and recycling of waste. The various wastes may carry some positive value, and be sold; or they may carry negative value, in which case the recycling companies must pay for further processing. Recycling companies finance their operations by levying so-called "*environmental fees*" on their members as payment for the company's services. Recycling companies' members recover their payments for the recycling companies' services via the price of the products they sell. These waste management systems represent significant sums: the recycling companies covered in the report have aggregate annual revenues of over NOK 1 billion.

As a rule, the various waste management systems investigated by the Norwegian Competition Authority have established a single collection system, and thus a single recycling company for each industry or product group. Industry participants, or, alternatively, industry organizations, own and operate the recycling company.

2. Relationship to Norwegian and European competition rules

2.1 Introduction

On 1 May 2004, the new Norwegian Competition Act entered into force. The Act introduces a purely prohibitive regime, modeled after EU and EEA competition legislation. Thus, the new Norwegian Competition Act regulates the activities of recycling companies responsible for handling returned products similarly to EU and EEA legislation and provisions on competition. However, one modification applies: It follows from the preparatory work for the Competition Act that the Norwegian Competition Authority must not allow competition considerations to be outweighed by other considerations, such as environmental ones, in its application of the Competition Act. This contrasts with the situation in the EU, where the EU Commission may — and in some cases is obliged to — give more weight to environmental considerations in applying EU competition legislation.

Under Norwegian legislation, consideration of various overarching issues, such as weighing effective market competition against environmental effects, beyond what is socioeconomically efficient, are to be made at a political level, see Section 13 of the Norwegian Competition Act.

The actual establishment of a recycling company generally does not violate competition rules and regulations. However, the organization and operation of such companies create certain competition problems. The main focus of the report is the question of whether the manner in which the recycling companies are organized and operate, implies price-fixing as prohibited in Section 10 of the Norwegian Competition Act. The focus chosen by the Norwegian Competition Authority must be understood on the basis of its prior cases: All cases concerning recycling companies set up to collect discarded products that were examined by the Norwegian Competition Authority prior to this report involved conduct relating to this type of cooperation. Particular issues associated with recycling companies' use of service providers and the prohibition against abuse of dominant market position set forth in Section 11 of the Norwegian Competition Act are also discussed.

2.2 Prohibition against cooperation that restricts competition

2.2.1 Problem definition

The question of whether recycling companies' financing constitutes price cooperation in violation of Section 10 of the Competition Act is discussed at two levels in the report: firstly, whether the companies' *determination and handling of the so-called "environmental fee"* constitutes illegal price cooperation; secondly, whether *sale of collected products* for recycling violates the prohibition provision.

2.2.2 Payment for recycling services

The problem is whether recycling companies' determination of the "environmental fee" or how that fee is to be passed on, constitutes illegal price-fixing among the recycling company's members.

Recycling companies finance their activities by levying "environmental fees" payable by their members as compensation for the companies' services. Members recover the expenses associated with the "fee" through the pricing of the products they sell. Thus, the "environmental fee" is included in the price customers pay for members' products. Accordingly, if members determine the amount of the "environmental fee" via their recycling company, then they have reached an agreement as to that component of a product's price, for example, the price of automobile tires. Such an agreement may, in certain instances, violate Section 10 of the Competition Act.

In most instances, the board of directors of the recycling company determines the "fee", though sometimes it is determined by its management or jointly by the board and management. Whether the *determination of the "environmental fee"* is to be regarded as illegal price cooperation among the members of the recycling company, largely depends on a concrete assessment of the ability of members to *determine the level of the fee*. If the recycling company determines the fee unilaterally, without its members being able to influence the decision, then cooperation of the sort prohibited by Section 10 of the Competition Act has not occurred. If, on the other hand, members are able to influence the determination of the fee, the determination may in some instances be regarded as cooperation in violation of Section 10 of the Competition Act.

With regard to this issue, the recycling company's relationship with its members is decisive. If the company is *independent of its members*, there is no cooperation as to price setting. However, if the recycling company can be seen as acting on behalf of its members, the company's fee setting will have to be regarded as a type of cooperation that may be prohibited by Section 10 of the Competition Act. Whether the company can be identified with its members will depend a concrete assessment of the facts, including whether the company is owned by its members, and whether they are represented on the company's board of directors. Whether determination of the fee is prohibited price-fixing among recycling company members is a complex, detail-oriented assessment. Legality must, therefore, be determined on a case-by-case basis.

In some instances, the recycling company determines that members' costs for being company members are to be specified in invoices to members' customers; i.e., such costs must be itemized in payment invoices. Agreement as to the amount of the environmental fee to be reflected in the price of products for sale, entails cooperation on a pricing component. *Agreements or guidelines on how the "environmental fee" is to be passed on* by members of a recycling company to their customers, therefore, clearly violate the prohibitions of the Competition Act. In several cases involving recycling companies, the

Norwegian Competition Authority has established that cooperation on how to pass on recycling charges violates the prohibition against price-fixing, as set forth in the Norwegian Competition Act of 1993.¹

2.2.3 *Sale of waste*

In most cases, recycling companies do not handle collection or recycling of discarded products themselves, but leave those tasks to subcontractors. However, recycling companies often handle the *sale of recycled products*.

The sale of products that are recycled by the recycling companies can be regarded as cooperation in determining the price of such products, in violation of Section 10 of the Competition Act. Whether a recycling company's determination of price constitutes illegal price-fixing, depends on the findings of a detailed inquiry. If a company pays dividend to its members, the members will benefit from the recycling company setting excessive prices on waste sold, and this might therefore be an indication of price-fixing. If the recycling company can be identified with its members, the sale of waste through the recycling company may constitute price cooperation, in violation of Section 10 of the Competition Act.² If, on the other hand, the recycling company is independent of its members, there is no cooperation in violation of Section 10 of the Competition Act.

2.2.4 *Exchange of information*

The report also discusses the issue of whether recycling companies are organized in such a way that they facilitate exchange of information among members. If that is the case, it will lead to an *increased risk of illegal cooperation as to prices, but also as to market sharing, bid rigging etc., in violation of Section 10*. In this respect, there may be a risk that participation in a recycling company may give rise to competition restrictions in the very market for the products that the members of the company produce.

In many instances, recycling companies will receive data on members' sales of various products, because such data are often needed to determine the "environmental fee" each member is to pay. If the members of a recycling company have access to this information, for example through board representation, participants may have detailed information about each others' businesses. The Competition Act does not necessarily prohibit exchange of information among businesses, but in some cases it may constitute a cooperation that restricts competition in violation of Section 10 of the Act. Whether exchange of information is illegal depends on factors such as the type of information exchanged, e.g. whether the information only includes historical data or whether the information also includes future market conduct. The structure of the relevant market is also important. If the market has oligopolistic features, exchange of information will facilitate participants coordinating their market conduct.

2.2.5 *Coordination of competition parameters other than price*

Cooperation on pricing allows for the recycling company's services to be priced higher than necessary, and allows for the excess revenues to be returned to the company's members directly or indirectly. Direct transfer may take place through dividend payments to members or by a lowering of members' fees. Indirect retransfer may take place via the recycling company being assigned tasks beyond normal recycling activities.

¹ See the Norwegian Competition Authority's decisions V2001-69 and V2000-83.

² See the Norwegian Competition Authority's decision V2000-83.

Several of the recycling companies examined by the Norwegian Competition Authority have expanded their activities to include other areas, such as providing information about members' environmental efforts, lobbying activities and so forth. These tasks may be viewed as cooperation on information or marketing to consumers. Even marketing, a competitive parameter, can to some extent be coordinated through a recycling company, so that participants no longer compete in this area. Such coordination through a recycling company leads to company members competing in only a very few areas. Thus, it is possible that such coordination, in certain cases and in combination with other factors, may constitute cooperation that restricts cooperation in violation of Section 10 of the Competition Act.

2.2.6 *Exemptions under Section 10, third sentence, of the Competition Act*

Cooperation covered by the prohibition set forth in Section 10, sentence 1 of the Competition Act is not illegal if the terms and conditions of the exemptions in Section 10, third sentence, are met. To qualify for an exemption, the cooperation in question must meet four conditions. The cooperation must contribute to improving the production or distribution of goods or to promoting technical or economic progress; consumers must be secured a fair share of these benefits; the cooperation must not impose more restrictions than necessary to reach the goals of the cooperation; and competition must not be excluded for a substantial part of the products in question. The Commission's guidelines for applying the EC treaty's article 81(3) provide guidance on the application of Section 10, third sentence of the Competition Act. The report only discusses the announcement on horizontal agreements, as this is assumed to be of particular relevance to the activities of recycling companies.

Under Section 10, fourth sentence, more detailed rules and regulations may be issued as to what is covered by the third sentence, so-called block exemptions. EU and EEA legislation provides for special block exemptions both for horizontal and vertical agreements. Similar block exemptions will be provided under Section 10 of the Competition Act. Consequently, block exemptions and their related instructions are relevant to interpretations of Section 10 of the Competition Act.

The establishment of systems for product collection and recycling typically depends on the entrance into several different agreements; some of these agreements are entered into between competitors (horizontal agreements), others are entered into, for example, between demand side participants and service suppliers (vertical agreements). Regardless of affected undertakings' market shares, block exemptions do not apply to hard-core restrictions, such as horizontal price-fixing, market sharing, and influencing of fixed retail prices and minimum prices. It is viewed as improbable that a recycling system that entails *horizontal competition restrictions* will be allowed by an EU or EEA block exemption, and thus, by Section 10, fourth sentence, of Norway's Competition Act.

2.3 *Prohibition against abuse of dominant position*

The report on product collection for recycling also discusses recycling companies' use of service providers and the prohibition against abuse of dominance set forth in Section 11 of Norway's Competition Act. In the experience of the Norwegian Competition Authority, some recycling companies have used various forms of exclusivity clauses in their agreements with companies that provide services to them, such as companies that perform collection and/or waste recycling.

Typically, such exclusivity clauses ensure that a service provider will have the exclusive right to perform a specified service for the recycling company in a specific geographic area. In some cases, the clauses prohibit the service provider that performs services for a recycling company from offering its services to the recycling company's competitors or offering services similar to those the recycling company offers. As to recycling companies that enjoy a dominant market position, this type of conduct may be viewed as abuse of market power, and thus as a violation of Section 11 of the Competition Act.

3. Efficiency considerations

3.1 Introduction

Products that are included in recycling systems go through a series of markets during their lifecycle. Initially, the product is added to the *product market*, where it is sold, following production, to consumers, typically via wholesalers and/or retailers. Under the extended producer responsibility, producers and importers are obliged to handle collection of waste after consumers have finished use of the products in question. In many instances, it may be difficult or impractical for each market participant to fulfill this obligation on its own. Thus, a market arises for taking on and fulfilling participants' obligations as to waste handling, the so-called *recycling market*. Although the system in place in Norway typically results in a single participant that takes care of the waste in question throughout the entire recycling process, the recycling market comprises multiple sub markets. Actually, we are describing a waste management system encompassing a market for waste collection and sorting; a market providing recycling services; and, in some cases, a market for recycled materials.

In the view of the Norwegian Competition Authority, the current system for collection and recycling of waste in Norway restricts competition in recycling markets, and lends itself to restrictions of competition in the product market. This situation does not contribute to optimal use of the resources of society. Firstly, most recycling companies we have examined have, for practical purposes, a monopoly in the recycling market. Such monopolies lead to inadequate incentives for cost control, and the risk that the services of recycling companies are too expensive. Secondly, the Norwegian Competition Authority finds it highly problematic that the system in force at present is so greatly dependent on cooperation among competitors, as this entails the risk that competition is also restricted in product markets in which these market participants compete. The two competition problems mentioned here are discussed in greater detail, below.

3.2 Restricted competition in waste markets

Recycling-company monopolies restrict the potential effectiveness of competition in markets for waste collection, sorting, and recycling. Monopolies generally result in higher prices than what would be the case in competitive markets, in this instance higher "environmental fees". If the compensation payable by members of the recycling system is too high, a consequence may be that fewer participants join the system, which fosters the problem of "free rides" through the system for items originating with non-participants.

The recycling companies reviewed in the report have stipulated a non-profit clause in their statutes. Accordingly, the "environmental fee" should merely reflect the costs of the recycling system. Participants that are able to recover any loss through higher fees, however, will have no incentive to minimize their costs and optimize operational efficiency. Thus, they generally won't arrive at the most efficient solutions. Insufficient competition may lead to "monopoly profits", and thereby making it possible for companies to operate in an ineffective manner – in other words, at higher costs than necessary. For example, Plastretur (plastics recycling) has included in its statutes that any profit is to be invested in "developing the company and furthering its purpose." Another example is that of Norsk Dekkretur (tire recycling), which uses profits to "improve services." There are also examples of recycling companies that operate extensive activities beyond their core business activities. For example, Norsk Returkartong (cardboard recycling) has used its surplus to acquire 49 percent of Hippopotamus, a company that sells office supplies made from recycled paper.

Although, generally, there are no formal barriers to entry for competing recycling companies, potential new competitors will find it difficult to enter the recycling market. In many instances, public

authorities have granted first mover advantages in the form of grants to support the business development, which later competitors may not enjoy. Further, public authorities' requirement that recycling systems be nationwide may hinder new market entries, as this requirement increases market-entry costs. Typically, recycling systems must reach a certain size to be competitive. Although projections may indicate that the market may be large enough to accommodate two equal-sized systems, it will be difficult for a new market participant to win customers if most turnover in the market is already linked to an existing recycling system.

Further, an existing market participant may employ various strategies to prevent potential competitors from entering the market. As discussed previously, a monopolist will frequently have resources available to invest in measures that will deter new market entrants. For example, the monopolist may build excess capacity so as to convince potential newcomers that any attempt at market entry will be countered by aggressive pricing. By employing all available capacity, prices can be driven to levels that can bankrupt newcomers, who typically will not have "unlimited" resources. Such conduct will maintain the monopoly.

Most recycling companies have very few employees, and do not perform collection or recycling activities themselves. Their task is to enter into contracts with waste management subcontractors on behalf of an entire industry. A major market participant, such as a recycling company, will thus be able to exercise abusive purchasing power vis-à-vis suppliers of collection, sorting, and recycling services. This situation entails a sub-optimal market solution, as demand-side participants squeeze prices by curtailing their demand. Generally speaking, supplier markets with well-functioning competition at the outset, when confronted by demand concentrated in the hands of a recycling company, may eventually devolve into supplier-side concentration, too. Suppliers being unsuccessful in winning contracts with the single purchaser in the market, risk bankruptcy. Norsk Dekkretur, for example, has chosen to sign a contract with only a single nationwide contractor, instead of contracting with multiple, regional suppliers.

Although in most cases, recycling companies must pay for an environmentally sound treatment of waste, it is sometimes possible to convert waste into something that can be sold at a profit; for example, as a raw material for manufacturing. Recycling of brown paper, aluminum cans, and lead-acid batteries is common. Should a recycling company constitute a major seller, it may also be able to exercise abusive market power vis-à-vis purchasers of recycled materials. Dominant producers of products employing new materials may also benefit from controlling access to recycled material, which could be used as substitutes and, thus, represent a competitive threat. Such market examples are discarded tires, waste oil reprocessed into heating oil, and recycled HCFC refrigeration gases, all of which can compete on a par with imports from major manufacturers and petrochemical firms.

3.3 *Restricted competition in the product market*

A system leading to a single recycling company obtaining monopoly may result in inefficient waste management. The competition may be even further restricted when recycling company owners compete in the product market. The arena for cooperation and exchange of information established via recycling companies can undermine competition and thereby harm consumer welfare.

Recycling company owners are generally also that company's customers. Thus, they should be concerned with keeping the costs of collection and recycling as low as possible, so that the price they pay (the "environmental fee") is kept to a minimum. However, the "fee" is incorporated in the price of the products they sell. If demand for the products in question is relatively insensitive to price fluctuations, the potential is great for passing on the entire "environmental fee" to consumers by raising prices by the same amount, as if the fee was a state tax. An industry-wide agreement stipulating such conduct may easily be attained, as the industry's participants also are recycling company participants. Several recycling companies have had a more or less explicit agreement with their members to identify the "environmental

fee” on a separate line on invoices. Such a practice is particularly attractive if it is possible, directly or indirectly, to transfer the recycling-company’s surplus liquidity to its owners. The Norwegian Competition Authority has seen examples of recycling companies retroactively returning earnings to their owners (typically when there is no longer a need to further build up the company's financial credits), despite the company’s policy not to pay dividends. For example, three such instances have been identified with respect to Batteriretur. Payment of funds to members according to their paid-in amounts functions as a “rebate” on services provided. Moreover, if the entire, original cost of the environmental service has been passed on to consumers, then consumers are experiencing a price increase that *exceeds* the costs of the recycling plan. Alternatively, a recycling company can indirectly transfer its earnings to its owners by assuming tasks that members would otherwise have to perform, such as lobbying or joint marketing of an industry’s environmental profile.

In general, organizing industry-wide recycling companies will facilitate exchanges of information that harm competition, as well as facilitating joint understanding among participants in product markets. Recycling companies may have access to information about production and import volumes and other types of data on members’ business activities. Thus, the conditions are in place for participants to coordinate their market conduct, for example by agreeing to maintain product prices above a certain level. Such cooperation is more likely to be effective and stable if participants have access to information on each others’ market shares and similar data, so that they are able to verify that the agreed-to price level is maintained. Many of the markets discussed in the report have oligopolistic features, i.e., the markets have a transparent environment comprising few and large participants. Also, many of the products are relatively homogenous, which strengthens the incentives for coordination of market conduct because the alternative may be fierce competition on prices and thus, low profitability.

Product market participants do not compete solely on price; they may also compete as to “environmental friendliness.” The environmental impact of products and packaging is a matter of concern to consumers — and they are willing to pay a premium to lessen that impact. Thus market participants will compete by offering the most environmentally friendly technologies, using the most environmentally sound materials, and demonstrating that their products are part of an efficient system for collection and recycling. Projecting a proenvironment profile may be an important aspect of competition, and a featured aspect of product marketing. An industry-wide recycling company will only conduct *joint* marketing efforts, and thus remove competition in this area. To encourage producers to develop new and more environmentally sound products and packaging, that are less costly and easier to recycle, there must be a system in place that rewards such efforts. If an independent organization operates a recycling company, the latter is likely to differentiate prices based on the costs of collecting and recycling various materials. Recycling companies owned by an industry, on the other hand, will typically find it difficult to set anything but a “just” and equal-to-all fee for all products. This inflexibility manifests itself even when a recycling company’s co-owners use different technologies or materials in their production.

Comprehensive cooperation in an industry will also make it more difficult for new participants to enter the market and establish parallel import or production. Often participation in a recycling system is mandatory for producers and importers. In such cases, access to participation in existing recycling systems on the same terms and conditions that apply to established competitors, is vital for market entry. All recycling companies discussed in the report are formally open to all, including those that do not participate in industry associations, and are not recycling company shareholders. However, it is conceivable that newly established companies seeking to join a system might be met with terms and conditions poorer than those of established members. There seems to be no significant external monitoring as to whether all participants in a recycling system are treated equally, particularly in areas such as access to and level of services provided.

4. Recommendations

Norwegian environmental authorities have chosen a waste management solution under which the obligations of producers and importers are assumed by an industry-owned recycling company. Naturally, there may be good arguments *in favor* of such a solution, including economies of scale, operational efficiency, and avoidance of non-participating products getting a “free ride” through the recycling system. Nevertheless, the Norwegian Competition Authority believes that in most instances, there are better ways in which environmental authorities can reach their objectives. In fact, several recycling systems fail to fulfill the goals set by public authorities. One key reason appears to be insufficient incentives, including an absence of sanctions if goals are not achieved.

Through their regulation of recycling systems, public authorities are responsible for facilitating that waste management takes place through efficient utilization of society’s resources. First and foremost, public authorities must specify target collection/return rates for various environmentally harmful materials. The rates should be based on the cost of recycling the various types of waste, relative to the environmental gain. The optimized return rates can be modified over time, as technologies, production methods, and materials are improved. In most instances, public authorities’ regulation of waste markets has not been based on identifying optimal return rates. Generally, requirements for recycling are based on the decisions of politically appointed authorities or requirements pursuant to EU regulations.

By facilitating each industry’s organization of its own recycling company, public authorities may preclude solutions that exploit potential joint operations for collection and recycling. Consumers and retailers must relate to an unnecessary number of recycling systems, while artificial and inappropriate market divisions are fostered. This is certainly the case for multifaceted and complex products that typically contain a number of different components and several environmentally harmful materials. Coordination with various other recycling companies may yield efficiency gains. There is reason to believe that industry-independent collection and recycling providers would show greater imagination as to efficient solutions of this type. Primarily, it is the view of the Norwegian Competition Authority that splitting the waste-management value chain and differentiating the various recycling sub-markets can resolve the problems of today’s waste recycling systems.

The “environmental fee” determined by recycling companies is meant to cover the costs of recycling. Market participants are insulated from the costs arising from the proportion of waste that is *not* being properly treated, but rather ends up as deposits or releases to the natural environment. Thus, there is no convincing evidence that the “environmental fee” contributes to efficient fulfillment of environmental objectives. As mentioned previously, cooperation in determining “environmental fees” may be in violation of the Norwegian Competition Act. Accordingly, the Norwegian Competition Authority recommends that environmental authorities consider replacing the current system by introducing an environmental *tax* on environmentally harmful products, and that this tax reflects the damage wrought on the environment unless the products or materials are recycled or otherwise properly processed after being discarded. Such an environmental tax can be viewed as prepayment of the “right to pollute.” If discarded products are treated properly, public authorities may refund a portion of the tax.

A problem that remains to be solved is that producers or importers of products do not control their items or materials once they are discarded. On the consumption side, consumers lack financial incentives to return waste.

An environmental tax as suggested by the Norwegian Competition Authority, which is reimbursed to those who are able to prove that they have processed the waste in question according to applicable rules and regulations, will make it attractive to compete on “purchasing” discarded products. Each end processor has the option of collecting discarded products or purchasing them from collectors. In turn, collectors will

“purchase” discarded products from consumers by offering payment or other services. Incentives can be refundable deposits or environmental certificates. If consumers are offered the refunding of a deposit, they will choose to deliver their waste to the highest paying market participant. Typically, this participant will be the most efficient one.

Environmental authorities should determine environmental objectives, and then leave it to the market to arrive at solutions for how return and recycling may best be organized. Environmental taxes may be levied upon a product’s production or import — and refunded to those who ensure proper end-treatment. Reimbursement should be independent of whether it is the original producer/importer or other market participants that treats the waste. Authorities must facilitate the greatest possible number of participants entering the recycling market in order to ensure optimal competition. If taxes are payable at the introduction of a product to the market, this would eliminate the problem of non-participating producers getting a “free ride.” The amount recyclers are willing to pay to get hold of waste, will, as a point of departure, correspond to the size of the refund, *minus* a requirement for return on equity and recycling costs. Consumers, on the other hand, will want to offer collectors their discarded products if they receive a suitable price. In other words, natural market mechanisms should ensure that collection and final processing will take place as long as the cost of these actions is lower than the environmental tax, which, as a starting point, reflects the environmental cost of the products in question. Public authorities will achieve their environmental goals as long as the tax is correctly determined. A rate of product returns that is too low may be countered through higher taxes or an increase in the refunded amount.

The idea of a refundable environmental tax is, for practical purposes, a deposit that follows each product throughout its lifecycle, and thus generates a value chain for discarded products, from consumers to final processor. Over time, those market participants that offer the most efficient solutions will attract the most waste and process it at the lowest costs. The market will give rise to appropriate ways of resolving problems. For some products, using stores as collection points is natural, as is the case for today’s system for collecting beverage containers, whereas for other products it may be better if market participants collect discarded products at user or owner locations.

One key challenge is to offer producers incentives to develop more environmentally friendly products. The introduction of taxes will initially offer producers and importers incentives to develop and use products and raw materials that carry lower or no environmental taxes. Over time, however, the proposed system will also provide incentives to develop products with lower collection and recycling costs. If product A is more easily recycled than product B, and both cost the same to produce, then product A will be more valuable than B when it is discarded; thus, the net value of product A is higher than that of product B.

A key advantage of such a system is that it establishes a distance between producers/importers and the waste-market participants that collect and provide final processing. The product market and waste markets are thus disconnected. This separation will make it significantly harder to abuse a recycling system to engage in price-fixing among market participants and other anti-competitive behavior.

SWEDEN

1. Summary

Ultimately, the purpose of competition policy is the welfare of consumers. The preferences of consumers may also create an incentive for businesses to take into account environmental policy considerations. In the Swedish Competition Authority's experience, conflicts between objectives of environmental protection and competition can often be avoided. However, the environmental policy instruments chosen may be competition-friendly to a greater or lesser extent.

Uniform and clearly defined rules are essential to environment policy. The complexity of the rules and the administrative costs they engender must be minimised. In a number of contexts, the Swedish Competition Authority has emphasised the value of international harmonisation and uniformity in environment regulation as a means of reducing any adverse effects on competition.

The Swedish Competition Authority has also spoken in favour of a shift from administrative instruments in environment policy to economic instruments, for example tradable permits. In our view, economic instruments make it easier to ensure that businesses operate on equal terms and also that market entry is not unnecessarily impeded.

In the longer term, at least in the packaging sector, the Competition Authority considers that a European system of producer responsibility with recycling goals at Community level, and in which companies can fulfil their obligations by purchasing certificates both nationally and in other countries, would be an effective way of combining free movement in the internal market with efficient environmental controls.

The Competition Authority has usually recommended that subsidies, when they constitute an integral part of environment policy, should be designed to target consumers directly.

In Sweden, examples from the petrol market and from the asphalt industry show that horizontal co-operation on environmental issues may also facilitate anti-competitive co-operation.

2. Introduction

Ultimately, the purpose of competition policy is the welfare of consumers. The preferences of consumers may also create an incentive for businesses to take into account environmental policy considerations. The external costs of business activity to society and the environment may thereby be internalised.

In the Swedish Competition Authority's experience, conflicts between objectives of environmental protection and competition can often be avoided. However, the environmental policy instruments chosen may be competition-friendly to a greater or lesser extent.

In some sectors, too, there may be conflicts of interest over (natural) resources that are only available to a limited extent, and these conflicts may not be easily resolved. Examples of this can be found in city planning and in the construction industry, where environmental concern can limit opportunities for market

entry, especially in urban areas. Another example is found in the ballast industry, where gravel, which is a natural resource, is only available in limited quantities and is not renewable.

Genuine conflicts of interest due to resource scarcity are difficult to resolve. Different interests have to be weighed against one another. The Competition Authority considers that its role is to explain the interest of competition in this connection and to suggest how it might best be served.

The Competition Authority's position on various policy matters are summarised below, and a number of general reflections have been added.

3. Harmonisation

In a number of contexts, the Swedish Competition Authority has emphasised the value of international harmonisation and uniformity in environment regulation as a means of reducing any adverse effects that the rules or economic instruments may have on competition.

The agency has particularly drawn attention to the following problems in the waste management industry:

- vagueness in the Community regulations on waste management is leading to unnecessary legal processes and may inhibit the will to invest;
- erratic implementation by the EU member states of the Community regulations on waste management means that the various market actors are not operating under the same ground rules;
- differences in national regulations between EU member states are impeding cross-border exchange and marking off national markets from one another, and may thus inhibit competition;
- the complexity of regulatory frameworks and overlaps between different regulations are creating difficulties for both business and public authorities.

In the Competition Authority's opinion, these problems are particularly severe in view of the fact that the waste management market is large and growing rapidly. Indirectly, the achievement of environment policy objectives may prove difficult unless more efficient waste management markets can be created. The need for common rules at Community level may be described as particularly pressing in the case of Sweden, as Swedish enterprises otherwise risk being left in a relatively worse competitive position in the increasingly open European market.

In the Competition Authority's view, waste and environment problems are international in character, and a single market can only be achieved in the presence of common definitions of what constitutes waste, of when waste – after the requisite processing – becomes products or materials that can be dealt with in the usual way, and what minimum requirements should be imposed when waste is managed in the various member states.

In the case of the various eco-labelling systems, too, the Competition Authority recommends that these be harmonised internationally as far as possible so that they do not reinforce the demarcation of national markets. The possibility that the increase in product differentiation caused by environmental labelling may lead to a decrease in price competition cannot of course be ruled out, but in that case it would be replaced by competition in another dimension. Competition cannot lead to lower prices alone but must also be an instrument for creating better quality and enhancing environment-friendly content.

4. Economic instruments

In a number of different contexts, the Swedish Competition Authority has spoken in favour of a shift from administrative instruments in environment policy to economic instruments. In our view, economic instruments make it easier to ensure that businesses operate on equal terms and also that market entry is not unnecessarily impeded.

A particularly important issue in this respect is needs assessment (test), which is frequently practised in licensing procedures of various kinds but which has recently been phased out in many markets in Sweden. In certain cases, needs assessment can fulfil an important function in pursuit of established environmental objectives, but such assessments are by no means environmentally warranted in all cases. The Competition Authority has recommended that needs assessment be replaced as far as possible by economic instruments in environment policy. The agency has also discussed in principle the practical difficulties associated with conducting a needs assessment in a correct manner, and the question of where the burden of proof should lie in such cases. The dynamic nature of markets render it difficult for a new entrant to prove, beforehand, that there is a need for his products or services.

Tradable permits represent a special type of economic instrument in environmental policy. The Competition Authority considers that tradable permits are an important and cost-efficient means of achieving established environmental goals. The objections that the agency has had in this respect have related to the fact that tradable permits have only been introduced in limited parts of the industries or operations concerned, which may lead to non-uniform terms between competing enterprises. In a system of limited size, there is also a greater risk that frequent competitors will enter into bilateral agreements to take over each other's permits rather than becoming involved in the trading of permits on the market. This gives the various enterprises an insight into one another's activities and an opportunity to influence them.

The Competition Authority has also recommended that tradable permits be sold to a greater extent rather than distributed on the basis of historical volumes. From a competition policy viewpoint, there are definite risks associated with a system in which existing actors are given preferential access to scarce resources that are crucial to the pursuit of a particular activity.

Sweden has too little experience of the system to decide whether tradable permits might in practice be used by large enterprises or enterprises with strong finances as a means of excluding competitors. A close watch should be kept on this issue in connection with the various follow-ups of the trading system.

5. Barriers to market entry

In the Competition Authority's experience, it is often the case that under current environment policy new undertakings have to live up to higher standards than existing ones ('new source bias'). In practice, this may act as a type of barrier to market entry and reinforce the position of those actors already present in the market. Often, this effect has already been achieved as a result of the basic design of the regulatory framework. If permission is required to conduct a particular activity, it is more or less in the nature of things that new or revised (expanded) operations will be the ones that come under official scrutiny.

There does not appear to be any obvious solution to this problem, as the way regulatory frameworks are designed is often governed by the need for long-term ground rules for individual business activities, which is also of value from a competition policy viewpoint. Consequently, and by necessity, the framework represents a compromise between different interests. It is important, however, to take into account the impact on competition and the 'new source bias' when discussing the construction of regulatory frameworks.

As a result of the 'polluter pays principle', which is broadly applied nowadays, a large share of the costs of public measures will also affect the new or expanded undertakings mentioned above. This also applies, of course, to the enterprises' own costs for their contact with officialdom.

These effects can be considerably influenced by the way the various public charge systems are designed. A charge consisting of a small fixed part payable at the outset or on market entry, combined with annual charges linked to turnover, for instance, could in our view have a risk-reducing effect as products that are in the market for lengthy periods, and in large volumes, would then bear a greater share of the charge burden. The economic risk for enterprises launching new products would thus be diminished.

Charge systems are sometimes designed in such a way that 'first mover disadvantage' arises. This is the case, for instance, if a particular substance requires notification to the authorities or official approval and whoever is responsible for marketing it has to bear the costs for this procedure, despite the fact that other enterprises can subsequently take advantage of the notification already made or the approval received for their own purposes.

6. Rules and their simplification

In the Competition Authority's view, uniform and clearly defined rules are essential to environment policy. In various contexts, the agency has advised against different kinds of business interests being linked to functions exercising public authority in such a way that the division of roles becomes blurred and arenas for collusion are created, with all the risks this entails. The Competition Authority has also opposed 'voluntary solutions' when in fact these have had the main purpose of avoiding uniform legislation. From a competition policy viewpoint it is preferable that environment policy as far as possible be codified in legislation that applies to all equally rather than in more informal or formal agreements/contracts between public and private parties.

It is not just the material content of the regulations that is important to study but also their complexity and the administrative costs they engender.

Acting on a government mandate, the Swedish Agency for Economic and Regional Growth, NUTEK, is examining the administrative cost to businesses of regulations in the environment sector, etc. Administrative cost is defined as the cost to businesses of preparing, storing or transferring information or data required by laws, ordinances, official provisions or general recommendations. The object of the exercise is to develop a tool for regulatory improvement.

In all, 171 statutory instruments were examined in the study, and NUTEK estimates that the administrative cost to businesses of meeting the environmental requirements amounted to over SEK 3.6 billion per annum. Of this total, one quarter was attributable to external assistance in the form of consultants and the like. Many of the enterprises' costs were one-off in character and were associated with applications and notification procedures of one kind or another.

The study also shows that enterprises perceive a lack of clear, unambiguous legislation and of consistency in the official handling of environmental matters. They feel there is considerable room for interpretation, which leads to local differences and unclear guidelines for businesses operating nationwide.

7. Subsidies in environment policy

Often, subsidies of various kinds are an integral part of environment policy, and an important question is whether these subsidies may have adverse side-effects in the form of competitive distortions. In the Competition Authority's view, however, the EU rules on state aid have led to transparency in respect of such subsidies and have also caused various aid programmes to be adapted in such a way that the adverse

effects on competition can be expected to diminish. In various connections, the Competition Authority has noted the importance of designing state aid programmes carefully and of ensuring that they are properly evaluated and followed up.

A related issue is whether subsidies in general may have caused competitive intensity in various markets to decline (reduced competition) without this leading to any real competitive distortion (unfair competition). Often, the purpose of a subsidy is market growth (at least for those companies that utilise a specific environment-friendly technology). Depending on the extent to which barriers to market entry, etc, are present, market growth may result in reduced competition. Nor can we rule out the possibility that subsidies may boost enterprises' margins to a greater or lesser extent instead of benefiting the consumer or boosting demand.

For the purpose of avoiding such problems, the Competition Authority has usually recommended that subsidies of various kinds should be designed to target consumers directly, and that calculation of their size should not be influenced by the actual cost levels in individual subsidised activities.

8. Waste management

The market situation in waste management and how it develops is to a great extent influenced by the policy decisions reached, not least in relation to what the EU terms the 'waste hierarchy'. Important reforms have included the introduction of producer responsibility and, in Sweden, the phasing out of opportunities for municipalities to introduce a monopoly on commercial waste. In practice, municipalities now have less scope for market action and this has led to the emergence of new business activities in the environment field.

This development has not, however, been without its problems. In the borderland between private and public activities, competition – in the same market – between private and public enterprises has increased in scope. Cross-subsidising from monopoly activities is often described as a problem in the case of municipalities and municipal companies that besides operating monopolies also engage in competitive activities in adjacent sectors, such as commercial waste and hazardous waste management. Besides the risk of cross-subsidising, there are synergies between the treatment of household waste and the treatment of other waste, which may give municipal units an edge outside their monopoly domain as well.

A related problem is that the municipalities do not appear to be taking full advantage of existing opportunities to open up for competition. Many municipal activities in the refuse collection sector are conducted via municipal companies, and whether or not the procurement rules have been properly complied with is a matter of some dispute. Critics argue that procurement processes do not always take place, and also question such aspects as lengthy contractual periods. It is very difficult, however, to come to grips with such problems via the legal remedies currently available in the procurement field.

A government inquiry recently examined the prospects for phasing out the municipal right to introduce monopolies on the management of hazardous waste. In practice, this would affect just over 100 of the country's municipalities, or more than a third of the total. There is documentary evidence showing that municipalities operating monopolies charge higher prices for the collection of hazardous waste. The Swedish Environmental Protection Agency argues that a phase-out of this monopoly would solve a number of the problems involved, and that the other existing regulations governing hazardous waste would be adequate if they were better applied and supervised.

9. Producer responsibility

A new type of competition policy problem has developed out of producer responsibility due to the interfaces between competing actors created by this principle. There is a risk that the national enterprises

which in practice are carrying out this responsibility – usually large ones co-operating to set up national recycling systems – might engage in excluding practices in relation to their competitors.

As such, the principle of producer responsibility is unobjectionable from a competition policy viewpoint, but the intensity of competition may be affected by the choice of solution and organisation to carry out the responsibility. On one occasion, the Competition Authority called for a closer examination of the individual enterprise's chances of living up to its producer responsibility without being forced to join or enlist the services of one or other of the collection systems that are normally controlled by the major actors in the market. We found that the chances tend to be either remote or non-existent.

One government report¹ has made the point that some of the systems governing waste disposal have been established without any proper review being undertaken of the potentially adverse effects on market development. By their very construction, material recovery companies impose constraints on competition, as the purchaser monopoly means that the market may become too static. Thus statutory producer responsibility can be said to have generated monopoly tendencies.

Today, only a small proportion of Swedish businesses are complying with the producer responsibility principle by collecting material in systems of their own. According to the Swedish Environmental Protection Agency, however, a growing number are apparently considering leaving the material recovery companies, or declining to join them when entering the market. In time, this may break up the purchaser monopoly that the material recovery companies represent.²

In seeking to remedy the competition policy problems that sometimes arise as a result of the producer responsibility principle, the Competition Authority has focused its attention mainly on the beverage packaging markets. In a report on the subject³, the agency found that the current system restricts competition and trade to some extent and makes it particularly difficult for smaller and foreign companies to enter the Swedish market. Since then, partly due to the Competition Authority report, the system has been overhauled, although it is still too early to gauge the full impact of this reform.

Producer responsibility divides naturally into two parts: an economic responsibility and a responsibility devolving on the collecting organisation itself. A frequent characteristic of the latter is substantial economies of scale, and a smaller actor in the market may find it difficult or impossible to pursue such an activity on its own. From a competition policy viewpoint, it can sometimes be an advantage to keep collecting organisations separate from both the financing side and from companies operating in the industry, to assure all businesses of equal access to infrastructure.

In the longer term, at least in the packaging sector, the Competition Authority considers that a European system of producer responsibility with recycling goals at Community level, and in which companies can fulfil their obligations by purchasing certificates both nationally and in other countries, would be an effective way of combining free movement in the internal market with efficient environmental controls.

10. Environmental requirements in connection with public procurement

The effects on competition of using environmental requirements as a selection criterion in the public procurement process depend primarily on how these requirements affect entry and exit among potential

¹ *Resurs i Retur*, SOU 2001:102.

² Swedish Environmental Protection Agency report on the waste management market.

³ Report 2003:3 in the Swedish Competition Authority's report series.

bidders in the sector concerned. Environmental requirements increase the cost of market entry, which affects small enterprises in particular. Environmental requirements that are specific to Sweden can also make it harder for foreign enterprises to establish a presence in the Swedish market. They can impact on prices in two ways: directly, by increasing company costs which in turn affects the price, and indirectly through reduced competition resulting in higher prices. If the environmental requirement imposed in the procurement process is usually found in the industry concerned, the competitive impact is likely to be limited. If the requirement is an unusual one, however, a number of enterprises are likely to refrain from taking part in the procurement process, which would have a more pronounced effect on competition.

The effectiveness of environmental requirements imposed in the public procurement process as an environment policy instrument varies, depending on how they are formulated. The choice of requirement also influences the extent to which it affects competition. General policy instruments are often preferable to environmental requirements in public procurement. Such instruments, whether they are economic or administrative in character, affect whole markets and not just the enterprises involved in a particular procurement process. When it is difficult to achieve environmental objectives by using general policy instruments, however, procurement requirements may represent a valuable addition.

11. Environmental issues in Competition Law enforcement

Most of the law enforcement cases that the Competition Authority has dealt with in the environment field have related to the rules prohibiting anti-competitive agreements. In the majority of such cases, the agency has found that co-operation of one kind or another has harmed competition. In most cases however, the Competition Authority has also noted that the co-operation involved was an inevitable consequence of current legislation and environmental objectives, and chose therefore not to prohibit it.

Horizontal co-operation between competitors in the environmental area results in the risk that co-operation will concern other areas than those related to environmental issues. On the petrol market the Competition Authority has detected a cartel between companies which had been granted exemption for environmental co-operation, and which used that platform also for anti-competitive co-operation. Another example is a major cartel in the asphalt industry. In the asphalt case, meetings which officially had the purpose to discuss research and development and environmental issues, were also used to divide markets between competitors.

The Competition Authority has not come across any cases where the environment rules have been a significant factor in the assessment of mergers.

SUISSE

1. Introduction

La politique de la concurrence et la protection de l'environnement sont deux manifestations de l'intérêt général qui occupe en Suisse une importance primordiale en terme de croissance et de compétitivité. Les incidences économiques de la protection de l'environnement sont estimées en Suisse entre 1,6 % et 4% du PIB¹.

La loi sur les cartels et autres restrictions à la concurrence (LCart) n'est pas applicable selon l'art. 3 al. 1 LCart si des prescriptions légales excluent de la concurrence certains biens ou services, notamment celles qui établissent un régime de marché ou de prix de caractère étatique ou celles qui chargent certaines entreprises de l'exécution de tâches publiques en leur accordant des droits spéciaux. Dans la pratique la non application du droit de la concurrence au secteur de l'environnement est interprétée de manière stricte et est rare. En effet, la loi suisse sur la protection de l'environnement privilégie l'initiative privée à l'intervention des pouvoirs publics. Ainsi, cette loi encourage les mesures librement consenties par les privés et les accords sectoriels pour atteindre les objectifs environnementaux définis par le législateur (cf. art. 41a de la loi sur la protection de l'environnement²).

Ainsi, une très large partie des mesures de protection de l'environnement tombent sous le champ d'application du droit de la concurrence. En particulier, les accords sectoriels encouragés par la loi qui rassemblent l'ensemble des acteurs du marché présentent des dangers du point de vue du droit de la concurrence que ce soit en termes d'accord illicites ou d'abus de position dominante. L'examen des cas les plus importants traités par les autorités suisses dans ce domaine montre comment les autorités suisses de la concurrence ont résolu les relations entre concurrence et environnement.

2. Cas importants

2.1 *L'enquête Swico/Sens (taxe anticipée pour la collecte et l'élimination d'appareils électriques et électroniques usagés), DPC 2005/2, p. 251.*

L'enquête Swico/Sens a été ouverte en 2002 suite à des plaintes d'entreprises de recyclage. Il s'agit de la première procédure de l'autorité suisse de la concurrence qui clarifie les rapports entre droit de la concurrence et objectifs environnementaux.

¹ Auswirkungen des Umweltschutzes auf BIP, Beschäftigung und Unternehmen, étude commandée par l'Office fédéral de l'environnement, 2005.

² Art. 41a

1. La Confédération et, dans le cadre de leurs compétences, les cantons, collaborent avec les organisations économiques pour exécuter la présente loi.
2. Ils peuvent favoriser la conclusion d'accords sectoriels en indiquant des objectifs et des délais.
3. Avant d'édicter des prescriptions d'exécution, ils examinent les mesures que l'économie a prises de son plein gré. Si possible et si nécessaire, ils reprennent, partiellement ou totalement, des accords sectoriels dans le droit d'exécution.

D'après les art. 4 et 5 de l'Ordonnance sur la restitution, la reprise et l'élimination des appareils électriques et électroniques, les commerçants, fabricants et importateurs d'appareils électriques et électroniques ont l'obligation légale de reprendre gratuitement les appareils usagés et de les éliminer. Les fabricants, importateurs et commerçants ont le choix de charger une entreprise de la collecte et de l'élimination de ces appareils ou de l'effectuer eux-mêmes directement. Nombre de ces entreprises ont signé un contrat avec deux organismes Swico et/ou S.EN.S afin que ces entreprises se chargent de cette tâche. L'adhésion à Swico et Sens n'est en aucun cas obligatoire. Swico et Sens s'occupent concrètement d'organiser la collecte, le transport et le recyclage des appareils usagés. Swico et Sens organisent les appels d'offres pour le recyclage et veillent au contrôle de la qualité de l'élimination respectueuse de l'environnement des déchets (controlling).

Les contrats passés avec Swico et S.EN.S prévoient que les fabricants/importateurs d'appareils neufs prélèvent une taxe de recyclage anticipée, qu'ils reversent à Swico ou S.EN.S. Le montant des taxes de recyclage anticipées est obligatoire et elles doivent être prélevées dans tous les canaux de distribution.

Un accord sur la répercussion de la taxe anticipée est-il un accord en matière de concurrence ?

La taxe anticipée constitue un élément du prix de revente des appareils électriques et électroniques. Le problème concurrentiel est la collusion entre les commerçants dans la répercussion uniforme aux consommateurs du montant de la taxe anticipée. La Comco est arrivée à la conclusion qu'un accord sur la répercussion d'un élément de prix, faible en proportion du prix final, ne constitue pas un accord sur les prix pour autant qu'il n'ait pas pour effet d'harmoniser les prix sur le marché du produit final. Un tel effet restrictif n'existe pas dans le présent cas. De plus, il est impossible pour un commerçant de savoir si son concurrent répercute intégralement ou non la taxe anticipée dans le prix de vente au consommateur car chaque commerçant peut dissimuler la non répercussion intégrale de la taxe en diminuant sa marge. Un accord sur la répercussion intégrale de la taxe anticipée serait donc impossible à contrôler.

Les fabricants, importateurs et vendeurs restent donc libres de décider de répercuter la taxe anticipée après avoir signé la convention. Il n'existe pas non plus de signes laissant apparaître que la concurrence ne fonctionnerait pas sur le marché des appareils neufs. La Comco est arrivée à la conclusion qu'on est en présence de l'internalisation d'un facteur de coût – rendue obligatoire par la loi – mais non d'un accord portant sur un élément de prix. La convention ne constitue dès lors pas un accord en matière de concurrence au sens de la loi sur les cartels car il ne restreint pas la concurrence.

2.1.1 Accord sur la répartition des marchés ?

En outre, S.EN.S et Swico ont convenu que S.EN.S se chargerait de l'élimination de certaines catégories d'appareils (par ex. les appareils électroménagers) et Swico de celle d'autres catégories d'appareils (par ex. les appareils de bureautique). La Comco a estimé que cet accord peut être justifié par des motifs d'efficacité économique au sens de l'art. 5 al. 2 LCart. En particulier, il réduit les coûts de transaction et permet aux entreprises d'élimination de réaliser des économies d'échelle. Il est par conséquent admissible du point de vue du droit des cartels.

2.1.2 Abus de position dominante collective? À suivre....

La Comco a néanmoins constaté que Swico et S.EN.S pourraient jouir d'une position dominante collective. Un potentiel de discrimination en aval, en particulier envers les entreprises en charge de l'élimination (licenciés Swico et partenaires S.EN.S), pourrait ainsi exister. Le secrétariat de la Comco va dès lors suivre attentivement le secteur de l'élimination et établir un rapport à l'attention de la Commission sur les éventuelles mesures complémentaires à prendre.

Dans le rapport qui est actuellement en cours, l'autorité de la concurrence se penche notamment sur les problèmes concurrentiels suivants:

- Abus d'exploitation envers les licenciés Swico et les partenaires S.EN.S (procédure d'appel d'offres et évaluation des offres, prix du recyclage payé au partenaires, barrières à l'entrée au marché [nécessité d'avoir une licence Swico ou S.EN.S], acquisition des appareils à recycler, controlling, résiliation des contrats).
- Abus consistant en une entrave des entreprises de recyclage qui ne font pas partie des systèmes Swico et S.EN.S.
- Existence éventuelle de collusions entre les entreprises de recyclage.

L'enquête Swico/S.EN.S a été close sans suite en mars 2005. Les entreprises de recyclage à l'origine de la plainte ont fait recours contre la décision de la Comco. La décision de la Commission de recours pour les questions de concurrence est encore pendante.

2.2 *Centime climatique (prélèvement volontaire sur les carburants), DPC 2005/1, p. 239*

Suite au Protocole de Kyoto signé en 1998, la Suisse a adopté la loi sur le CO₂ qui est entrée en vigueur en 2002. Par cette loi, la Suisse s'est engagée à réduire, d'ici à 2010, les rejets de CO₂ dus aux agents fossiles de 10 % en dessous du niveau de 1990.

Pour les combustibles fossiles (fioul domestique, etc.), le Gouvernement a décidé d'introduire une taxe obligatoire sur le CO₂. L'Union pétrolière a proposé pour éviter également pour les carburants (essence, diesel) une taxe obligatoire sur le CO₂ un prélèvement volontaire par les importateurs de 1 à 2 centimes par litre de carburant («centime climatique»). Les recettes de l'ordre de 60 à 120 millions de francs suisses par an, tirées du centime climatique seraient gérées par une fondation et serviraient à financer des projets de réduction du CO₂ en Suisse et à l'étranger.

Dans le cadre de la mise en œuvre de la politique climatique suisse, l'Office de l'environnement a demandé à la Comco d'établir une expertise au sens de l'art. 47 LCart sur la conformité du centime climatique avec la loi sur les cartels. La Comco a rendu son expertise le 20 décembre 2004.

2.2.1 *Application de la LCart*

7. Tout d'abord, il fallait se demander si la loi sur le CO₂ établit un régime de marché ou de prix à caractère étatique au sens de l'art. 3 al.1 lit. a LCart qui restreindrait l'application de la LCart. La loi sur le CO₂ encourage certes des mesures librement consenties par des privés pour réduire les émissions de CO₂, mais ne prévoit pas de manière contraignante la perception et le taux d'un prélèvement sur les CO₂. La perception du centime climatique intervient sur une base volontaire, il n'existe donc pas de prescriptions étatiques et la LCart est pleinement applicable.

2.2.2 *Accord restreignant notablement la concurrence*

Le prélèvement volontaire de l'Union pétrolière n'a pas été considéré comme un accord indirect sur les prix car le prélèvement de 1 à 2 centimes représente une trop faible partie du prix pour avoir un effet d'harmonisation sur le prix final. En revanche, la Comco a estimé que l'accord avait un effet notable sur la concurrence en raison que le centime climatique représente 2 à 4% du prix de l'essence hors taxe et que ce prélèvement constitue un accord en vigueur dans l'ensemble de la branche des importateurs pétroliers (95% des importateurs de pétrole brut et de produits pétroliers en Suisse font partie de l'Union pétrolière).

Les accords qui restreignent notablement la concurrence peuvent être justifiés par des motifs d'efficacité économique au sens de l'art. 5 al. 2 LCart s'ils sont nécessaires notamment à une exploitation plus rationnelle des ressources.

2.2.3 Justification pour des motifs d'efficacité économique?

La doctrine suisse n'est pas unanime à considérer qu'atteindre un but en matière de protection de l'environnement peut être un motif d'efficacité économique et pas seulement un but général souhaité par la société. La Cour suprême suisse relève que la notion d'exploitation rationnelle des « ressources » comprend également les biens publics et les ressources naturelles, si bien qu'il est possible d'intégrer des paramètres écologiques dans l'évaluation des critères d'efficacité économique. La Comco se rallie à cette interprétation dans son expertise.

Il doit, toutefois exister, un lien suffisamment étroit entre la restriction de la concurrence et l'exploitation, le processus de fabrication des entreprises parties à l'accord et le produit en question. La Comco nie dans le cas présent l'existence d'un tel lien. Pour qu'un lien avec le produit (benzine, diesel) soit reconnu, il faudrait assurer que le centime climatique conduise effectivement à une internalisation des coûts liés à la pollution causée par les carburants fossiles. Dans l'état actuel des faits tels que soumis pour l'expertise, il n'était pas évident de déterminer si le centime climatique permettrait de diminuer effectivement les émissions de CO₂. Ni l'indépendance de la fondation chargée de la gestion des montants perçus ni leur utilisation n'étaient suffisamment claires. La Comco est dès lors arrivée à la conclusion sur la base des faits connus que le prélèvement du centime climatique ne pouvait pas se justifier par des motifs d'efficacité économique.

Cette décision ne réduit toutefois pas le choix des variantes de mise en œuvre de la loi sur le CO₂. Le Gouvernement peut en effet autoriser en application de l'art. 8 LCart, des accords en matière de concurrence reconnus illicites par les autorités de la concurrence si, à titre exceptionnel, ils sont nécessaires pour sauvegarder des intérêts publics prépondérants. Il s'agit ici d'une décision à caractère politique.

2.3 Enquête sur les nouvelles lignes ferroviaires à travers les Alpes (NLFA)

Une enquête actuellement en cours porte sur un cartel de soumission allégué entre les fournisseurs de ciment et de béton lors de l'attribution des marchés pour la construction de tunnels ferroviaires reliant la Suisse à l'Italie (NLFA).

Les prescriptions environnementales, en particulier l'obligation de transporter le ciment exclusivement par train, a exclu de facto les fournisseurs étrangers de ciment qui ne sont pas à même de remplir cette condition environnementale. En effet, le ciment est transporté quasi exclusivement par route dans les pays voisins de la Suisse et les fournisseurs étrangers ne disposent pas de sites de production reliés au réseau ferroviaire ni de wagons permettant de transporter le ciment par train. En Suisse, environ 50% du ciment est transporté par train. Les exigences environnementales ont donc créé des barrières à l'entrée favorisant les offreurs suisses, ce qui a réduit considérablement le nombre de compétiteurs potentiels.

2.4 Concentration d'entreprises: Batrec/Recymet, DPC 1999/1, p. 172

En 1999, la Suisse était un des rares pays où l'entrepôt «sauvage» des piles usagées était interdit. Suite à la concentration entre Batrec et Recymet, deux entreprises actives dans le recyclage des piles usagées, il ne subsistait plus qu'une seule entreprise sur ce marché. Cependant, les conditions de la théorie de l'entreprise défaillante ont été estimées être remplies. De plus, la Comco relève qu'à l'époque le marché de recyclage des piles usagées constituait un monopole naturel étant donné le faible volume de piles à recycler et les hauts coûts fixes des installations de recyclage. Le fait qu'une seule entreprise subsiste était par ailleurs la solution la plus efficace. La Comco souligne également que les prescriptions plus sévères de

la Suisse que le pays voisins et l'interdiction d'exportation et d'importation de piles usagées généraient des coûts d'élimination très élevés pour les piles usagées en Suisse. La Comco a recommandé à l'office de l'environnement de lever cette interdiction.

2.5 «Advocacy» lors d'adoption de lois et ordonnances à but environnementaux

Les autorités suisses de la concurrence ont eu l'occasion de s'exprimer à plusieurs reprises lors de l'adoption de nouvelles lois ou ordonnances poursuivant des objectifs environnementaux, par exemple dans le domaine des emballages ou de la collecte des piles usagées. Dans la lignée des recommandations faites lors d'une observation de marché de la Commission des cartels (prédécesseur de la Comco) dans le secteur du recyclage³, l'autorité de la concurrence a notamment préconisé en premier lieu de protéger l'environnement au moyen de mécanismes de marché, de seulement désigner les responsables de l'obligation de recyclage et de laisser aux entreprises la liberté de s'organiser sur la manière de remplir cette obligation. Les pouvoirs publics doivent également éviter de fixer le taux des taxes anticipées d'élimination afin d'inciter les entreprises à choisir les entreprises d'élimination les plus efficaces.

3. Conclusions

La poursuite d'objectifs environnementaux en tant que tel ne permet pas de s'affranchir du droit de la concurrence. Les dispositions légales qui empêchent l'application de la loi sur les cartels sont interprétées de manière très restrictive par les autorités de la concurrence. Dans le domaine où la LCart n'est pas applicable, la Comco peut faire des recommandations afin de remédier à des distorsions étatiques prises dans un but de protection de l'environnement. Le rôle d'« advocacy » au stage de l'adoption des lois et des ordonnances à but environnemental est donc crucial pour éviter ces restrictions d'origine étatique.

Concurrence et environnement ne sont pas obligatoirement antinomiques. Des mesures restrictives de concurrence peuvent être justifiées pour des motifs d'efficacité économique dans la mesure où une production respectueuse de l'environnement aboutit à une exploitation plus rationnelle des ressources. Toutefois, le lien entre la restriction à la concurrence et l'objectif environnemental doit être suffisant, afin d'éviter que sous prétexte de la protection de l'environnement, des privés puissent restreindre la concurrence. C'est le seul cas de figure où les autorités de la concurrence doivent résoudre elles-mêmes le conflit entre concurrence et environnement. Ce mécanisme est similaire à l'exemption d'accords environnementaux servant au progrès économique dans l'Union européenne.

Enfin, une restriction à la concurrence déclarée illicite par les autorités de la concurrence peut être autorisée à titre exceptionnel (possibilité de conditions et de limites temporelles) par le Gouvernement au titre de l'art. 8 LCart pour des motifs d'intérêts prépondérants. La protection de l'environnement pourrait être un de ces motifs.

Peu d'attention n'a été jusqu'à présent portée à la thématique d'élévation des barrières à l'entrée sur le marché par des prescriptions environnementales et la capture de celles-ci par les entreprises. Ce problème va gagner en importance car la réglementation suisse est en général plus stricte que celle de ses voisins européens en matière de protection de l'environnement.

³ Publications de la Commission des Cartels et du Surveillant des prix, 2/1995 et 2/1996.

TURKEY

In the last decades, environmental issues are taken into consideration more and more not only by the governments but also by the consumers all over the world. Environmental protection is considered as one of the cornerstones of sustainable development in both developing and developed countries. Furthermore, it is necessary for the well-being of future generations. Developing countries have been concerned that domestic environmental policies in developed countries may adversely affect market access of products from developing countries. Producers in developing countries may lack the technical and financial ability to comply with the environmental regulations of industrialised nations. Environmental protection requirements are often seen as a way to move towards more environmentally sustainable production and consumption methods.

As is known, EU environment policy is based on the belief that high environmental standards stimulate innovation and business opportunities. To this end, Community law provides that environmental considerations must be integrated into all other Community policies. This includes European competition policy as well. Environment policy is also one of the obligations arising from Turkey's candidacy to EU membership.

There is no explicit relation between environmental issues and competition rules in the Act on the Protection of Competition Law no 4054 (Turkish Competition Act). However, in line with the changes concerning the impact of economic activity on the natural environment, environmental considerations are gradually becoming inevitable during the implementation of Turkish Competition Act by the Competition Board, which is the responsible body for the application of the aforementioned Act. Although there is no direct reference to environmental issues in the Act, such concerns start to take place in the secondary legislation and case analyses.

In today's world, undertakings are paying more attention to environmental standards to be better in the markets. However, those environmental standards which regulate the environmental characteristics of products (product standards) might act as barriers to entry. Besides, the conformity with those standards requires new technology that is seen risky and costly by undertakings. As a result of which undertakings might end up in horizontal agreements.

Article 4 of the Turkish Competition Act prohibits those agreements, decisions and concerted practices, which restrains, distorts or restricts competition within the relevant market. Nevertheless, certain agreements and decisions which restrict competition and therefore fall under article 4 may at the same have 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 prohibition provisions of article 4 under article 5 of the Act.

Within this regard, "Block Exemption Communiqué on Vertical Agreements and Concerted Practices in the Motor Vehicle Sector Communiqué No: 2005/4" is worth mentioning before talking about other cases. Article 5 of this secondary legislation arranges limitations which exclude agreements from the scope of group exemption. Accordingly, the exemption provided for shall not apply where the manufacturer of

motor vehicles prevents the access of independent undertakings¹ to any technical information, diagnostic devices and other type of equipment, necessary software, or training required for the maintenance and repair of motor vehicles or for the implementation of environmental protection measures. In brief, this Communiqué aims to ensure that consumers would be able to get their cars repaired and serviced by independent repairers, and also safety and environmental protection be maintained.

1. Relevant Cases Dealing with Environmental Issues

1.1 Hotel services

During the evaluation of the cases in the hotel services markets, the Board has come across with the Ministry of Environment and Forestry's request for an obligatory report from the undertakings which are willing to build tourism premises. According to the Environmental Effect Evaluation Regulation, based on the Environment Law no 2872 article 10, those undertakings willing to invest into tourism premises having hotel rooms in between 50 to 200 rooms are obliged to prepare "Pre-Environmental Effect Evaluation Report", whereas undertakings willing to invest into more than 200 rooms are obliged to prepare "Environmental Effect Evaluation Report". Upon the preparation of these reports, they need to be submitted for approval to the aforementioned Ministry. The Ministry decides in 10 days whether the planned activities are in line with the environmental standards and regulations. The Board, in its evaluation concerning the privatisation of Abant Bolu Hotel² and İstanbul Hilton Hotel³, decides that although such an obligation can be considered as a legal entry barrier within the relevant product market (hotels and holiday villages), from the competition law perspective it is not yet certain whether this obligation has positive or negative consequences. But, the Board decided that this is an affirmative and beneficial obligation from the environmental protection point of view. In brief, it can be concluded that environmental issues arising from other relevant laws and regulations are taken into consideration and cannot be put aside within the hotel services markets while dealing with the competition law cases.

1.2 Coal Sector

The Board also dealt with the environmental issues, while examining the anti-competitive practices in the coal sector in the city of Diyarbakır⁴. In order to prevent air pollution, the Provincial Environment Board of the Diyarbakır Municipality orders a control mechanism. This mechanism foresees the prevention of the transfer of the coal to Diyarbakır which is not up to standards. According to this mechanism, the coal transferred to Diyarbakır is collected at the coal distribution centre before sold to consumers. At this centre, undertakings are obliged to show their authorisation certificates from the Municipality. In addition to this authorisation certificate, the Municipality also foresees obligatory membership to "Diyarbakır Coal Procurement and Distribution Cooperative". Although the Competition Board accepted the first part of the mechanism as obligatory from the environmental protection point of view in its decision, it considers the obligatory membership to a cooperative as an entry barrier that could restrict competition by leading into price agreements among its members, thus informed the Diyarbakır Municipality and the Governorship for the abolition of such practice.

¹ According to article 3 (v) of this Communiqué "independent undertaking" means the undertakings, special services, repair device and equipment manufacturers, independent spare part manufacturers and distributors, technical information publishers, automobile clubs, undertakings that provide road assistance, undertakings that provide testing services and undertakings that provide training, which are engaged, directly or indirectly, in the maintenance and repair of vehicles.

² Board Decision no 99-56/611-388 (b) dated 9.12.1999.

³ Board Decision no 5-53/812-222 dated 1.9.2005.

⁴ Board Decision no 05-07/59-26 dated 3.2.2005.

1.3 LPG Distribution

The Board, in one of its recent decisions, continues appreciating environmental matters. This recent case is an individual exemption evaluation in the LPG distribution market. In generic terms, LPG distribution market composes of the storage activity since storage can not be separated from the distribution of the LPG. In this case⁵ three competitors are willing to form a JV which will be serving them in the management of the construction of the ship connection buoy system, interim storages and pumping mechanism in Karaagac Bay of İzmir. This JV will continue managing the operation of the whole mechanism upon the completion of the construction process. As mentioned above under the Turkish Competition Act, agreements restricting competition can be exempted from the prohibition of Article 4, if beneficial effects caused are greater than the harmful effects. In order for such an exemption to be granted, the simultaneous existence of four conditions listed in the article 5 is obligatory. First of all, the agreement or concerted practice or decisions 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 in the provision of services. Under the evaluation of this item, the Board decides that when economies of scale are taken into consideration, construction of a single terminal instead of three would be affirmative not only for the cost advantages it creates but also for the environmental effects it produces. The opinion from the Under secretariat of Navigation supports the Board's decision under the umbrella of environmental considerations too. Accordingly, construction of more than one terminal would be inconvenient for the security of the environment under the current circumstances.

1.4 Conclusion

Competition policy has to consider the environmental effects during its evaluation in the market. It is truism to argue that environmental consequences are reflected mainly in the form of horizontal agreements among undertakings. Every kind of horizontal agreement is seen as illegal if it prohibits, restricts or limits competition within the market under Turkish Competition Law. However, they can be exempted individually or as a group upon the satisfaction of certain criteria. Moreover, some legal environmental obligations can be seen as market barriers to entry. But from the competition law perspective it is not yet certain whether those obligations has positive or negative consequences. The point lies in the fact that whether those obligations have affirmative effects upon the natural environment and to what extent affect the market behaviour of undertakings.

The implementation of Turkish Competition Act by the Competition Board tries to reflect this understanding in its various decisions. The Board, bearing in mind the importance of environmental considerations, the impact of economic activity on this matter and the awareness of the business community, aims to establish the link in between environmental issues and competition policy.

⁵ Decision no 06-31/380-97 dated 28.4.2006.

UNITED KINGDOM

Introduction

The objective of UK competition policy is to make markets work well for consumers through tackling both private and public restrictions of competition. Competition, through its incentive properties and otherwise, is a valuable means to a great range of ends, including the achievement of environmental objectives.

This paper begins by outlining private restrictions of competition and environmental issues and the extent to which competition law can take environmental issues into account. However, competition policy is wider than competition law: it is also about ensuring that government makes the most of competition when pursuing other policy objectives, and avoids imposing undue restrictions. For example, different approaches to correct for environmental externalities such as pollution will have different impacts on competition and the way markets work e.g. traditional regulation to control the level of pollution may be more distortional than market-based approaches such as tradable permits.

1. Private restrictions of competition and environmental issues

Competition law e.g. dealing with anti-competitive agreements, abuse of dominance and mergers has mainly been used to deal with private restrictions of competition¹.

In circumstances where competition policy may have an impact on areas that also concern environmental policy, UK (and European) competition law does allow in principle for environmental benefits to be taken into account within the economic framework of competition analysis.

Chapter 1 of the Competition Act 1998 prohibits agreements which prevent, restrict or distort competition and may affect trade in the UK. Section 9(1) exempts an agreement which contributes to improving production or distribution, or promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit; but does not impose on the undertakings concerned restrictions which are not indispensable to the attainment of those objectives or afford the undertakings concerned the possibility of eliminating competition in respect of a substantial part of the products in question.

For example, at the European level an agreement between manufacturers and importers of washing machines that was to result in the phasing out of old models, which were inefficient in terms of the use of water, detergent and electricity was found by the European Commission (EC) not to infringe Article 81 since it would result in cheaper fuel bills and less pollution². Points to note include:

- EC estimated that the combined social benefits were seven times greater than the higher purchase costs as a result of the more stringent standards;

¹ Public bodies that are undertakings are also subject to competition law.

² CECED - Article 81 of the EC Treaty and Article 53 of the EEA Agreement - Antitrust - Case No IV.F.1/36.718 [1999] ECTComm 3 (24 January 1999).

- EC concluded that less restrictive alternatives, such as information campaigns eco-label awards were unlikely to deliver the expected benefits because consumers do not rate energy efficiency highly compared to other factors such as price, brand, technical performance.
- EC noted incentives for R&D to improve energy efficiency.

The consideration of mergers under the Enterprise Act 2002 does have scope in principle for environmental benefits to be taken into account in two ways but this is untested in practice:

- If they result in rivalry-enhancing efficiencies or customer benefits, in which case they must be demonstrable, merger-specific and likely to be passed on to consumers. So if firms competed on being environmentally-friendly and the merged entity would be more competitive in terms of this there may be efficiencies. However, efficiencies and customer benefits are difficult to prove in practice.
- The Secretary of State for the Department of Trade and Industry can issue a Public Interest Intervention Notice – but this appears to be highly unlikely to occur in practice. The Enterprise Act 2002 currently defines only national security as a public interest criterion, although there is provision for the Secretary of State to identify additional public interest criteria.

2. **Public restrictions of competition and environmental issues**

There is a role for government intervention in markets when private and social costs/ benefits diverge and there are externalities, such that the consumption of a good or service by one set of individuals affects the welfare of others. Emissions of greenhouse gases are an example of a negative externality. When one person engages in an activity which leads to the emission of pollutants into the atmosphere, the pollution is largely borne by others. Because individuals or firms do not personally bear the full cost of the pollution they generate, they tend to produce more pollution than society as a whole would consider desirable. This market failure creates a role for governments to intervention.

The tools for achieving improved outcomes are varied, some will make greater use of competition than others. This section will consider how the following public sector activities can affect competition:

- Traditional regulation
- Public subsidies
- Public procurement
- Market-based approaches to environmental policy.

2.1 *Traditional regulation*

Market failures and social objectives lead to government involvement, such as regulation, in sectors of the economy. It is estimated that around 80 per cent of environmental regulations in the UK stem from EU directives. In general, regulations can affect competition by:

- **Directly limiting the number or range of suppliers.** This is likely to be the case if the regulatory proposal involves: the award of exclusive rights to supply; procurement from a restricted group of suppliers or single supplier; the creation of a form of licensing scheme; and/or a fixed limit on the number of suppliers

- **Indirectly limiting the number or range of suppliers.** This is likely to be the case if the regulatory proposal: significantly raises the costs of new suppliers relative to existing suppliers; significantly raises the costs of some existing suppliers relative to other existing suppliers; and/or significantly raises the costs of entering or exiting from an affected market.
- **Limiting the ability of suppliers to compete.** This is likely to be the case if the regulatory proposal: controls or substantially influences the price(s) a supplier may charge; controls or substantially influences the characteristics of the product(s) supplied, for example by setting minimum quality standards; limits the sales channels a supplier can use or geographic area a supplier may supply to; substantially restricts the ability of suppliers to advertise their products; and/or limits how the supplier organises its production process or restricts its choice of organisational form.
- **Reducing suppliers' incentives to compete vigorously.** This may be the case where a regulatory proposal: exempts suppliers from general competition law; requires or encourages the exchange between suppliers or publication of information on prices, costs, sales or output; and/or increases the costs to customers of switching between suppliers.

Some environmental regulations have exemptions for certain types of industry e.g. the UK exempted the aluminium industry from climate change levy that applies to electricity consumption. Provided the industry with the exemption does not compete in the same markets as industries without the exemption, this is unlikely to distort competition. The international position of the exempted industry is unchanged from its position before the regulation was introduced so international competition should not be affected. However, this area is complex from the perspective of the state aid rules. Also, it is not straightforward to ensure that an exempted industry does not compete currently with regulated industries or that the exemption will not distort future developments in a way that undermines the regulation or creates economic inefficiency.

Sometimes small firms are exempt from environmental regulations although it is not clear that there are any set criteria for deciding when to give an exemption. If, to achieve an environmental objective, firms will incur large fixed costs it might be the case that an increase in industry concentration is not necessarily a bad thing. In which case, exemptions for small firms might not be appropriate.

There is always a risk that vested interests may try to take advantage of changes in environmental policy to dampen competition. When considering how to implement the Waste Electrical and Electronic Equipment (WEEE) directive in the UK, some sectors of industry wanted the Government to go further than is required by the Directive and introduce a mandatory 'visible fee', where the cost of recycling for each product is separated out from the price of a product, so the consumer is aware of this at the time of purchase. An interesting question is whether this could provide a focal point around which firms could collude and agree to fully pass on the costs of recycling to the consumer. In addition, the cost of recycling would not necessarily be the same for each firm so having a mandatory visible fee may dull the incentives for producers to find better ways of designing products to minimise waste.

Incumbents may have an incentive to use voluntary agreements and take a 'partnership' approach instead as an alternative to environmental regulation. These may be more cost effective but attention should be paid to whether such agreements could raise barriers to new entrants and could themselves restrict competition as a result of particular provisions in the agreements.

2.1.1 *OFT scrutiny of environmental regulations*

Important steps have been taken to make competition scrutiny of regulation in the UK more systematic. The Enterprise Act 2002 has strengthened the power of the Office of Fair Trading (OFT) and the Competition Commission (CC) to examine and make recommendations to Government on regulatory restrictions.

Since 2002, government departments have been required to assess the impacts of new regulations on competition through the regulatory impact assessment (RIA) process. The OFT provides guidance to Government departments on when and how to carry out competition assessments. Over the last year we have provided advice on 10 RIAs relating to environmental policies.

In market studies the OFT looks at how the whole market works and takes a pragmatic approach when assessing the impact of regulations on competition. Although environmental issues have not been a big feature of market studies to date, the taxis market study provided an example of where there was quality regulation to protect the environment by controlling emissions. Although it may be possible to reduce emissions through specific methods such as fitting oxidation catalysts or converting taxis to run on LPG, given the general improvements in fuel efficiency in cars over time, levels of taxi vehicle emissions are most often controlled through limits on vehicle ages. We concluded that, because taxi services have a role to play in broader social welfare policy such as environmental protection, local authorities should be able to apply regulations to suit their needs. The key point is to ensure that regulations in these areas are proportionate.

2.2 *Public subsidies*

Environmental subsidies have the potential to distort competition because they alter not only the behaviour of recipient firms but the behaviour of competitors. The provision of subsidies may distort competition by³:

- causing firms to set pricing and output levels inefficiently;
- keeping inefficient firms in the market, discouraging entry by efficient firms and encouraging entry by inefficient firms;
- distorting investment and research and development decisions.

Almost all subsidies are likely to affect competition. The extent of this impact depends on the characteristics of the subsidy and the characteristics of the market in which the recipients operate. The main characteristics of a subsidy that affect the size of the competition distortion are:

- the absolute size of the subsidy as well as its size relative to the costs of the activity being subsidised;
- the level of selectivity of the subsidy i.e. whether it is provided to all or some firms in a market;
- whether the subsidy affects the recipients costs directly;
- whether the subsidy is provided on a recurring basis.

³ Public subsidies: A report by the Office of Fair Trading, November 2004, OFT 750.

In terms of market characteristics, distortions are more likely to be significant if:

- the market is concentrated;
- there is a high level of product differentiation;
- the firms in the market are of markedly different sizes;
- there are barriers to entry;
- firms in the market compete in research and development.

So a subsidy for an environmental purpose that is available to all firms in the market or can be competed for by all firms in the market (with regard being taken to any incumbency advantage) is unlikely to distort competition. It is where there are asymmetries in the availability of subsidies to different firms in a market that competition is likely to be distorted.

The UK uses subsidies to support the innovation/development of environmental technologies. If these are available on the same terms to anyone who had a similar chance of developing environmental technology then they do not distort competition. Strictly speaking the subsidy needs to be available to technology developers regardless of their location. However, Government is unlikely to offer a subsidy on these terms and will probably require that a company is British or the development is taking place in the UK, which does introduce an element of distortion to the extent that developers do not choose to relocate in the UK.

2.3 Public procurement

Where the public sector, through procurement, exercises countervailing buyer power, it keeps a check on supplier market power, making suppliers compete more vigorously for public contracts than they otherwise would. The exercise of countervailing buyer power may sustain a competitive market in the long term, or even help new suppliers overcome entry barriers. On the other hand, a strong public sector buyer may also reduce competition, e.g. by creating strong incumbency advantages through overly large and long contracts.⁴

Public procurement can affect competition in a number of ways:

- short-term effects on competition among potential suppliers i.e. effects on the intensity of competition among existing suppliers in a particular tender, for example, taking the number of firms in the market, the range of products available and the underlying production technology as given
- long-term effects on investment, innovation and the competitiveness of the market, i.e. effects that capture changes in market structure and technology caused by public procurement, which would be reflected, for example, in the level of competition for future tenders
- knock-on effects on competition in the supply of other buyers; other buyers are, for example, affected by changes in market competitiveness or technology. They might both benefit from, or

⁴ Assessing the impact of public sector procurement on competition, report by DotEcon for Office of Fair Trading, September 2006, OFT734.

be harmed by, attempts by the public sector to use buyer power in order to obtain better terms and conditions from its suppliers.

These effects can sometimes work in opposite directions. For example, strong promotion of short term competition among suppliers can reduce long term competition, or may discourage innovation and investment.

The OFT has recently been working with the Department of Environment, Food and Rural Affairs and the Office of Government Commerce to look at how public procurement in the municipal waste management sector can be used to deliver environmental objectives such as diverting waste away from landfill and developing the waste treatment sector⁵. At present, the infrastructure to meet waste targets e.g. the Landfill Directive does not exist, with some estimating that 2,300 new waste treatment facilities will be required by 2020. This is a good example of how competition and environmental policy objectives could go hand in hand because of the need to encourage new entry and investment in order to meet the demand for new waste treatment facilities.

For example, our work showed that many local authorities aggregated their landfill contracts with waste treatment contracts. Given the difficulties in the UK of securing a landfill site, the effect of this was to limit the number of suppliers who could bid for contracts to those who already had existing landfill sites. We recommended that local authorities should consider carefully what services are aggregated and why, taking particular care when aggregating waste treatment and landfill contracts. We also recommended local authorities to encourage bids from suppliers active outside the region, for example, by ensuring that they had access to landfill sites.

We also found that suppliers' previous experience in the waste management sector is often a prerequisite for local authorities in tenders for waste treatment facilities. However, there may be potential suppliers with the relevant skill set and smaller waste management firms who may be able to form a consortium to bid for contracts. In order to widen the supply base, we recommended that local authorities should remain open to these type of consortia bids.

2.4 Market-based approaches to environmental policy

Government intervention to solve market failures and achieve social objectives can bring its own problems – this is often referred to as government failure. This arises from the loss of certain disciplines of free-market provision such as incentives for efficiency and the role of the price mechanism in allocating resources. Market-based approaches such as tradable permits offer alternatives to traditional regulation by introducing these disciplines i.e. using market forces to reduce the problem of government failure⁶.

Tradable permit schemes have been employed in a number of countries, including the UK, mainly to control pollution emissions. Economic theory suggests that property rights should be allocated through an auction, rather than being based on historic levels of pollution. An auction ensures that, right from the beginning, the right to pollute is given to those firms that can extract the most value from it. However, such an allocation method is likely to face more opposition from firms than the 'grandfathering' of rights, where firms are given rights free of charge depending on current pollution levels.

⁵ More competition, less waste: public procurement and competition in the municipal waste management sector, Office of Fair Trading, May 2006 OFT841.

⁶ The OFT, Department of Trade and Industry and the Competition Commission commissioned research to look at this issue. Public Policy: using market-based approaches, DTI Economics Paper No.14, September 2005.

In the UK emissions trading scheme (ETS), participants received permits based on their historic emissions levels. In order to encourage voluntary participation, the Government held an auction where participants could bid emissions reductions over the period 2002-2006 relative to historic emissions in return for a share of £215 million of incentive funding from the Government. An assessment of the auction carried out for the National Audit Office by Frontier Economics⁷ suggested that an alternative, and perhaps better, way to have set and allocated the incentive fund would have been through a sealed-bid auction process, where participants submit details of how many reductions they would bid at a range of prices. This, argued Frontier Economics, would have enabled the Government to procure emissions reductions at a lower unit cost.

The key competition issue with implementing this sort of market-based mechanism relates to market power. Firstly, firms may hoard permits in order to exclude potential entrants in the same industry. This problem can be avoided by including within the scheme participants across several industries, from whom new entrants can purchase permits or setting aside permits for new entrants. Second, firms may hoard permits in order to manipulate the price of the permits themselves. Again this risk can be reduced by maximising the size of the scheme across emission types and geographic boundaries.

The UK emissions trading scheme (ETS) allowed a number of different types of participants such as firms and traders to buy and sell permits. This range of potential participants increases both the number of participants and the number of sectors or industries participating in the market, which helps to reduce the likelihood of market power problems.

The UK ETS covered emissions of all six greenhouse gases. The same allowance can be used to meet a target for emissions of any greenhouse gas, with set exchange rates between different gases to reflect their differing impacts on climate change. Widening of the scheme in this way can also limit the extent to which firms can exercise their market power.

Under scheme rules participants were prevented from gaining more than 20 per cent of the incentive fund in the initial auction, reducing the number of permits they could hold and their ability to manipulate the price of allowances.

LECG in its report to DTI on using market based approaches⁸ suggest that in practice, the biggest participants ended up holding a very large number of allowances. However, LECG argues that the observed movements in prices suggests that the presence of market power is unlikely to have been a significant problem in practice as prices have, on average, fallen since the launch of the scheme.

Another example of the how tradable permit schemes can affect competition is the UK implementation of Phase I of the EU Emissions Trading Scheme (EU ETS) (which started on 1 Jan 2005 and ends on 31 Dec 2007). This covered glass fibre plants (as part of the EU ETS 'glass sector') but did not extend to rock wool, which is a direct competitor of glass wool, thereby creating a competitive distortion within the mineral wool industry in the UK. Some member states included rock wool in Phase 1, others did not. For Phase 2 (which begins on 1 Jan 2008) it is proposed that one of the areas to which the scheme is expanded is rock wool to address this distortion.

⁷ Report by the Comptroller and Auditor General (April 2004) The UK Emissions Trading Scheme: A new way to combat climate change, National Audit Office.

⁸ Public Policy: using market-based approaches, DTI Economics Paper No.14, September 2005.

3. Conclusion

Competition law can take environmental issues into account. To date there do not appear to be many cases in the UK where there has been a conflict between competition and environmental policies.

Competition policy is wider than competition law: it is also about helping government make the most of competition and minimising undue public restrictions of competition (which might not be caught by competition law) to make markets work well for consumers.

Environmental policies can involve regulation, subsidies, procurement, all of which affect how markets work. The key is how to design environmental policies to protect and promote competition or, where tradeoffs arise, to minimise any distortions or restrictions of competition.

UNITED STATES

(*FTC and DOJ*)

In keeping with the focus of this OECD roundtable, our submission addresses how environmental regulation may affect (and has affected) competition. As such, this paper does not examine the significant benefits that environmental regulation has provided and continues to provide, *e.g.*, through improved air, land and water quality. Antitrust enforcers and advocates can play an important role in identifying the competitive effects of regulation, so that legislators and regulatory agencies can do the best job of balancing potentially competing policy considerations and can make fully informed decisions. Antitrust agencies are well suited to this competition-specific analysis, and we appreciate the opportunity to focus attention on the competitive effects of environmental regulation.

This submission focuses on the competitive effects of environmental legislation in the gasoline sector, in which the Federal Trade Commission (“FTC” or “Commission”) has extensive competition policy and enforcement expertise. In examining the competitive effects of environmental regulations applied in the last decade to gasoline markets in the United States, this submission examines the extent to which environmental regulations – particularly those intended to encourage cleaner-burning formulations of gasoline – may have worked to change the contours of relevant markets or may have contributed to highly visible market phenomena such as price volatility.

1. Environmental Regulations Applied in Gasoline Markets

1.1 Background

In the United States, the refining, terminaling, wholesaling, and marketing of gasoline are subject to numerous environmental regulations enforced at the federal level by the U.S. Environmental Protection Agency (“EPA”) and by state environmental agencies. In particular, regulations to reduce air pollution have required refiners to change gasoline formulations to produce cleaner burning fuels. The original step in this direction, taken pursuant to the Clean Air Act, prohibited lead additives in gasoline. Similar regulations followed, *inter alia*, requiring the use of oxygenates that would make gasoline burn more cleanly and limiting emissions of several harmful pollutants, including nitrogen oxide, sulfur dioxide, and volatile organic compounds.

Under amendments to the Clean Air Act, the EPA was authorised to identify “pollution no attainment areas,” defined as metropolitan areas in which air pollution was particularly high. In such areas, the EPA could require remedial measures, including the use of special formulations of gasoline – so-called “reformulated gasoline” (“RFG”). By 1995, the EPA identified 19 non attainment areas in which RFG and its successors, RFG II and RFG III, would be required. It was illegal for retailers to sell gasoline in these areas that did not burn at least as cleanly as RFGs.¹ At present, RFGs are required in portions of 17 states

¹ The non attainment areas were Covington, Kentucky (near Cincinnati, Ohio); Louisville, Kentucky; St. Louis; Dallas-Ft. Worth; Houston; the Chicago-Milwaukee area; the Los Angeles-San Diego area; the Sacramento, California, area; the area in Virginia between Richmond and Norfolk; and the heavily populated area between Washington, D.C., and Boston.

and the District of Columbia, and they account for 30% of the gasoline sold in the United States. Each individual refiner decides whether and how to blend RFGs.

At roughly the same time, the State of California enacted similar environmental regulations, requiring gasoline sold anywhere within the state to meet minimum quality standards set by the California Air Resources Board ("CARB" or "Board"). CARB formulations pollute less than do RFGs. Thus, although CARB formulations satisfy federal environmental standards for gasoline sold in non attainment areas, RFGs do not necessarily satisfy California's environmental standards.

1.2 The Possible Effect of Gasoline Formulation Regulation on Competition

This submission assesses whether such environmental regulations applied in the gasoline sector may affect the intensity of competition and the likelihood of anticompetitive conduct, rather than other price effects (such as those attributable to a change in costs).² In particular, we describe how environmental legislation may have affected the contours of the relevant markets in which firms compete or may have contributed to price spikes or price volatility. These rules also have been subject to manipulation by market participants, and, in the case of CARB regulation, also have raised concerns over the potential for anticompetitive unilateral conduct in the form of "cheap exclusion."

1.2.1 Market Fragmentation

The Commission has examined the gasoline industry in numerous investigations. Most of these investigations have involved petroleum industry mergers, with others addressing conduct prompted by temporary price spikes. Relevant gasoline markets are usually regional or metropolitan in scope.³ Similarly, environmental regulations on gasoline formulations usually are applied over a specific region or metropolitan area. Thus, environmental regulations can result in requirements to use different gasoline formulations in nearby or adjacent geographic areas.

FTC merger investigations,⁴ for example, have shown that environmental regulations may affect competition and the competitive analysis of mergers in several ways. First, in some cases, environmental regulations may make it appropriate to assess the possible competitive effects of mergers in relatively narrow relevant markets or in multiple product and geographic markets. For example, when Chevron proposed to acquire Texaco in 2001, the Commission alleged a relevant market in RFG II gasoline

² Both RFGs and CARB formulations are more expensive to refine and blend than conventional gasoline, and the price premiums for those specialised formulations do not necessarily indicate a change in the competitive dynamics of the market.

³ In the refining/bulk supply markets, this is due to transportation infrastructure, whereas terminal markets are limited by transportation costs. The staff of the FTC has noted that "[a]lthough crude oil is, for the most part, a commodity traded on world markets, our experience shows that economically relevant gasoline markets are regional for refining and transportation, and local when considering gasoline distribution or retail sales." Comments of the staff of the FTC before the EPA at 4 (Jan. 30, 2002).

⁴ The FTC has released data in the last two years that show that the agency has brought merger cases in the petroleum industry – and has required relief in such cases – at lower levels of concentration than in other industries. Unlike in other industries, the Commission has obtained merger relief in moderately concentrated petroleum markets. Moreover, our vigorous merger enforcement has preserved competition and thereby kept gasoline prices at a competitive level. See, e.g., Federal Trade Commission Horizontal Merger Investigation Data, Fiscal Years 1996-2003 (Feb. 2, 2004), Table 3.1, et seq.; FTC Horizontal Merger Investigations Post-Merger HHI and Change in HHI for Oil Markets, FY 1996 through FY 2003 (May 27, 2004), available at <http://www.ftc.gov/opa/2004/05/040527petrolactionsHHIdeltachart.pdf>.

confined to just the greater St. Louis metropolitan area.⁵ The Commission also examined the competitive effects of West Coast refinery consolidation in its investigation of the Shell/Texaco joint venture in the late 1990s, separately alleging markets for conventional gasoline in the Pacific Northwest and for CARB gasoline in California. The Commission resolved the competitive concerns in these two markets with the divestiture of one refinery in the Pacific Northwest that produced both conventional and CARB gasoline.⁶

Second, the limited volume of some special environmentally-mandated fuel specifications may limit the number of refineries that produce the fuel, at least in the short run. In addition to the costs and timing of changing product specification line ups, the ability of refineries that currently do not produce a special formulation to respond to a price increase in such a fuel may be further impeded, in some cases, by other factors, such as the time and expense of transporting product into the high price area, capacity limitations in the high-priced area's terminal storage or a relative lack of independent distribution outlets in the area. Moreover, as discussed further below, environmental regulations for certain fuel specifications in some cases may require such significant investment costs that some refineries may choose to exit the market permanently.

By the same token, sometimes regulatory action can expand the contours of these markets when circumstances dictate. For example, following Hurricanes Katrina and Rita, various temporary environmental waivers allowed the sale of many fuel specifications into geographic areas where such sales would not normally be permissible, thereby enabling the refiners to respond more quickly and effectively to the price spikes resulting from the storms.⁷

Economies of Scale and Scope for Larger Refineries

In the United States, environmental regulations require that specific gasoline formulations be sold in specific geographic areas. With each new formulation, a potential supplier must decide whether to make a costly investment in any refinery that might provide the new formulation to a market. This investment imposes both a fixed cost and a variable cost on the refinery.⁸ For some formulations, the fixed cost is sufficient to discourage the refinery from making the investment, and thus impedes the refinery from supplying the new formulation in the geographic area in which it is required. In this way, the formulation regulations can fragment markets for the bulk supply of refined products.

Because the fixed component of the investment can be high, the disincentive to supply a new formulation of gasoline falls disproportionately upon small refiners, for which average costs increase more sharply than for refiners with the capacity to produce at higher output levels. Thus, the new formulation regulations may accelerate the ongoing trend of market exit by small refineries, with a concomitant shift

⁵ Chevron Corp., FTC Dkt. No. C-4023 (Jan. 4, 2002).

⁶ Federal Trade Commission, Bureau of Economics, *The Petroleum Industry: Mergers, Structural Change, and Antitrust Enforcement* ("Petroleum Report") at 51 (2004).

⁷ See, e.g., Prepared Statement of the Federal Trade Commission, "Market Forces, Competitive Dynamics, and Gasoline Prices: FTC Initiatives to Protect Competitive Markets," Presented by Deborah Platt Majoras, Chairman, Before the Committee on Commerce, Science, and Transportation and the Committee on Energy and Natural Resources, United States Senate, at 24 (Nov. 9, 2005).

⁸ A refinery can be viewed as a collection of assets, each providing the ability to implement specific chemical reactions in very large volume. Refinery capacity is usually expressed in terms of atmospheric distillation capacity – the most basic step in refining crude oil into gasoline. But this oversimplifies matters, since refineries usually become large by adding "downstream" assets (*i.e.*, other chemical processes) that enable the refinery to produce a greater variety of products. Each of these assets has its own capacity for the specific intermediate or final products that it supplies. Petroleum Report at 176, 178-180.

toward larger refineries.⁹ As a corollary, formulation regulations also confer a cost advantage on operators of multiple refineries. In addition, multi-refinery operators usually can supply the new formulation at lower cost than the single refinery operator, irrespective of the scale of individual refineries.¹⁰ Broadly speaking, these advantages (induced by environmental legislation) amount to economies of scale and scope for larger refiners, and contribute to concentration in the supply of gasoline at the refinery level.¹¹

Notwithstanding the reduction in the overall number of petroleum refineries in the United States – a trend that has been constant over the last 50 years, with the exception of the late 1970s and early 1980s – the U.S. has experienced an expansion of refinery capacity as the remaining refineries have expanded and grown more efficient. Just since 1995, the expansions to existing refineries have added the equivalent of approximately 15 new average-sized refineries to the nation’s refining capacity. The older, less efficient refineries that were taken out of service – many of them so small and inefficient that they were dubbed “tea kettle” refineries – faced a number of difficulties and increased costs in producing gasoline formulations that would satisfy increasingly stringent and complex environmental specifications. These cost penalties have reinforced other factors encouraging small refineries either to exit or to become larger.¹²

More generally, to the extent environmental regulations increase the investment requirements and the fixed costs of operations, these regulations may increase scale economies and efficient operating size throughout the supply chain, from the refinery to the wholesale terminal to the retail gas station.

1.2.2 *Price Spikes and Price Volatility*

In the past, federal, state, and local environmental regulations have interacted with pipeline repair problems to produce price spikes and (in some cases) increased price volatility. For example, in 2000, supply interruptions on the Explorer pipeline (serving St. Louis and Chicago) and the Wolverine pipeline (serving Detroit and northern Ohio) contributed to supply problems causing price spikes in these areas. Supply interruptions were exacerbated by local government decisions mandating that particular oxygenates – methyl tertiary-butyl ether (“MTBE”) or ethanol – be used in RFG.¹³ By 2000, St. Louis had chosen to encourage the use of MTBE-based RFG, whereas Chicago and Milwaukee required the exclusive use of ethanol. Generally, MTBE is less costly for refiners to use than ethanol. MTBE is produced at the refinery and can be shipped via pipeline. Ethanol is a solvent that threatens product quality in batch operations in pipelines,¹⁴ and therefore it must be shipped – at greater cost and hazard – via barge, rail, or truck before it

⁹ There are economies of scale to refineries. Engineering studies estimate that the minimum efficient scale falls between 115 MBD (thousands of barrels per day) and 183 MBD. Yet even for refineries of similar size, costs vary greatly, in part due to the influence of location, access to waterway transport, proximity to large markets, and access to low-cost crude oil. To some degree, the exit of small refineries has resulted from the decline of domestic crude oil reserves. Petroleum Report at 179.

¹⁰ Petroleum Report at 180-181.

¹¹ Although the cost disadvantages of smaller refineries in some instances may be offset by other factors such as transportation costs advantages due to proximity to crude producing areas or product consuming areas, increasing scale economies owing to environmental regulations and technological change generally appear to be favouring larger scale refineries and refinery systems in the long run. Petroleum Report at 179-180.

¹² To the extent that technological advances or regulatory requirements require large capital investments, bigger, higher capacity refineries will be increasingly competitively advantaged compared to smaller refineries due to economies of scale. See Petroleum Report at 7.

¹³ The Clean Air Act originally required the use of oxygenates in gasoline in order to encourage more complete combustion, thereby reducing airborne pollution. Refiners have relied largely upon MTBE and ethanol to fulfil this oxygenate requirement.

¹⁴ Final Report of the Federal Trade Commission, “Midwest Gasoline Price Investigation,” at 127 (Mar. 29, 2001).

is mixed with gasoline at the terminal. In addition, the intermediate feedstocks for gasolines using MTBE and ethanol are different and incompatible. Refiners found it very difficult to produce gasoline using ethanol. In addition, there were refinery product problems, extended shutdowns of refineries for maintenance, refining disruptions, major pipeline disruptions, and low inventories from a tight market beginning in the spring of 2000.¹⁵ All of these actions weakened or undermined the incentives of refiners and pipelines to provide the feedstocks for the ethanol gasoline required by Chicago and Milwaukee, and contributed to extended price spikes in this region.¹⁶

A number of states have recently limited or banned the use of MTBE, and the Energy Policy Act of 2005 contained numerous provisions encouraging the use of ethanol and discouraging the use of MTBE. MTBE has virtually been eliminated from the market, and prices for RFG with ethanol are significantly higher than conventional gasoline. Many observers expect the increased reliance on ethanol to result again in price spikes. After the problems that Chicago and Milwaukee encountered in blending ethanol into gasoline, some observers believe it likely that states in the Northeast will encounter similar problems. In April 2006, President Bush announced that he would ask the EPA to weaken or suspend environmental regulations that apparently have caused gasoline shortages in some portions of the Northeast.¹⁷

Upon examining price volatility for different regions of the country and comparing these results to gasoline formulation restrictions, FTC staff found that the regulation of gasoline formulation, in and of itself, did not cause greater price volatility, but that environmental legislation may exacerbate volatility in areas with limited alternative sources of supply because potential substitutes are more difficult to obtain in the event of a supply shortage.¹⁸

As an initial test, a comparison of the standard deviation of the prices of reformulated versus conventional gasoline in the Gulf Coast area showed no significant difference in the variation of the prices.¹⁹ This demonstrates that, at least within the important refining region of the Gulf Coast area, the prices of RFG are not more volatile than those of conventional gasoline. This result suggests that the RFG formulation, in and of itself, adds no significant volatility to the price.

This test was then applied to a defined area encompassing the East Coast of the U.S., which is served by the Colonial and Plantation pipelines that supply gasoline from the Gulf Coast. Comparing

¹⁵ *Id.* at 18-20.

¹⁶ *Id.*, Executive Summary at 3 -5. Shortages of ethanol-based RFG spilled over to other types of gasoline. St. Louis was granted a waiver from federal regulation, which allowed it to substitute conventional gasoline for RFG, and this diverted conventional gasoline shipments that could have gone to the Chicago region. In addition, the waiver immediately froze a stock of MTBE gasoline intended for sale in St. Louis; this gasoline occupied scarce storage capacity. Moreover, the EPA waiver raised uncertainty, further weakening incentives for suppliers to supply Chicago and Milwaukee with the feedstock necessary for ethanol-based RFG. See Jeremy Bulow, (former) Director, Bureau of Economics, Federal Trade Commission, "The Midwest Gasoline Investigation" at 3 (Apr. 17, 2001). The Commission's 2001 report predicted that price spikes in gasoline would recur absent a change in the underlying regulatory environment.

¹⁷ See <http://www.cnn.com/2006/POLITICS/04/25/bush.energy/>.

¹⁸ Federal Trade Commission, *Gasoline Price Changes: The Dynamic of Supply, Demand, and Competition* ("Gasoline Price Changes"), Ch. 4 (2005).

¹⁹ RFG's higher price was expectedly attributable to higher refining costs.

conventional gasoline across these two regions, we found no significant difference in the volatility of prices near these pipelines.²⁰

The Commission found a different result for RFG. Price volatility for RFG sold in Maryland and Virginia near the Colonial pipeline, which brings Gulf-refined product into the area, is higher than the price volatility for RFG sold on the Gulf Coast. The most reasonable explanation for this phenomenon is that the only locations along the Colonial pipeline that use RFG are in Virginia and Maryland (at the northern end of the pipeline), while the broad areas to the south supplied by Colonial require only conventional gasoline. Moreover, these areas in Maryland and Virginia tend to rely on the pipeline for their RFG supply, with few or no supply alternatives. Thus, in the event of a shortage, other shipments of RFG would not be diverted quickly to Maryland and Virginia from relatively nearby locations. As shortages develop and prices rise, then, there is no mechanism – other than time-consuming additional shipments from the distant Gulf Coast – to drive the price back down toward the pre-shortage level. For these reasons, shortages tend to result in larger and more persistent price increases – that is, in the higher price volatility that we observe in some areas.²¹

1.2.3 Concerns over Regulatory Failure and “Cheap Exclusion”

In theory, environmental regulations might encourage collusion by leading to narrower relevant markets characterised by significantly higher concentration levels. The FTC, however, has not found evidence of collusion in the petroleum markets despite several extensive investigations over the past decade.²² With regard to unilateral conduct, there are numerous instances in antitrust history in which firms have endeavoured to misuse the regulatory process to create or maintain market power. The FTC’s *Unocal* case, concerning the misuse of the regulatory process with respect to gasoline formulation rules, provides a striking example of this form of anticompetitive unilateral conduct.

In 1988, the California Legislature enacted the legislation that laid the foundation for the eventual creation of CARB gasolines. The Legislature intended that these gasolines would use the latest relevant science and technology. In implementation of this legislation, the Board relied on industry experts and the large petroleum refiners for information on available technologies and the costs of using such technologies. With its mission to promulgate product standards for gasoline, the Board wanted to avoid the use of proprietary standards that might have enabled one or more firms to exercise market power or otherwise harmed competition.²³

²⁰ Gasoline Price Changes at 95.

²¹ See generally Gasoline Price Changes at 69-97. In Gasoline Price Changes, the Commission examined a variety of factors and found that prices depended on, *inter alia*, access to refineries as well as access to refined products pipelines. Areas were vulnerable to price spikes, and subject to highly volatile prices, only when they depended heavily on one or a few supply sources. Areas with access to more numerous, diversified suppliers did not experience price spikes even when an important source of supply was interrupted. Some of the observed price spikes were related to environmental regulations. Shortages developed in Detroit when a blackout followed a transition to a specially formulated gasoline. *Id.* at 74-75. By contrast, in 2004, price spikes were predicted when New York and Connecticut banned MTBE in favour of ethanol; but this transition proceeded smoothly, with no price effects, due to supply from European and South American refiners. *Id.* at 75-76.

²² See, e.g., *The Federal Trade Commission Investigation of Gasoline Price Manipulation and Post-Katrina Gasoline Price Increases: A Commission Report to Congress* (Spring 2006) at 12 (Commission investigation did not find evidence of collusion involving special fuel formulations).

²³ See *Union Oil Co. of California*, FTC Dkt. No. 9305 (Mar. 4, 2003) (Complaint), at ¶¶ 16-27, at <http://www.ftc.gov/os/2003/03/unocalcmp.htm>.

In an administrative complaint issued in 2003, the FTC alleged that Unocal, in its participation in proceedings before the Board, deceived the Board and other participants regarding a process for developing clean-burning gasolines appropriate for use in California. Unocal allegedly encouraged the Board to rely on several of Unocal's studies to develop product standards for gasolines, and the Board did so in part because Unocal represented that these studies were non-proprietary and available to the public at no charge.²⁴ Concurrently, the Commission alleged, Unocal was pursuing patents that would enable it to charge substantial royalties once the Board incorporated the research into its RFG regulations.²⁵

Over time, refiners invested so as to comply with Board regulations, based on the Unocal standards. In so doing, the refiners implicitly committed themselves to relying on Unocal's then-patented studies. Early in 1995, Unocal issued a press release announcing that its patented technology covered many of the fuel compositions compliant with the CARB requirements. Shortly thereafter, the major California refiners – Exxon, Mobil, ARCO, Chevron, Texaco, and Shell – filed suit to have the Unocal patents invalidated. Unocal countersued for patent infringement and ultimately prevailed, obtaining an initial award of \$91 million from the refiners.²⁶ In other lawsuits, Unocal sought damages for infringement (by the six named refiners) and also sued Valero (another refiner).

Under the terms of FTC consent orders issued in 2005, which resolved this administrative case as well as the Commission's challenge to Chevron Corporation's acquisition of Unocal,²⁷ Chevron and Unocal agreed to stop enforcing the patents in question and to release them to the public by the merger's effective date.²⁸

The regulatory process in California addressed in the Unocal case provides a clear lesson on regulatory issues. The legislation at issue prescribed design standards for gasoline. Design standards, however, can have unintended side effects. In particular, they can create or enhance the incentives of suppliers and other participants to use the regulations as a means of enhancing or creating market power.²⁹ In the case of Unocal and California's standards, this resulted in what some FTC antitrust enforcers have referred to as "cheap exclusion" – the obtaining of monopoly power through processes that are relatively inexpensive and that have no plausible efficiency justifications.³⁰ Exclusionary conduct featuring the misuse of governmental rules is relatively cheap, since it does not require investment in business

²⁴ Complaint at ¶¶ 33-49.

²⁵ *Id.*

²⁶ *Id.* at ¶¶ 60-72.

²⁷ See *Union Oil Company of California*, FTC Dkt. No. 9305, Agreement Containing Consent Order (June 10, 2005), available at <http://www.ftc.gov/os/adjpro/d9305/050610agreement9305.pdf>.

²⁸ See Oil Daily, *FTC Deal Frees Refiners from Unocal Patents* (June 13, 2005). The Commission estimated that the savings to California motorists resulting from the settlement would be approximately \$500 million per year.

²⁹ This is why some standards-setting bodies, including the larger organisations in North America, try to avoid design standards and instead rely on performance standards as much as possible.

³⁰ In recent years the FTC has pursued a number of investigations of anticompetitive unilateral as well as joint conduct that might be characterised as "cheap exclusion." See Susan A. Creighton, "Cheap Exclusion," remarks before Charles River Associates 9th Annual Conference on Current Topics in Antitrust Economics and Competition Policy (Feb. 8, 2005), available at <http://www.ftc.gov/speeches/creighton/050425cheapexclusion.pdf>; Susan A. Creighton, "Ranking Exclusionary Conduct," remarks before the 2005 ABA Fall Forum (Nov. 15, 2005), available at <http://www.ftc.gov/speeches/creighton/051115conduct.pdf>.

capability. Moreover, this technique may be particularly pernicious, both because presumably there is no efficiency benefit from misusing government authority and because the presence of government authority may prevent market forces from eroding market power as quickly as they otherwise would.³¹ The Unocal case exemplifies how firms can attempt to misuse regulation (in this case environmental regulation) as a form of cheap exclusion.

As our examination of the US gasoline sector demonstrates, environmental legislation has important competitive implications. With increasing reliance on environmental regulation worldwide, there is a real need for a better understanding and identification of the hidden competitive costs of such legislation. This roundtable offers an initial step toward prompting this analysis.

³¹ See generally Robert A. Bork, *The Antitrust Paradox* 159 (2^d ed. 1993).

EUROPEAN COMMISSION

1. Competition and environment policies as part of EU's Lisbon Strategy

European Community law provides that environmental considerations must be integrated into all other Community policies.¹ This includes also the EU competition policy. In their turn, EU Member States and the industry have to respect competition law in putting in place environmental initiatives. They should not establish forms of collaboration, rules or practices that would constitute unjustified obstacles to competition.²

Both the competition policy and the environment policy are part of the European Union economic and social reform process started in Lisbon in 2000 (so called Lisbon strategy), which highlights an upturn in growth as the central policy objective, striving to improve the competitiveness of the European model while maintaining prosperity, employment, cohesion and environmental protection.

A healthy environment is essential to long term prosperity and quality of life and at the same time economic growth is important to the European citizens. Therefore, it is an objective to decouple environmental impacts and degradation from economic growth. Hence, business must operate in a more eco-efficient way and produce the same or more products with less input and less waste. The Sixth Action Programme for the Environment, adopted in July 2002, sets out the priorities for the European Community up to 2010 in more concrete terms. Four areas are highlighted for urgent action: climate change, nature and biodiversity, environment and health and the management of natural resources and waste.

At the heart of the Lisbon strategy is also recognition that it is markets that generate growth. A competitive and open market provides best guarantee for companies to increase their efficiency and innovative potential. Vigorous competition is thus a key driver for competitiveness and economic growth. Strong competition, encouraged and protected by the EU competition policy, is therefore rightly regarded as instrumental for achieving the competitiveness objective of EU's Lisbon strategy.

Hence, the starting point for identifying issues of competition in the environment protection is that competition and environment policies should be implemented in a mutually reinforcing way in order to best contribute to the Lisbon strategy goals. The European Commission's aim is accordingly to ensure that the markets are open and that competition takes place within a framework that maintains high levels of environmental protection.

2. Competition advocacy and screening of regulatory initiatives

In the competition policy field the fundamental goal of the European Commission is to create a climate in which anti-competitive behaviour is prevented at source. That means not just enforcing the rules, but also advocating competition policy principles. The European Commission competition advocacy activities aim at influencing regulatory processes both at EU and national level to ensure better and pro-competitive regulations. The Commission has always been an active competition advocate and more

¹ Article 6 of the Treaty establishing the European Community ("the Treaty")

² See for reference Articles 10 and 81-86 of the Treaty.

systematically since the summer of 2005 it has been systematically testing at European level the impact of new legislative proposals on competition. The revised Impact Assessment Guidelines for new EU legislation, adopted in June 2005, include for the first time an explicit competition test: legislative proposals which potentially affect competition in the EU internal market will be examined with a view to making them more conducive to competition. The focus is not on preventing legislation but on actively promoting less restrictive alternatives wherever they are feasible. The European Commission Directorate-General for Competition is actively participating in the Impact Assessment process and is offering guidance for other Directorates-General³.

The Impact Assessment Guidelines assesses in general three critical effects of new legislation: economic, social and environmental. Assessment of competition impacts belongs to the assessment of economic impacts. In the field of legislation competition impacts are compared with other impacts – such as environmental impacts – and there are naturally trade offs to be made. But the overall result of the regulatory impact assessment should always be that the proposal furthers the Lisbon strategy objectives of growth and jobs.

The aim of the competition test in the Regulatory Impact Assessment is to avoid that the regulatory measures proposed bring unnecessary and disproportionate restrictions of competition. Moreover, both the regulatory framework itself and the way it is enforced in practice must create an environment which not only allows cross-border competition to happen, but which induces it to flourish.

Further to the Competition Impact Assessment, the competition advocacy within the European institutions takes many other forms, including for instance the participation of the Directorate-General for Competition in the preparation of other Directorate Generals' regulation proposals within the Commission, public consultations, reports on the state of competition and promotion of best practices. Following the introduction of the new Impact Assessment Guidelines, the Commission Directorate General for Competition will become involved at a very early stage in the various regulation proposals that have a competition impact. Early involvement helps to ensure that the Commission is actively promoting less restrictive alternatives wherever they are feasible.

For example, since 2003, the Directorate-General for Competition has scrutinised from a competition point of view and contributed to the Commission's proposal for a Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals ("REACH")⁴ and its follow-up in the legislative process. REACH provides for *inter alia* mandatory registration of chemical substances reaching certain volume thresholds and stipulates a wider cooperation between industry players in view of the registration of chemical substances which already exist today. In this context, Competition DG's activity has focused on ensuring that REACH and its implementation will not lead to distortions of competition. Today, REACH is still in the legislative adoption process.⁵

As well as building competition testing into European regulations' impact assessment, the Commission is also encouraging the EU Member States to review national regulation that may stand in the way of competition. Legislation screening initiatives of competition agencies are not always successful; restrictions are sometimes introduced further downstream in the legislative process. Bearing this in mind, the Commission Directorate-General for Competition and the Member State competition authorities are

³ The Directorate-General for Competition has issued a guide to competition screening, which is available at the Commission competition web-site:
http://europa.eu.int/comm/competition/publications/advocacy/legis_test.pdf

⁴ COM (2003) 644 final.

⁵ Therefore, at this stage, no further details can be given.

spreading competition culture among European and national legislators by raising their awareness of competition issues, going beyond the individual proposals at stake.

3. Integration of environmental objectives in State aid policy

The EC Treaty stipulates that environmental protection requirements must be integrated in the implementation of the European Community policies in particular with a view to promote sustainable development. The primary way in which competition policy can directly contribute to this development is through State aid policy.

The purpose of EU State aid control is to maintain a level playing field for all undertakings active in the Single European Market, no matter in which Member State they are established. Therefore, according to the EC Treaty, State aid is, in principle, prohibited in the European Union. However, if a measure does not distort intra-community competition and trade to an extent contrary to the common interest, it may be authorised if it fulfils clearly defined objectives of common interest. Moreover, State aid measures can sometimes be effective in achieving these objectives e.g. if they correct market failures and thereby improve the functioning of markets. The State Aid Action Plan⁶ which was adopted by the European Commission in 2005 aims to facilitate a re-orientation of State aid towards measures, which are better targeted at the horizontal objectives and underlying market failures. To achieve that, the State Aid Action Plan reinforces the application of a refined economic analysis in the EU environmental policy.

In the absence of regulation, a polluting company does not automatically have to bear the cost of its pollution and since the action of one individual imposes a cost on others a market failure (negative externalities) is considered to exist in the field of environment. As regards the link between State aid and environmental policy it is important to note first, that in many cases environmental regulation does not interact with EU State aid control and second, where such an interaction is present State aid policy is used actively to promote environmental protection. In assessing whether an aid measure can be accepted, the Commission balances the positive impact of the aid measure (reaching an objective of common interest) against its potentially negative side effects (distortions of trade and competition).

3.1 When does environmental regulation constitute State aid

In the context of the EC Treaty, a large part of the environmental regulation is not considered to contain a State aid element. A measure is only considered to be State aid if it, among other things, is *favouring certain undertakings by reducing their normal costs with State resources*⁷. This implies that regulations applying in general to all undertakings without exception are normally outside the scope of the EC State aid rules. However, if certain undertakings in a Member State are exonerated from e.g. an environmental tax, the amount of tax they save is considered to be State aid, unless the exoneration is harmonised throughout the EU.

Moreover, in many cases the most appropriate instrument to achieve a specific environmental objective is through a *general regulation* prohibiting pollution or setting standards for the level of

⁶ STATE AID ACTION PLAN: Less and better targeted state aid: a roadmap for state aid reform 2005–2009 COM(2005)107 final

⁷ In Article 87(1) of the Treaty establishing the European Community measure is a State aid if it fulfils all the following four criteria:

- Transfer of state resources
- Advantage for the undertaking
- Selectivity
- Distortion to competition and effect on trade between Member States

pollution. Thus, a large part of the environmental regulation in the European Union consists of minimum standards in a number of areas. Member States may choose to adopt even stricter mandatory standards in their own country.

Clearly, the fact that a new measure is general, does not exclude a possible effect on competition because the burden of the regulation may be different for different undertakings. Furthermore, if one Member State has higher mandatory standards than the rest of the EU, this may influence competition between Member States. However, such effects are not covered by State aid control unless exonerations are granted and hence, there is no conflict between generally applicable environmental regulation and state aid policy.

3.2 *EU Guidelines on State aid for environmental protection*

On the other hand, the European Commission controls the type of measures which provide exonerations or direct financial support to certain undertakings. Due to the presence of the market failure, the Commission recognises that State aid measures can be an effective tool to achieve higher environmental protection. Therefore, such aid may be allowed despite the general prohibition of State aid in the European Union. However, State aid should only be used when it is an appropriate instrument to reach the objective that is, when it creates incentives which will lead to an improvement of the level of environmental protection, which would not occur without the aid. Furthermore, the aid must be proportionate to the objective and distort competition to the least possible extent.

To provide clarity and legal certainty to Member States as regards the legality of measures that do contain State aid, the European Commission has adopted Community Guidelines on State aid for Environmental Protection⁸.

The Guidelines built on three important principles, in particular: the *polluters pays*' principle, the principle of *internalisation of costs* and the principle that the State aid must have an *incentive effect*.

3.2.1 *The polluter pays' principle and internalisation of costs*

In Article 174 of the EC Treaty it is stated that 'Community policy on the environment ... shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.'

The polluter pays' principle implies that costs of measures to deal with pollution shall be borne by the polluter who causes the pollution. This implies that the cost of pollution shall be internalised, i.e. all costs associated with the protection of the environment shall be included in firms' production costs and ideally be reflected in the price the consumers pay for the final product. Since State aid lowers the costs of production, there is a risk that aid may run counter to the "polluter-pays" principle and State aid may even increase pollution in the long term due to the lack of internalisation of the cost to the environment. This might be the case, for example, where aid is designed merely to facilitate compliance with mandatory Community standards. Therefore the choice of acceptable State aid measures in the Guidelines are carefully chosen to avoid conflicts with the polluters pays' principle. An aid may for example be accepted if new national standards are more stringent than the applicable Community standards or if national standards are introduced in the absence of Community rules, with the result that firms in the Member State concerned temporarily lose competitiveness at international level.

⁸ Official Journal C 37, 03.02.2001, pages 3-15

3.2.2 *The Incentive effect providing an additional positive effect on the environment*

Closely linked to the polluters pays' principle is the prerequisite of an incentive effect. State aid distorts or threatens to distort competition in the European Union, per definition, and therefore State aid must have a positive effect on the level of environmental protection to be acceptable. In other words, an investment that would have taken place without State aid shall not be supported. For instance, since undertakings must comply with Community standards, aid to meet mandatory standards does not trigger the investment, i.e. the aid has no incentive effect.

On the contrary aid may provide an incentive to go beyond the Community standards or it may give Member States the possibility to adopt standards that are stricter than Community standards without harming the relative competitiveness of the country. Therefore, aid to go beyond the Community standard or aid to meet stricter national standards are allowed in the EU. Moreover, the aid is calculated on the basis of eligible costs that are confined strictly to the *cost of the extra investment* necessary to meet the environmental objectives. Costs related to capacity increase or gains in terms of lower operating costs must be subtracted to arrive at the true 'extra costs'. For the calculation of the 'extra costs' it is preferable to compare the investment with a reference investment which exactly meets the mandatory standards. Admittedly, this calculation can be difficult to make in practice, but the limitation to only aid the 'extra cost' ensures an incentive effect and that the undertaking is not overcompensated. The latter could lead to a violation of the polluter pays' principle.

3.2.3 *Focus on Community objectives*

The Guidelines also focus on certain measures that are key priorities in the EU environmental policy. More efficient use of energy and better use of natural resources can all help to reduce harmful emissions and the EU has set itself the indicative target of producing 12% of energy and 21% of electricity from renewable energy sources by 2010. In the current Guidelines State aid is, for instance, accepted for energy savings, the use of combined heat and power plants, renewable resources and waste management. The aid can both cover part of the extra investment costs and the extra operating costs that are a direct consequence of the more environmentally friendly production.

However, the fact that a type of measure is not included in the Guidelines does not exclude the possibility that State aid may be granted. The European Commission has approved a number of cases directly on the basis of the EC Treaty, because these cases were considered to contribute considerably to the level of environmental protection. For example the Commission has authorised an aid to construct pipelines to transport propylene between the Netherlands and Germany. The pipelines result in less pollution and more safety than road transport as well as less traffic congestion.

3.2.4 *The burden of regulation and the need for incentives are higher for SMEs*

The environmental guidelines entail more generous rules for SMEs than for large companies. This approach reflects the fact that the burden of regulation is considered to be higher on SMEs. Furthermore, the relative importance of the cost for SMEs to improve on standards is also considered to be higher, and therefore Member States may cover a larger part of the extra costs for SMEs to provide a sufficient incentive to trigger the investment in more sustainable production.

3.3 State aid policy reinforces environmental policy

In 2005 25% of all State aid⁹ granted by Member States in the European Union had the objective to improve environmental protection. The State aid rules are designed to reinforce environmental policy and environmental policy must respect state aid rules. Therefore, to the question if there is an inevitable conflict between the objectives of environmental policy and those of competition, in the field of EU state aid policy, the answer is: on the contrary.

The current Guidelines are applicable until 31 December 2007. The European Commission will attempt to develop new rules to better meet the challenges and opportunities that sustainable development creates, as set out in the Lisbon and Sustainable Development Strategies.

4. Antitrust policy and environmental objectives

4.1 Guidance on application of competition rules to environmental agreements

The Directorate-General for Competition is actively enforcing the EC Treaty competition rules also in areas that involve environment issues. As the importance of environment protection has grown consistently in Europe, a wide range of new economic activities and markets have emerged in the vanguard of various environmental initiatives. These evolving markets have also generated variety of horizontal cooperation modes. Guidance was needed to improve clarity and transparency regarding the applicability of the prohibition on competition restricting agreements and practices in Article 81 EC. This is why the Commission included guidance on approach to environmental agreements into the guidelines that it issued in 2001 concerning assessment of the most common types of horizontal cooperation.¹⁰

The Commission guidelines on horizontal agreements define environmental agreements as “those by which the parties undertake to achieve pollution abatement, as defined in environmental law, or environmental objectives, in particular those set out in Article 174 of the Treaty”. The target or the measures agreed need to be directly linked to the reduction of a pollutant or a type of waste identified as such in relevant regulations. This excludes agreements that trigger pollution abatement as a by-product of other measures.

Environmental agreements may set out standards on the environmental performance of products or production processes. Other possible categories may include agreements at the same level of trade, whereby the parties provide for the common attainment of an environmental target such as recycling or certain materials, emission reductions, or the improvement of energy-efficiency.

4.1.1 What type of agreements fall under Article 81(1)?

The guidelines give first examples on agreements that are not likely to fall within the scope of the prohibition of Article 81(1) EC, irrespective of the combined market power of the parties. This may arise if no precise obligation is placed upon the parties or if they are loosely committed to contributing to the attainment of a sector-wide environmental target. In the latter case the assessment will focus on the discretion left to the parties as to the means that are technically and economically available in order to attain the environmental objective agreed upon.

⁹ All State aid, except State aid to agriculture, fisheries and transport. Source: State Aid Scoreboard - autumn 2005 update - COM(2005)624 final

¹⁰ See the Commission Notice “Guidelines on the applicability of Article 81 of the EC Treaty to horizontal cooperation agreements”, OJ C 3, 6.1.2001, p. 2-30.

Similarly, agreements setting the environmental performance of products or processes that do not appreciably affect product and production diversity in the relevant market or whose importance is marginal for influencing purchase decisions do not fall under Article 81(1). Finally, agreements which give rise to genuine market creation, for instance recycling agreements, will not generally restrict competition, provided that and for as long as, the parties would not be capable of conducting the activities in isolation, whilst other alternatives and/or competitors do not exist.

On the other hand, environmental agreements come under Article 81(1) by their nature if the cooperation does not truly concern environmental objectives, but serves as a tool to engage in a disguised cartel, i.e. otherwise prohibited price fixing, output limitation or market allocation, or if the cooperation is used as a means amongst other parts of a broader restrictive agreement which aims at excluding actual or potential competitors.

In addition, environmental agreements covering a major share of an industry at national or EC level are likely to be caught by Article 81(1) where they appreciably restrict the parties' ability to devise the characteristics of their products or the way in which they produce them, thereby granting them influence over each other's production or sales. For instance, if such agreements may phase out or significantly affect an important proportion of the parties' sales, those agreements may fall under Article 81(1) when the parties hold a significant proportion of the market. Same applies to agreements whereby the parties allocate individual pollution quotas. Similarly, agreements whereby parties holding significant market shares appoint an exclusive provider of collection and/or recycling services for their products, may also appreciably restrict competition, provided other actual or realistic potential providers exist.

4.1.2 *Criteria for an exemption from the prohibition*

8. An agreement that comes under Article 81(1) may be exempted provided it:

- contributes to improving the production or distribution of products or to promoting technical or economic progress and allows consumers a fair share of the resulting benefit (economic benefits);
- does not impose restrictions which are not indispensable to the attainment of the above mentioned objectives; and
- does not afford the possibility of eliminating competition in respect of a substantial part of the products in question.

Environmental agreements caught by Article 81(1) may attain economic benefits which, either at individual or aggregate consumer level, outweigh their negative effects on competition. To fulfil this condition, the expected economic benefits must outweigh the costs, such as the effects of lessened competition along with compliance costs for economic operators and/or effects on third parties.

The more objectively the economic efficiency of an environmental agreement is demonstrated, the more clearly each provision might be deemed indispensable to the attainment of the environmental goal within its economic context. An objective evaluation of provisions which might "prima facie" be deemed not to be indispensable must be supported with a cost-effectiveness analysis showing that alternative means of attaining the expected environmental benefit would be more economically or financially costly, under reasonable assumptions.

Whatever the environmental and economic gains and the necessity of the intended provisions, the agreement must not eliminate competition.

4.2 *Waste management and recycling*

One of the areas where new markets have recently emerged following environment policy initiatives is waste management and recycling.

The Commission has adopted four formal decisions¹¹ in the area of antitrust related to packaging waste management systems and has resolved a number of other cases informally. In addition, Commission decisions concerning waste management systems have been adopted in the area of State aid.¹²

Since 2003, the Commission and the EU Member State's competition authorities have also carried out an exchange of information and experiences in the waste management sector, in particular as regards three types of waste and the corresponding EC Directives: (i) **packaging waste** (Packaging Directive¹³); (ii) end-of-life vehicles, also known as "**car wrecks**" (ELV Directive¹⁴) and (iii) **waste electrical and electronic equipment** (WEEE Directive¹⁵). The results of this information exchange and recent reflection on possible competition concerns in waste management area are incorporated in a paper that the Directorate General for Competition has published in September 2005.¹⁶

The packaging waste markets in the EU have developed gradually since the mid-1990s. As regards ELVs and WEE, the markets in most countries are either in the process of being created or will be created in the future. In addition, developments occur at a different pace in different Member States. It is also worth bearing in mind that different market conditions are likely to result not only from undertakings' actions or from requirements possibly laid down by the competition authorities, but also from different legislative/regulatory frameworks in the Member States in implementation of the relevant Community Directives.

When analysing these markets the Commission Directorate General for Competition has identified three different levels of economic activities which are relevant for competition assessment: (i) the organisation of systems/solutions to fulfil the obligations under the respective Directives, (ii) the collection, sorting and treatment of waste, and (iii) recovery and sale of secondary material.

¹¹ Commission decision of 16 October 2003, ARA, ARGEV, ARO, OJ 2004 L 75/59 (Article 81 EC); Commission decision of 17 September 2001, DSD, OJ 2001 L 319/1 (Article 81 EC); Commission decision of 15 June, 2001, Eco Emballages, OJ 2001 L 233/37 (Article 81 EC); and Commission decision of 20 April 2001, DSD, OJ 2001 L 166/1 (Article 82 EC).

¹² E.g. Commission decision of 30 October 2001, ARN, OJ 2002 L 68/18 (with respect to waste management systems for end-of-life vehicles); Commission decision of 16 December 2003, OJ 2004 C 69/23 (approval of a Finnish state aid scheme for the disposal of end-of-life vehicles). See also section 3 above.

¹³ Directive 94/62/EC of the European Parliament and Council of 20 December 1994 in packaging and packaging waste, OJ 1994 L 365/10. This Directive was amended by the Directive 2004/12/EC of the European Parliament and Council of 11 February 2004, OJ 2004 L 47/26.

¹⁴ Directive 2000/53/EC of the European Parliament and Council of 18 September 2000 on end-of-life vehicles, OJ 2000 L 269/34.

¹⁵ Directive 2002/96/EC the European Parliament and Council of 27 January 2003 on waste electrical and electronic equipment (WEEE), OJ 2003 L 37/24.

¹⁶ See the DG Competition Paper Concerning Issues of Competition in Waste Management Systems. Published at the DG Competition web-site:
<http://europa.eu.int/comm/competition/antitrust/others/waste.pdf>

4.2.1 Issues of competition

The Packaging and ELV Directives stipulate that EU Member States shall ensure that collection systems are set up to fulfil the environmental obligations. As a result for example in the packaging waste management in most Member States the obliged companies cooperate in systems of some form in order to establish a system for the management of packaging waste and discharge their individual packaging waste management obligations. Most of these systems are non-profit legal entities. Shareholders are often the obliged companies. In the case of ELV, various markets are only starting to emerge, but similar cooperation systems may arise. Also the WEEE Directive provides that EEE producers may, *inter alia*, set up systems on a collective basis to fulfil their collection, treatment, and recovery obligations¹⁷. These types of cooperation arrangements may give rise to competition concerns.¹⁸

Collection/recycling agreements may relate to and have effects on two markets: (i) the market on which the parties are active as producers or distributors (**spill over effects**) and (ii) the markets of collection services potentially covering the good in question (in particular **effects of bundling demand**).

The obliged companies may be competitors in the market for the packaged products or car manufacturing/car imports or manufacturing and sales of electrical and electronic equipment, as the case may be. The cooperation to fulfil the obligations under the respective waste management directives may therefore have spill over effects in the market for those products. In particular, the cooperation at the waste level may lead to (i) the development of a common design of the products (or of the packaging) and (iii) communality of costs as regards the products through uniform costs of collection and recovery. As regards the development of a common design, competitive concerns would appear to be limited. As for the communality of costs, the Commission found in *the VOTOB case*¹⁹ that a waste management agreement by six tank storage operators that was financed by a fixed fee constituted a restriction of competition since the fixed fee harmonised the costs and thus excluded competition on an important price component. In the case of packaging, the cost of the collection and recovery normally represents only a small part of the total costs of the products. However, there are variations depending on the competition in the market and therefore the issue needs to be assessed on a case-by-case basis. For instance, the cost of collecting and recycling certain types of WEEE lamps may account for a significant percentage of the retail price of the lamp. Thus, a cooperation between large lamp producers in the context of the WEEE Directive may lead to high communality of costs, and therefore to the risk of price alignment of such manufacturers' final products.

In the markets of collection services, competition concerns may arise due to effects of bundling of demand for collection and sorting services. As a general principle, competition between several waste management systems should be possible. If collective systems are created, it is essential to ensure that they do not lead to unjustified restrictions of competition on the markets concerned. The bundling of demand limits the choice of collection/sorting and recycling companies and they may have only a few systems or, in the case of a *de facto* or *de iure* monopoly of the system, a single system with which they can enter into agreements.

However, in some cases bundling of demand would seem to be the inevitable to create viable systems. In the case of household packaging waste collection, for instance, it may only be viable to collect such

¹⁷ The producers may also opt for an individual solution to fulfil their collection, treatment and recovery obligations under the WEEE Directive.

¹⁸ It is important to note in this respect that the fact that the Packaging, EVL and WEEE Directives envisage the possibility of systems, including collective systems, does not in itself prejudice their legality under the EC competition rules. Collective and comprehensive systems established by economic operators will have to be analysed under the EC competition rules, in particular Articles 81 and 82 EC.

¹⁹ VOTOB, see the 22nd Commission Report on Competition Policy [1992], at paras. 177 et seq.

waste with an infrastructure separate of that for other household waste if a sufficient amount of household packaging waste can be collected. In the case of commercial packaging waste, there are less network economies and it is easier to set up alternative waste collection structures. It would therefore be more difficult to justify the setting up of collective, in particular comprehensive systems. The extent of market power of the waste management systems for WEEE (which covers several types of machines and appliances) will depend on what are the collection and recovery markets found; e.g. would recovery markets cover one type of WEEE products or several products. Also the network economies resulting from bundling of demand may be different depending on the product: e.g. stronger network economies in case of small products sold in high quantities and collected at a large number of premises.

Regarding the ELV sector it is noteworthy that the car wrecks are much bigger, bulkier and heavier than packaging waste or most types of WEEE. Car wrecks also contain a number of dangerous parts and substances that require particular treatment. Therefore there would not seem to be significant network economies in the ELV sector to counter adverse consequences of bundling. Concerns may arise in particular concerning large collective ELV collection systems.

In cases where demand is bundled it is essential to ensure that the bundling of demand does not lead to unjustified restrictions of competition on the downstream markets (competition between collectors) and upstream markets (competition between systems). For instance, in some cases collective systems may have a shareholders businesses active in the recycling of secondary materials. There may thus be a danger that collective systems privilege contracting with their own shareholder companies for the treatment/recycling of the materials. Thus the Commission has found in decisions that it has taken concerning packaging waste markets that **contracts between a system and the collectors** should be of limited duration, there should be a transparent, objective and non-discriminatory tender procedure, and the system must not prevent access of competitors to the collection infrastructure.

In the decision that the Commission took on 20 April 2001 in *the DSD case*²⁰, the Commission scrutinised long-term exclusive agreements. The assessment showed that taking into account the market position of DSD and the duration time of the agreement, access to the market by domestic and foreign collectors was significantly obstructed. As a consequence, the tender for new service agreements had to start earlier than initially foreseen by DSD, i.e. in 2003 instead of 2007. The new service agreements reduced DSD's costs for the collection and sorting of plastic packaging waste by more than 20%. This case indicated that for future collection agreements, one has to take into account elements such as the market power of the system, the positive network effects and the necessary investment. In *the ARA decision*²¹, the Commission accepted a binding contract duration of three years (after these three years, ARA is free to terminate contracts). The line taken in these cases is that duration of no more than three years for household packaging waste collected for a dominant system is reasonable and economically justified. In addition, both DSD and ARA also undertook not to impose exclusivity clauses on their collectors.

One of the specificities of the market for collection and sorting of packaging waste at households is that duplication of the existing collection infrastructure is in practice difficult. It would be inconvenient for households to use different bins for different collection systems for the same material and presumptively this would not be an economically viable solution. Therefore the Commission agreed in *the DSD*²² and *ARA decisions* with the requirement to share collection infrastructure. The Commission imposed as a condition in these decisions that DSD and ARA could not prevent their collectors from opening their facilities for competitors of DSD or ARA.

²⁰ Commission decision of 20 April 2001, DSD, OJ 2001 L 166/1 (Article 82 EC)

²¹ Commission decision of 16 October 2003, ARA, ARGEV, ARO, OJ 2004 L 75/59 (Article 81 EC)

²² Commission decision of 17 September 2001, DSD, OJ 2001 L 319/1 (Article 81 EC)

The marketing of secondary material by the collectors should also be as free as possible while making sure that materials will find an appropriate reprocessing channel. Collected and stored packaging material can indeed be used as a secondary raw material for various new products.

As for the **relationship between the system and the obliged companies** the Commission considers, as a general rule, that collective systems should apply objective, transparent and non-discriminatory conditions as regards membership criteria and with regard to fees levied by the system. The *DSD case* demonstrates these principles. The payment provisions of DSD's licence agreements required the obliged companies to pay for all their packaging placed on the German market with the Green Dot trademark, irrespective of whether DSD actually provided its service to them or not. The Commission followed the principle "no service, no fee" and adopted a decision under Article 82 EC, according to which DSD's fees must be related to the service actually provided.

Some systems require that the participants transfer all of their obligations to the system, i.e. the members may either contract for all of their packaging or for nothing. The effect of such a rule is to deny alternative systems the possibility to compete for the collection services. At the same time, the rule may prevent undertakings from choosing the most cost-effective "mix" of options. In 1998 and 2000, the Commission accepted under Article 81(3) EC the all or nothing rule in a number of cases given that the operation of the rule was necessary to encourage vital investment in the UK's collection and recycling infrastructure. The rule can not, however, be exempted when it becomes evident that further substantial investment in waste collection infrastructure is no longer necessary to fulfil the obligations under the Directives and/or the rule may no longer be regarded as an effective means of securing new investment.

4.2.2 *Competition policy objectives in the field of waste management*

On the basis of the analysis of possible competition issues in the waste management sector, the European Commission Directorate General has identified the following main EU competition policy objectives in this field that can be summarised as follows:

- *Preventing anti-competitive practices* such as e.g. market sharing, price fixing and the exchange of sensitive information.
- *Ensuring choice* between several waste management systems for the companies obligated under national legislation to recycle their waste.
- *Avoiding exclusive arrangements* of all kinds without solid and convincing economic justification thus allowing for increased competition and lower prices.

In the initiatives following these objectives, we bear in mind that in the waste management area competition policy is closely intertwined with environmental goals. On the one hand, efficient waste management policy relies on functioning markets and, therefore, competition policy can contribute to better environmental policy. On the other hand, adopting efficient, market-based instruments to achieve environmental objectives also ensures that competition problems, once a waste management scheme is in place, are reduced to minimum. It is therefore fundamental to clearly identify the environmental goals behind the Directives and determine the most efficient market instruments capable of achieving those goals.

For example, while the "free take-back" and "producer responsibility" principles under the EVL and WEEE Directives aim at supporting the achievement of the environmental goals provided for in the Directives, they may also result in distortions of competition. It should be ensured that the most effective solution both from the environment and competition perspective is chosen to implement the directives.

“Free take-back” or “producer responsibility” may be conducive to but may not be strictly necessary for the achievement of recycling targets and may be disproportionately restricting competition. In particular, non-manufacturers of cars should not be foreclosed as collection and dismantling companies on the market for ELVs.

BRAZIL

THE ENVIRONMENTAL LEGISLATION AS A BARRIER TO ENTRY

Brazilian firms are subject to some sort of environmental laws and regulations imposed by the government or by international environmental agreements, such as Kyoto Protocol.

Environmental and competition policies are concerned with the same objective, social welfare maximisation. Despite this, environmental laws and regulations, in general, increase barriers to entry, a factor that diminishes contestability of a given market. Beyond the fact that environmental policies increase entry barriers, they also favour larger firms established in the market, once these firms can adapt themselves easier to the regulations.

In Brazil, the phenomena described in the last paragraph also occur. Brazilian environmental legislation affects the degree of competition and of contestability in many markets. In mergers analysis, Secretariat of Economic Monitoring considers the impact of this legislation, mainly the entry barriers created by this laws and regulations.

This paper presents a brief summary of the Brazilian environmental legislation and how this regulation could affect merger analysis.

1. Brazilian Environmental Legislation

In Brazil, the first signs of concern over natural resources emerged during the second half of the 17th century, when the exploration of wood and its sub-products was the exportation basis of Brazil as a colony. In order to meet the commercial agreements with Portugal and other European countries on the huge volumes of wood coming from Brazil, the Legal Letter of October 15th, 1827 was proclaimed, which created the term hardwood (“Madeira de lei”). The Supplementary Regulation n. 363/1844 and Circular Letter of February 5th, 1858 enumerated and specified the different types of hardwood, as well as the cutting, even on private property.

Only between 1930 and 1940, the Forest, Water and Mine Codes were established, with emphasis on the exploration and protection of economically important natural resources. Between 1964 and 1967, the laws that maintained the economic value of the exploration were proclaimed, added by the innovating concept of rational use, honouring health and life quality. During this period, the New Forest Code (Law number 4,771/65), the Fauna Protection Law (Law number 5,197/67), the Fishing Code (Decree-law number 221/67) and the New Mines Code (Decree Law number 227/67) were highlighted.

The New Forest Code (changed by Law number 7.803/89) innovates with the definition of the Permanent Preservation Areas: locations where all the forests and other forms of natural vegetation should be maintained, with restrictions as to its use. So as to comply with the new code and the Fauna Protection Law, the Brazilian Institute for Forest Development was created (Decree law number 289/67) and also in 1967, the Indigenous Reservations, the National Parks and the Biological Reservations were established.

The United Nations Conference on Human Environment, held in Stockholm (Sweden) in 1972, represented a new standing in the face of environmental issues. Brazil established its National

Environmental Policy through Law number 6.938/81, which includes the environmental component in the public policy management and, five years later, it disciplined the public responsibility civic action as a result of damages caused to the environment through Law number 7.347/85.

The Constitution of 1988 improved this issue and assured that the actions and activities considered damaging to the environment were subject to penal sanctions of the transgressors. The Environmental Crime Law (Law number 9.605/98) consolidated the process begun in 1985, establishing, for all legal entities, an administrative responsibility – civil as well as penal – in cases where the infraction is incurred as a result of a decision made by their legal or contractual representative. For individuals, the law established liability measures in accordance with damaging conduct to the environment.

So as to assure the maintenance of biodiversity and appoint the criteria and norms for the establishment, installation and management of the Preservation Units, the National System of Environmental Preservation Unit (SNUC), through Law number 9.985/2000. This initiative reinforces the Brazilian Biodiversity Policy in the maintenance of large protected areas, which assure biological diversity for the development of scientific research and sustainable activities.

2. The environmental permit in Brazil

The environmental permit is a procedure by which the government, represented by its environmental entities, approves and follows the start-up and operation of activities which make use of natural resources or may be considered effectively or potentially pollutants. The enterprise has the obligation, by law, to seek the proper environmental permit with the environmental authorities from the very beginning, from planning throughout its installation to the start-up procedures.

The Resolution of the Brazilian Council for Environment (Conselho Nacional de Meio Ambiente - "CONAMA") No. 237/1997 lists every enterprise that must apply for an environmental license. Since 1981, as stated by the federal law nº 6.938/81, the environmental licensing is obligatory in Brazil and the activities that may be considered effectively or potentially pollutants may not operate without proper permit. Since then, every enterprise operating without environmental license is subjected to sanctions as stated by law including the ones related to the Environmental Crime Law, from 1998: fines, temporary or definitive halt of the operations.

The environmental license is the document, with defined stated period of validity, where the environmental agency establishes rules, conditions, restrictions and measures of environmental control to be followed by the company. Some of the main evaluated characteristics in the process are: the solid potential of generation of pollutant liquids, solid residues, atmospheric emissions, noises and the potential of risks of explosions and fires. When receiving the Environmental License, the entrepreneur assumes the commitments for the maintenance of the environmental quality of the place where if it installs.

The process of environmental licensing is constituted of three types of licenses. Each one is demanded in a specific stage of the licensing: Previous License (LP), Installation License (LI) and Operation License (LO). The Previous License concerns the very basic concepts of the project: location, environmental viability and, in the process, it lays out the basic requirements for the next licensing phase. Once the initial project is detailed and the proper environmental protection measures are defined, it is the time to pursuit the Operation License in order to initiate any construction or settling of equipment. And finally, the Operation License will allow the enterprise to commercially initiate its operations. This last license should be required by the end of all construction and verification of the environmental protection measurements efficiency established in the previous licenses.

The stated period for analysis and concession of a license is established in the 14^o article of the Resolution of the Brazilian Council for Environment (Conselho Nacional de Meio Ambiente - "CONAMA") No. 237/1997: "The competent entity may establish differentiated stated period of analyses for each kind of license (LP, LI and LO) due to special peculiarities of the enterprise or activity as well as for complementary demands as long as a maximum stated period of six months is observed from the requirement date. This stated period should be observed till it's or not approved except when it's an EIA/RIMA¹ case or public hearing when the maximum stated period is twelve months."

Depending on the complexity of the analysis, the granting of an environmental license may take too long time, becoming the entrance of a new firm totally intempestive.

3. Barriers to Entry

Barriers to entry can be defined as any factor in a market that places a potential competitor in disadvantage toward the established economic agents. The following factors represent important barriers to entry:

- a) sunk costs;
- b) legal or regulatory barriers;
- c) resources belonging exclusively to established firms;
- d) economies of scale and/or of scope;
- e) the level of integration of the productive chain;
- f) the loyalty of consumers to established brands; and
- g) the threat of reaction by established competitors.

Legal and regulatory barriers are demands created by the government or by regulatory agencies for a firm's establishment and functioning, such as commercial permits, permissions, authorisations, judicial warrants, environmental regulation, among others.

4. How have environment regulation affected merger analysis?

The possibility of entry of new competitors into the market is one factor that could inhibit the exercise of market power. For the analysis of conditions of entry, SEAE and SDE use to take into account the behaviour that a hypothetical firm that wishes to enter into the market must adopt. The higher the barriers to entry, the larger the minimum viable scales (MVS) necessary to make entry viable and the smaller the probability of new firms entering the defined relevant market.

Legal and regulatory barriers are one type of barrier considered in one antitrust analysis. These barriers may represent, in practice, an increment to sunk costs², when their fulfilment implies higher costs or even the exclusion of the possibility of entry.

Depending on the market being analysed³, a newcomer will need environmental licenses to operate in that market, and the licensing process might be expensive and time consuming, as seen previously, making it difficult the entrance of new companies or becoming it even though intempestive⁴.

¹ This study of Environmental Impact (EIA) and the Environmental Impact Report (RIMA) is a legal requirement, instituted for Resolution CONAMA 001/86.

² Sunk costs are costs that cannot be recovered when the firm decides to leave the market.

³ The Resolution of the Brazilian Council for Environment (Conselho Nacional de Meio Ambiente - "CONAMA") No. 237/1997 lists every enterprise that must apply for an environmental license.

In the following cases, the antitrust Brazilian authorities elaborated, although superficially, how the environmental issues affect the entrance of newcomers in the iron ore production market and in the distribution and reselling of liquid fuels markets.

5. Case Studies

5.1 *PetrobrasXAgip*

In the acquisition of AGIP by PETROBRAS, SEAE and SDE⁵ considered the environmental aspect when analysing conditions of entry in markets for distribution and reselling for liquid fuels. Specifically, the relevant items taken as barriers of entry were, among others: I) minimum capital and financial liquidity, ii) minimum storage capacity, iii) environmental licenses for LP, LI, LO and EIA/RIMA study.

The environmental impact study (EIA) and the environmental impact report (RIMA) are obligatory, according with the Resolution of the Brazilian Council for Environment (Conselho Nacional de Meio Ambiente - "CONAMA") No. 001/86, for projects with some significant environmental impact. It consists of a study carried through in the place, more necessarily in the ground, water and air to verify if the area contains some environmental liabilities, and what will be the major environmental and economic impacts due the enterprise.

With regard to the fuel reselling market, in respect to the operation of new gas stations, among others regulatory compliances, is necessary to fulfil Portaria ANP n.º 116/2000 and the Law n.º 10,165, from 27 of December of 2000, deal with the environmental aspects.

In this specific case, as the legal and regulatory barriers are only one amongst many types of barriers of entry considered in an antitrust analysis, Seae and SDE had concluded that the barriers to the entrance in the distribution and reselling of liquid fuels markets were not significant.

5.2 *CVRDXFerteco/Caemi/Socoimex/Samitri*

In the operations concerning the acquisition of the mining companies Ferteco, Samitri, Socoimex and Caemi By Companhia Vale do Rio Doce - CVRD⁶, SEAE, SDE and CADE had analysed the legal and regulatory barriers especially in the activity of iron ore exploration, as well as in the railroad transport. It was also observed the lack of newcomers for this market in previous years.

Generally, it was observed that iron ore production expands in existing mines (browfield expansion). Rarely it occurs by exploring new mines (greenfield expansion) and in those cases, when it occurs, it is conducted by well-established mining companies which already have the extraction rights.

The stringent environmental legal barriers, partially, explains the above phenomena. Besides the Previous License (LP), Installation License (LI), Operation License (LO), the environmental impact study

⁴ SEAE and SDE will, generally, consider a period of 2 (two) years as socially acceptable period for entry. All the necessary steps for entry into the market, such as planning, product design, market studies, obtaining licenses and permissions, constructions and operation of the plant, promotion and distribution of the products, are included in this period.

⁵ Until the present moment - May 2006, the case was not yet judged by CADE.

⁶ Concentration Acts N° 08012.000640/2000-09; N° 08012.001872/2000-76; N° 08012.002838/2001-08; N° 08012.002962/2001-65.

(EIA) and the environmental impact report (RIMA), a new mining company must submit itself to environmental demands from governmental entities concerning the iron ores improvement⁷.

With regard to the extraction rights, one evidenced, at the time, that to enter in the iron ore market a new mine must have an authorisation (extraction right) granted by the National Department of Mineral Production (DNPM). In accordance with information gotten next to the DNPM, at that time, about 63% of the extraction rights of the iron ores measured reserves⁸ in Minas Gerais (region most affected by the operations) already had been granted to CVRD, or to Socoimex, or to Samitri or to Ferteco.

At the time of the analyses, the extraction rights should be obtained at the Departamento Nacional de Produção Mineral – DNPM⁹. It proved that 63% of the measured iron ore sites were granted to CVRD or to Socoimex or to Samitri or to Ferteco, mainly at the province of Minas Gerais.

Therefore, as much the attainment of the rights of cultivates how much the ambient requirements for the installation of a new mine and in relation to the resultant rejeitos of the process of improvement of the iron ore had been considered as raised barriers to the entrance of new mineradoras.

Not only the extraction rights but the environmental requirements for the installation of a new mine, together with the environmental demands from governmental entities concerning the iron ores improvement were considered as stringent barriers of entrance for new mining companies. So, such legal requirements added to other characteristics of the analysed markets had taken the competent agencies to the conclusion that the possibility of entry of new competitors into the market was not a factor that could inhibit the exe.

⁷ Law 6938/81; Decree 88351/83; Article 225, paragraph 2º of 1988 Federal Constitution; Decree 97632/89.

⁸ The measured reserves are those in which the mining resources were already quantified in accordance with the DNPM standards.

⁹ The objectives of the National Department of Mineral Production are: to foster the planning and promotion of exploration and mining of mineral resources, to supervise geological and mineral exploration and the development of mineral technology, as well as to ensure, control and monitor the exercise of mining activities throughout the national territory, in accordance with the Mining Code, the Mineral Water Code and respective legislation and regulations that complement them.

RUSSIAN FEDERATION

In order to define contradictions between the tasks of environmental policy and competition policy it is necessary to make clear who sets these tasks. As a rule, while ensuring its objectives in legislative acts and target development programmes the state sets the tasks for environmental policy in the line with international approach towards the problem. At present an economic entity is aimed at gaining profit and in the conditions of a certain ecological control it may not include the task of installment of ecologically efficient equipment, increase of the production's ecological competitiveness and implementation of activity with the greatest ecological effect. Prudential legal regulation of the economic entities' activity is necessary in order to equate environmental policy with competition policy. This regulation should make the undertakings be interested in combination of measures for effectiveness increase and increase of environment protection.

Ecological enterprising activity is the best sphere where competition policy can enter into alliance with environmental policy. It should be quite clear for the state that in the conditions of market economy the most efficient way is to make ecological enterprising a direct participant of environmental activity. Improvement of environmental activity and environmental sanitation to a great extent depends on intensification of ecological enterprising activity. Thus it is necessary to create satisfactory conditions for its development.

At present we can establish the fact of existence of the Russian market of environmental services. The market satisfies the demand formed by the consumers which observe the environmental legislation.

Annual volume of environmental services in Russia amounts from \$600 billion to \$2 trillion according to the RAS Institute of Geography data. The market includes two spheres (according to the EC classification which was elaborated in the course of talks on Russia entrance in WTO), i.e. "green", which is a complex of services connected with assessment and preservation of biological variety, and "brown", which includes a large scale of commodity output such as industrial scale plants, technologies, devices, reagents, works and services for preparation of environmental documentation. Several market sectors where the legal environmental regulation is strict can be singled out:

- construction, starting-up and adjustment and operation of the environmental objects;
- production of equipment and means for environmental protection;
- works and services for industrial and domestic waste utilisation;
- development works and experimental development for creating environmental protection equipment, plants and facilities, modern environmental technologies, methods and means of protection of environment from negative influence;
- services for elaboration of documentation proving the necessity for getting permission for pollutant emissions, waste discharge and placement of industrial and domestic waste;

- services for elaboration the section “Protection of environment” in ToRs and working drafts for construction, reconstruction, technical re-equipment, projects for control areas, estimation of influence on the environment;
- ecological monitoring;
- ecological audit;
- informational services in the sphere of ecology and protection of the environment.

Analysis of the market, which was made in the course of investigation of the cases of the antimonopoly law violation, showed that segments are filled by small business. At the same time the market specific is the basis for origin of monopolistic tendencies in the market. First of all it is clearly exposed in unfair competition, dominant position of some economic entities and creation of additional barriers for the market entry and for the market activity.

The demand in the market is a 100% depended on the level of its “regulation” by the legislation on protection of the environment. Any user, whether it is a small shop which waste consist of a dozen of kilos of packing a month or it is a large aviation industrial complex, **must** get permission for placement of waste and accordingly **has to** order works for elaboration of normative for industrial waste formation, consumption and limits for its placement.

Another specific quality of the market is **lack of possibility to replace the product (work or service)** by another which is similar by its internal and external characteristics to that which the user is obliged to purchase in the framework of the legislation.

In the context of the antimonopoly control the problem of barriers for entrance in the market consists in the following: in the condition of contradictory regulation by legislation on protection of environment there is illegal restriction of activity of the economic entities by authority in the sphere of ecological control.

In the contest of small business support, elimination of illegal administrative barriers and taking into consideration the above mentioned, the antimonopoly body proposes the following:

- State policy aimed at ensuring industrial and ecological security should solve the following problems:
 - formation, regulation and stimulation of the national ecological industry is out of the sphere of activity of the federal bodies of executive authority;
 - lack of official information about the condition and tendencies of development of this sphere of business activity;
 - lack of economic basis for realisation of efficient ecological policy (inadequacy of budgetary funds granted for protection of environment, lack of stimulate in development of ecological enterprising, introduction of technological innovations, etc.);
 - insufficient transparency of the process of formation and usage of the financial resources allocated for protection of environment;

- non-participation of the population in the decision-making on ecological matters, violation of the citizens' right for information about the environmental conditions and measures for the protection of environment.
- These problems can be solved by establishment of legal basis for implementation of the activity aimed at protection of environment. At present the market of ecological and environmental services is functioning within the framework of common legislation. The act regulating business activity in the sphere of ecology and protection of environment should contain the following:
 - strengthening of economic mechanism of stimulation in the market of ecological and environmental services, taking into consideration the large investing part, and including:
 - provisions which provide for elaboration and adoption of a programme supporting ecological enterprising according to which the participants can be registered (notification, accounting) with the aim of getting government support as performer of state-important function (outside the frames of public contract);
 - norms securing national interests in the world market of ecological and environmental services, including strict regulation of environmental equipment import;
 - order of preparation, approval and application of a List of Services, which can be rendered by private operators, having exclusive rights for rendering such services in the sphere of protection of environment and a List of Services in this sector tariffs for which are regulated by state.

SOUTH AFRICA

High levels of concentration are prevalent in a number of industries in the South African economy. This phenomenon can largely be attributed to the political and geographic isolation of the country from major European and US competitors. The political history of the country during the second half of the last century is such that industries were not exposed to significant international competition due to sanctions being imposed on the apartheid government. The result has been a number of private and State owned, or aided, monopolies in, for example in the telecommunications, transport, mining and chemicals industries, to name a few.

Although South African investors have not been exposed to competition for the South African market, South Africa is a country heavily dependent on trade with exports constituting 33.8%, 28.2% and 28.2% of GDP in 2002, 2003 and 2004 respectively¹. Because South Africa has a small open economy² it is heavily dependent on economic developments within its major trading partners³. It is therefore also sensitive to the increased environmental concerns in these countries with respect to production methods used in traded goods.

If South Africa is to achieve its development goals of halving poverty and unemployment by 2014 it is obliged to adhere to international protocols that address environmental concerns in order to secure markets for its products⁴. On the competition front the ability to adhere to environmental protection laws raises interesting issues in the South African context.

In recognition of the wide disparities in economic opportunities and the need to stimulate fair competition the South African Competition Act was promulgated in 1998. The stated purpose of the Act is to:

- a) promote efficiency, adaptability and development of the economy;
- b) provide consumers with competitive prices and product choices;
- c) promote employment and advance the social and economic welfare of South Africans;
- d) expand opportunities for South African participation in world markets and recognise the role of foreign competition;
- e) ensure that small and medium-sized enterprises have an equitable opportunity to participate in the economy; and

¹ Sources: World Bank, IMF.

² The South African GDP amounted to US\$234.125 billion in 2005.

³ USA: 11.6% of exports
 UK: 10.5% of exports
 Japan: 10.2% of exports
 Germany: 8% of exports and
 Netherlands: 4.6% of exports
Source: COMTRADE

⁴ 58% of South Africa's exports in 2003 constituted manufactured goods, 19% mining and 10% was attributable to food products.

- f) promote a greater spread of ownership, in particular to increase the stakes of historically disadvantaged persons.

From the stated purposes of the Act it can be seen that South African Competition policy has not given specific recognition to the role of environmental protection policies in the attainment of competition amongst firms in the same market. It can, however, be argued that purposes (a), (c) and (d) of the Act, as stated above, cannot be achieved without sustainable development. This is a development approach that places emphasis on environmental protection. Sustainable development has as its premise that future generations will at least live as well as the current generation. In order for this to occur the maintenance of a healthy, sustainable environment is paramount. Instead of propagating that humans should control nature and increase consumption, as suggested by conventional development thinking, sustainable development implies that humans and nature are indivisible.

Purpose (a) can only be achieved by ensuring that there is minimal disruption of physical and ecological processes. In other words, that the total resource base of an economy is not depleted. The two major threats to the earth's ability to sustain living standards are the world's expanding population and the rising consumption standards of the growing middle class⁵. Globalisation and the increasing sophistication of the South African consumer have ensured that South Africa has followed the worldwide trend in terms of increased consumption.

A competition policy that aims to expand market participation at any cost, which includes the extraction of as much of the earth's resources as possible in the shortest possible time, may have the opposite effect of achieving sustainability, although it will achieve economic growth and an increase in the GDP thereby realising purpose (c) over the short-term: employment will be promoted and the social and economic welfare of South Africans will temporarily be advanced.

Having provided a caveat, the short-term needs of populations in developing countries cannot be ignored, yet there is often a trade-off between catering to the basic needs of populations over the short-term through job creation⁶ and achieving sustainable development, which takes a longer-term perspective of the effects of present behaviour.

The efficiency defence, which is relied on in order to allow mergers that may result in a substantial lessening of competition to proceed, can have consequences that diminish the earth's resources over a shorter time period than would be the case if less efficient extraction methods were promoted. A case in point is the approval of a merger in granite mining in South Africa whereby a merger that was likely lead to a substantial lessening of competition in the supply of granite slabs to the South African market was approved conditionally, inter alia, on the grounds of increased efficiency due to the introduction of improved technology that would reduce wastage and improve recovery rates. The behavioural conditions that were placed on the merging parties related to ensuring supply to the domestic market at non-discriminatory prices compared to in-house supply and supply to the international market. The disadvantage of increased efficiency, from an environmental perspective, is that extraction would occur at a faster rate, especially in view of the fact that the acquiring firms in this instance were controlled by international entities that had ready access to a wide international customer base.

In order to protect the environment the Department of Minerals and Energy has a number of policies in place to ensure that mining activities' negative impact on the environment is minimised. The responsibilities of the mining industry in respect of environmental management are laid out in the Minerals

⁵ Gillis,M, Perkins,DH, Roemer,M and Snodgrass, DR. (1996). **Economics of Development**. London: Norton.

⁶ South Africa's official unemployment rate is estimated to be at above26%.

Act, 1991, the Environmental Conservation Act, 1989, the Water Act, 1956 and the Atmosphere Pollution Prevention Act, 1965. None of these Acts, however, regulate the rate at which minerals may be extracted.

The Minerals Act requires that before mining can commence a mine must submit a legally binding environmental management programme (EMP) for approval by the Department of Minerals and Energy whereby all persons deemed to be affected by prospecting or mining operations are consulted. Approval of an EMP may take a considerable period of time. This reduces the ease of entry of new firms, although legislation does provide for the granting of temporary permission to proceed with mining operations under exceptional circumstances⁷. In addition to the timing issue, the mining company must finance the rehabilitation of land disturbed by mining operations. Failure to comply with the EMP may result in the suspension or withdrawal of a mining authorisation or prosecution of the holder of the authorisation. These regulations arguably prejudice smaller mining operators who do not have ready access to EMPs. The Government has, however, put less rigid guidelines in place in order to strike a balance and encourage the participation of small mines, which assists in achieving purposes (e) and (f) of the Act.

Although the regulatory burden, including compliance with legislation on environmental policy has the potential to discourage entry into a market, not imposing strict environmental criteria can also hamper competition. One area, in which government policy has been slow in its encouragement of competition, by dragging its heels on environmental policy, is in the area of electricity generation. The provision of electrical energy has traditionally been the responsibility of a State owned monopoly whereby electricity for the national grid has been produced using coal-fired power stations. Coal is relatively cheap and abundant in South Africa. This makes other forms of electricity generation less economically viable absent any penalties on greenhouse gas emissions. Against the background of coal-fired stations it was recently decided to commercialise and eventually privatise electricity generation and encourage competition in the sector.

South Africa is one of the top 20 greenhouse gas emitters in the world. Yet, because it is classified as a developing country it has escaped mandatory compliance with the Kyoto protocol. Although the Air Quality Act is set to come into effect in 2006, Government has been more inclined to encourage bio fuels production, rather than other sources of power generation, such as wind or solar energy, which have more positive environmental impacts.

Recently Government voiced its commitment to improving environmental protection. In the 2005 Budget speech the Minister of Finance stated “ South Africa seeks to integrate the principles of sustainable development into Government policies and programmes, including the responsible stewardship of environmental resources”. Proposals included extending tax relief for rehabilitation costs in the mining industry to the chemicals and electricity generation industries and to impose more environmental charges. To support this stance the Government released a draft policy paper on a framework for considering market-based instruments to support environmental fiscal reform in South Africa in April 2006. This would mainly be through tax reforms.

Environmental protection is, however, not seen as a priority in all Government circles. Evidence of environmental policy being put on the back burner in the interests of accelerated growth can also be seen in the recent attitude towards environmental impact assessments (EIAs) in areas other than mining. In its new vision for growth Government has explicitly referred to the regulatory burden imposed on small businesses in the imposition of EIAs⁸. New regulations streamlining EIAs, whereby they would be the responsibility

⁷ Such circumstances would include a situation where insignificant impact on the environment is expected or the mineral involved needs to come into production urgently.

⁸ South African Government Information – Accelerated Shared Growth Initiative for South Africa (AsgiSA) <http://www.info.gov.za/asgisa>

of the department of environmental affairs, rather than being dispersed across government departments, have been put on hold for more than a year with the attitude being that EIAs hamper development in an economy that has to compete with other emerging markets for investment, and with lower cost producers in the Far East for export markets. The argument is that First World-type EIAs cannot be implemented in a country where development needs are more Third World. The reduction in monetary costs of production is also encouraged in purpose (d) of the Act, which is to “expand opportunities for South African participation in world markets and recognise the role of foreign competition”.

If competition policy is viewed in isolation it can be argued that adherence to environmental regulation increases the costs of doing business and may entrench the position of dominant incumbents who may be given leniency with respect to adhering to new legislation and enjoy artificially lower costs than a new entrant would during the crucial entry stage. The same principles can be applied to relatively smaller companies in sectors that produce negative externalities that may be subjected to environmental legislation.

Typical impacts on profitability identified by businesses that are associated with environmental policy, directives and regulation are:

- Increased costs, including the time and resources, it takes to conduct Environmental Impact Assessments;
- the costs and time required to obtain regulatory permits for industrial activities;
- Additional liability posed by regulations in terms of monitoring and
- Expected increases in capital expenditure in response to requirements for new legislation⁹.

As competition increases, the price elasticity of demand for a company’s product increases and thus there is more pressure to reduce the gap between price and costs. Increased regulatory costs thus become a factor in the profitability of a company. South African companies perceive that given their geographical disadvantage additional costs, in the form of environmental regulations, will place them at a global disadvantage¹⁰. Empirical literature¹¹, however, suggests that environmental regulations do not generally affect an industry’s competitiveness, but neither do they stimulate innovation and propel competition¹².

From the above it is evident that environmental protection is necessary in a rapidly changing world. Yet South Africa still needs to take a strong stand in this regard. Competition policy has not been proactive in addressing the issue of environmental protection.

In order to achieve sustainable development, compliance with international norms is a necessity. Failure to take cognisance of the environmental impact of issues brought before the Commission may lead to lower prices over the short-run, but with significant long-term costs. There is a need to strike a balance between the environmental and competition policy goals of the country. Failure to use discretion when evaluating competition and environmental regulation could either result in environmental degradation, the maintenance of concentrated market structures, or both.

⁹ Terblance, C. (2004). **Commercial Effect of Environmental Legislation**. Mondi

¹⁰ *ibid*

¹¹ Meyer, SM. **The Economic Impact of Environmental Regulation** (Internet Research Papers on-line)

¹² Hanley, N *et al.* **Environmental Economics**. Oxford University Press

**LINKS BETWEEN THE ENVIRONMENT AND COMPETITION POLICY
THE CONTRIBUTION OF THE INDUSTRIAL ECONOMY**

by Anne Perrot¹

1. Market structures and environmental damage

Competition law seeks to promote the most competitive market structures and behaviour possible. This is demonstrated by the fact that the quantities produced in a competitive market are increased. Prices are lower and players more numerous, and this in turn results in higher demand and correspondingly higher supply.

If the production processes employed in the sector concerned create pollution, or consume large amounts of energy, then the situation is clearly harmful to the environment compared with less competitive market structures. In this simple case and looking solely at the environmental damage caused, the most favourable situation from an environmental viewpoint is that of a monopoly. In markets where there is a single dominant player, the quantities produced are lower, and so is the associated pollution.

The environmental problem lies in the fact that pollution is an external effect, i.e. the private production decisions taken by a company do not take into account the potential damage caused for the rest of society (consumers, other companies). In some cases, a merger between initially separate companies can provide a solution to the problem. The classic example of this is a river, with two companies, one based upstream of the other. The activity of the company based farther upstream releases pollutants into the water, resulting in harmful effects on the activity of the other company located downstream. As the upstream company is maximising its own profit without taking account of the downstream company, it is producing more pollution than it would under a socially optimum situation, in which the profits of both companies are taken into account. If the two companies merge, the resulting single entity, which maximises the sum of their profits, takes account of the "external" effect of pollution since the effect is now "internalised". It will therefore opt for the optimum level of production and pollution. This example is a further illustration of the fact that less competitive (and more highly concentrated) market structures can nonetheless be better for the environment.

A second, well known ecological problem, which involves the same sort of conflict between competition and the environment, is that which arises as a resource is exhausted (e.g. fish stocks, for which economic models were initially developed). In this case, each player, competing with others on a downstream market, is unaware of the effects its own consumption (e.g. catching fish) is having on the exhaustion of the resource, which runs out more quickly than if it were being exploited by a sole company under a monopoly. A monopoly leads to higher prices on the end market, which in turn pushes down demand and therefore slows the rate at which the resource is exhausted. A monopoly will also be perfectly aware of the consequences its current catches are likely to have on its future production. These basic results indicate that since a monopoly takes on board the effects of its current behaviour on the future state of the resource, it will make better decisions between the present and the future, and will therefore better preserve its oil reserves, water or fish stocks. This second example concerning the exploitation of a rare

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resource highlights the fact that, in many cases, environmental conservation and the promotion of competitive market structures do not go together well.

One of the questions raised by this situation, in which a monopoly is better than competition from an environmental viewpoint, is how the competition authorities themselves can take account of it. Their task is to protect the interests of consumers, which means maximising their surplus. Since any attempt to measure this should include environmental damage, the policy adopted by competition authorities could, in theory, perfectly take account of environmental damage linked to a particular market structure or company behaviour. This means measuring the effects, in terms of consumer surplus, of the damage created by the pollution concerned. Traditionally, when evaluating the effects of anticompetitive practices on consumer surplus, not always an easy task, competition authorities "only" require data on price and quantities. However, evaluating environmental damage requires a wide range of information, which a competition authority may find too difficult to translate into an assessment of well-being. For example, evaluating the beneficial effects of an inter-company agreement designed to minimise local pollution requires some measurement of its effects on the health of consumers, the loss of availability that the population must pay for this reduction in pollution, etc. All these data are difficult to obtain and cannot reasonably be evaluated, except in very specific cases, during litigious proceedings.

However, whilst competition on downstream markets is potentially harmful in terms of the environmental problems that appear on upstream markets, and whilst it is extremely difficult to directly take account of the effects on consumer well-being, competition law can help environmental policy in other ways.

This is the case of markets for "pollution rights", energy savings certificates or eco-industries in which operators recycle certain materials or clean up pollution at sites. It is also true of industries that innovate in the fields of technology and pollution clean-up.

Traditionally, public intervention to protect the environment (and more generally to take account of external effects) involves the introduction of taxes, the imposition of production quotas or standards. The whole arsenal of public interventions is designed to allow economic players to "internalise" their environmental actions, so as to reconcile the private and social costs of individual decisions. All these mechanisms embody the "polluter pays" principle, as they increase the relative cost of decisions which have the effect of raising pollution, and reduce the cost of environmentally-friendly decisions. Taxes on pollution are designed to encourage companies to invest in cleaner processes, such as more energy efficient technology. Meanwhile, a more recent addition to the range of environmental instruments used is the concept of "pollution entitlements". These are rights or allowances that can be traded on secondary markets. However, the companies that buy and sell them may be tempted to manipulate their prices, by abusing their dominant position or entering into cartel agreements. The state of competition in these markets therefore needs to be monitored closely. Finally, much further downstream, other sectors such as the waste processing or site clean-up industries, or the container recycling business, can be handed responsibility for remedying environmental problems. Here again, competition policy can be called upon to ensure the system works with a proper degree of competition, thus reducing the price of dealing with pollution.

2. Energy saving certificates

This particular example of the "polluter pays" principle in practice involves forcing energy suppliers (gas, electricity) to obtain certificates from the government, proving that they have installed or financed equipment to enable energy savings to be made at consumers' homes or company premises. Periodically, the energy suppliers are required to give a report of the certificates they have accumulated. These certificates can also be traded on a secondary market. An energy supplier can therefore obtain a given

volume of certificates in recognition of its investments, or by purchasing them from another player. It is therefore faced with the following decision: an efficient supplier will find it more advantageous to make its own energy saving investments, whereas an inefficient one will find it more profitable to obtain certificates via the secondary market. In all cases, the polluters pay, and that is the aim of the incentives inherent to the mechanism: efficient suppliers are those which make investments, whilst the others purchase certificates, with the overall result that energy sales fall.

However, there are a range of other decisions to be taken in addition to this, and their impact on competition cannot be immediately assessed. For example, certificates represent a dual cost for energy suppliers: on the one hand, they are expensive in themselves (in line with the principle of seeking to make energy consumption more costly), whilst on the other hand, the investments made to enable energy savings have the effect of reducing energy sales, and consequently deprive the suppliers of additional profit. There is therefore an incentive for each energy supplier to make investments that will enable purchasers to make savings on a competing type of energy. On the secondary market where certificates are traded, all kinds of anticompetitive behaviour are possible: abuses of dominant position and agreements can therefore distort the price of certificates. This in turn has a directly visible impact on the environment: distorted prices result in higher pollution. In addition, certain players (like major high street chains, for example) can be suppliers of both energy and equipment used to make consumption savings, so that their strategies to manipulate prices and the quantities traded on the certificates markets are numerous and complex.

3. Eco-industries

The effect of certain types of pollution produced by both production and consumption can only be reduced by acting afterwards, once the pollution has actually been emitted. Some prime examples of eco-industries that do this are recycling, cleaning up formerly polluting industrial sites once they have been decommissioned or processing households waste or packaging. There is also a European Directive on packaging².

The principle of all recycling industries is to have the cost of treating waste covered. In the case of pollution caused by packaging, which when the product inside is opened is simply thrown away and transported to landfills where it is then incinerated, there are several negative external effects. To begin with, some packaging can be reused practically as it is, without any further transformation process, and so destroying it is wasteful. Also, there is a cost involved in storing and destroying packaging. In the case of packaging waste produced by households, they all pay an equal tax for removing it, irrespective of how much each individual household produces. Consequently, the tax does not provide any individual incentive to reduce packaging waste.

The company Eco-Emballages is the result of an agreement between local authorities, producers and users of packaging intended for consumption by households. Businesses pay contributions to Eco-Emballages and the local authority receives a subsidy for processing waste. As the cost of the contribution is passed on in the price of products (in proportions that depend on the type of competition between companies on the downstream market), it is the consumers of the packaging who pay the social cost of their consumption, rather than the contributors all paying a uniform amount. At the end of the chain, reprocessing industries may recycle the materials recovered, depending on the nature of the waste.

Eco-Emballages and similar companies therefore form an additional rung on the ladder, one which is common to all user companies. Collection and processing of waste (like the wider activity of collection and processing of household refuse) is an activity with strongly rising returns. Handing it to a monopoly, at

² Directive 2004/12/EC of 11th February 2004 amending Directive 94/62/EC on packaging and packaging waste.

least locally, is therefore not an absurd option. In addition, centralising it in the hands of a small number of national companies means certain other costs can be internalised, whilst tax and information collection can also be centralised.

This type of centralised structure nonetheless raises some competition problems: for example, if it is compulsory to pay contributions to an unregulated monopoly, the company in question is liable to practise high prices, or even to discriminate between client firms producing packaging. In this case, the monopoly acts as a bottleneck and raises the sort of competition problems traditionally associated with this type of market structure, such as distortions in competition between companies further downstream if they are discriminated against.

In addition, EC and national case law includes many cases of agreements between companies which, whilst positive for the environment, nonetheless have damaging consequences for competition. Economic progress can be invoked as justification for pro-environmental agreements, but only if no other solution can be found which would cause less damage to competition.

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LES LIENS ENTRE ENVIRONNEMENT ET POLITIQUE DE LA CONCURRENCE: L'APPORT DE L'ÉCONOMIE INDUSTRIELLE

par Anne Perrot¹

1. Structures de marché et dommages environnementaux

Le droit de la concurrence cherche à promouvoir des structures de marchés et des comportements les plus concurrentiels possibles. Cette intensité concurrentielle se manifeste par le fait que les quantités produites y sont plus importantes : les prix sont plus faibles sur un marché concurrentiel, les acteurs plus nombreux et ceci se traduit par une baisse des prix, une hausse de la demande et une hausse de l'offre correspondante.

Si les processus de production impliqués dans le secteur en question sont polluants, ou fortement consommateurs d'énergie, alors cette situation est clairement défavorable à l'environnement par rapport à des structures de marché moins concurrentielles. Dans ce cas simple et lorsqu'on ne tient compte que du dommage environnemental, la situation la plus favorable du point de vue de l'environnement est celle où un monopole sert le marché puisque c'est dans cette configuration que les quantités produites sont les plus faibles, leurs sous-produits polluants l'étant aussi.

Le problème environnemental vient du fait que la pollution est une externalité, c'est-à-dire que les décisions productives privées prises par une entreprise ne tiennent pas compte des dommages qu'elles engendrent pour la collectivité (consommateurs, autres entreprises). Parfois, la fusion d'entreprises initialement disjointes permet d'apporter un remède à ce problème. Prenons l'exemple caricatural d'une entreprise située en amont d'une autre le long d'une rivière. Son activité lui fait rejeter dans l'eau des polluants qui entraînent des effets négatifs sur l'activité de l'entreprise située en aval. Comme l'entreprise en amont maximise son propre profit sans tenir compte de l'entreprise en aval, elle produit trop de pollution par rapport à la situation socialement optimale où l'on tiendrait compte des profits des deux entreprises. Si les deux entreprises fusionnent, l'entité unique, qui maximise la somme des profits, prend en compte l'effet « externe » de la pollution puisque cet effet est maintenant internalisé. Elle choisira donc le niveau de production et de pollution qui maximise le bien-être. Cet exemple atteste encore du fait que des structures de marché moins concurrentielles (plus concentrées) peuvent être pourtant plus favorables du point de vue environnemental.

Un deuxième problème environnemental bien connu, qui fait apparaître le même conflit entre concurrence et environnement est celui de l'épuisement d'une ressource (comme les ressources halieutiques, pour lesquelles les modèles économiques ont été initialement développés). Dans ce cas, chaque acteur, en concurrence avec les autres sur un marché aval, ignore les effets de sa propre consommation de la ressource (prises de poissons par exemple) sur l'épuisement de la ressource, qui s'épuise plus rapidement que si un monopole était chargé de son exploitation. En effet, un monopole, qui fait augmenter les prix sur le marché final, retarde, en abaissant la demande, l'épuisement du gisement. Par ailleurs il internalise parfaitement les conséquences que ses prises d'aujourd'hui ont sur sa production future. Ces résultats fondamentaux indiquent qu'un monopole réalisera, en internalisant parfaitement les

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effets de son comportement présent sur l'état de la ressource dans le futur, un meilleur arbitrage inter temporel entre le présent et le futur et préservera donc mieux gisement pétrolier, réserve d'eau ou ressources en poissons. Ce deuxième exemple, relatif à l'exploitation d'une ressource rare, souligne donc que dans bien des cas, préservation de l'environnement et promotion de structures de marché concurrentielles font mauvais ménage.

L'un des problèmes que pose cette situation, où le monopole est meilleur que la concurrence du point de vue environnemental, est de savoir comment les autorités de concurrence elles-mêmes peuvent en tenir compte. En effet, la mission qui leur est assignée est bien de protéger les intérêts des consommateurs, ce qui passe par la maximisation de leur surplus ; comme la mesure de celui-ci devrait intégrer d'éventuels dommages environnementaux, la politique mise en œuvre par les autorités de concurrence pourrait parfaitement tenir compte, en théorie, des dommages environnementaux liés à telle ou telle structure de marché ou à des comportements des entreprises. Mais ceci nécessite que soient mesurés les effets, en termes de surplus, des dommages créés par la pollution en cause. Si l'évaluation habituelle des effets sur le surplus des consommateurs des pratiques anti-concurrentielles, à laquelle sont habituées les autorités de concurrence même si elle n'est pas toujours facile, ne requiert « que » des données de prix et de quantités, celle des dommages environnementaux nécessite de nombreuses informations dont la traduction en termes de bien-être économique risque de dépasser largement les possibilités d'appréhension par une autorité de concurrence. Par exemple, évaluer les effets bénéfiques d'un accord entre entreprises qui viserait à minimiser une pollution locale requiert la mesure de ses effets sur la santé des consommateurs, celle de la disponibilité à payer de la population pour cette réduction des rejets polluants etc. toutes données qui sont difficilement accessibles et ne peuvent raisonnablement être évaluées, sauf cas particulier, au cours d'une procédure contentieuse.

Toutefois, si la concurrence sur les marchés aval est potentiellement néfaste vis-à-vis des problèmes environnementaux qui apparaissent sur des marchés amont, et si la prise en compte directe des effets des dommages environnementaux sur le bien-être des consommateurs est extrêmement difficile, le droit de la concurrence peut venir au secours de la politique de l'environnement par d'autres biais.

C'est le cas des marchés de droits à polluer, des certificats d'économie d'énergie ou des éco-industries dont les acteurs recyclent certains matériaux ou dépolluent des sites. C'est aussi vrai des industries innovantes en matière de technologie de dépollution.

Traditionnellement, l'intervention publique en matière de protection de l'environnement (et plus généralement dans le domaine de la prise en compte des externalités) passe par l'instauration de taxes, l'imposition de quotas de production ou celle de normes. Tout l'arsenal des interventions publiques vise à permettre l'internalisation par les agents économiques de leurs actions environnementales de façon à faire coïncider les coûts privés et les coûts sociaux des choix individuels. Tous ces mécanismes augmentent donc le coût relatif des décisions polluantes, réduisent celui des choix favorables à l'environnement et sont des déclinaisons du principe « pollueur payeur ». Les taxes sur la pollution cherchent à inciter les entreprises à investir dans des procédés moins polluants, comme des technologies plus économes en énergie par exemple ; plus récemment est venu s'adjoindre le nouvel outil des droits à polluer ; comme ces droits sont cessibles sur des marchés secondaires, et comme les entreprises qui les achètent ou les vendent peuvent avoir intérêt à manipuler leurs prix, en abusant de leur position dominante ou par le biais d'ententes. On est ainsi fondé à surveiller le fonctionnement concurrentiel de ces marchés de droits. Enfin, bien en aval, d'autres secteurs industriels, celui des industries de traitement des déchets ou de dépollution des sites, ou encore l'activité de recyclage des emballages, peuvent être chargés de remédier aux problèmes environnementaux. Là encore, la politique de la concurrence peut être appelée à surveiller que son fonctionnement est bien concurrentiel, ce qui diminue le prix de traitement de la pollution.

2. Les certificats d'économie d'énergie

Cette forme particulière que revêt le principe du pollueur payeur consiste à imposer aux vendeurs d'énergie (gaz, électricité) d'obtenir auprès d'une administration des certificats prouvant qu'ils ont bien effectué ou financé des équipements permettant des économies d'énergie chez les consommateurs (particuliers ou entreprises). Périodiquement, ces offreurs d'énergie sont tenus de faire état des certificats qu'ils ont accumulés. Ces certificats peuvent par ailleurs être échangés sur un marché secondaire. Un volume donné de certificats peut ainsi provenir, pour un vendeur d'énergie, de ceux qu'il a obtenus en reconnaissance de ses investissements ou bien d'un achat auprès d'un autre acteur. L'arbitrage auquel fait face un vendeur d'énergie est donc le suivant : si ce vendeur est efficace, il est avantageux pour lui de réaliser lui-même des investissements d'économie d'énergie, tandis que s'il ne l'est pas il est plus profitable de se procurer les certificats sur le marché secondaire. Dans tous les cas, les pollueurs sont bien payeurs, et c'est l'objectif des incitations contenues dans ce mécanisme : les vendeurs efficaces sont ceux qui réalisent les investissements, les autres les achètent et globalement, les ventes d'énergie diminuent.

Mais à cet arbitrage simple s'en ajoutent bien d'autres, dont les effets sur la concurrence ne sont pas immédiats à évaluer. Par exemple, le coût des certificats est double pour les offreurs d'énergie : d'une part les certificats sont coûteux en soi (c'est bien le principe recherché qui tend à rendre plus coûteuses les consommations d'énergie), d'autre part les investissements destinés à ces économies réduisent les ventes d'énergie et fait faire par ce biais aux offreurs une perte de profit additionnelle. Il existe donc une incitation pour chaque offreur d'énergie à réaliser des investissements permettant aux acheteurs d'économiser une énergie concurrente. Sur le marché secondaire sur lequel s'échangent les certificats, tous les comportements anti-concurrentiels peuvent trouver à s'exercer : abus de position dominante, ententes peuvent ainsi distordre les prix des certificats. La conséquence en est directement mesurable sur l'environnement : des prix distordus entraînent une pollution plus élevée. Par ailleurs, certains acteurs (comme ceux de la grande distribution) peuvent être à la fois vendeurs d'énergie et d'équipements permettant d'en économiser la consommation, si bien que leurs stratégies pour manipuler les prix et les quantités échangées sur les marchés de certificats sont nombreuses et complexes.

3. Les éco-industries

L'effet de certaines pollutions qui sont des produits joints de la production ou de la consommation ne peut être réduit que par le biais de retraitement ex post, une fois que les polluants ont été émis. Ainsi le recyclage, les procédés de traitement des sites industriels polluants une fois l'exploitation de ceux-ci arrêtée, ou le traitement des déchets ménagers ou des emballages sont ils des exemples de ces éco-industries. Il existe d'ailleurs une directive européenne relative aux emballages².

Le principe de toutes les industries de recyclage est de faire prendre en charge le coût du traitement des déchets. Dans le domaine des pollutions liées au emballages, par exemple, qui sont, une fois le produit déballé, jetés et transportés en décharges où ils sont brûlés, les externalités négatives sont de plusieurs ordres ; tout d'abord, certains emballages peuvent être réutilisés pratiquement sans transformation, les détruire est donc un gaspillage. Ensuite il existe un coût à entreposer et détruire ces emballages. Lorsque les déchets d'emballage sont produits par les ménages, ceux-ci acquittent une taxe d'enlèvement égale pour tous, quelle que soit la production individuelle de rejets d'emballages et qui en tant que telle ne crée donc aucune incitation individuelle à être économe en emballage.

La société Eco-Emballages est le fruit d'un accord entre collectivités locales, producteurs et utilisateurs d'emballages destinés à la consommation des ménages. Les entreprises cotisent auprès d'Eco-

² Directive 2004/12/CE du 11 février 2004 modifiant la directive 94/62/CE relative aux emballages et aux déchets d'emballage.

Emballages et la collectivité locale reçoit une aide pour retraiter les déchets. Comme le coût de la cotisation est répercuté dans le prix des produits (dans des proportions qui dépendent cette fois de la nature de la concurrence entre les entreprises sur le marché aval) ce sont les consommateurs d'emballage et non les contribuables uniformément, qui payent le coût social de leur consommation d'emballages. En bout de chaîne, des industries de retraitement peuvent ou non, suivant la nature des déchets, valoriser ce qui a été récupéré.

Eco-Emballages et les entreprises analogues apparaissent donc comme un échelon supplémentaire dans la filière verticale, qui plus est comme une entreprise commune à toutes les entreprises utilisatrices. En effet, la collecte et le traitement des déchets (tout comme l'activité plus globale de ramassage et de traitement des ordures ménagères) est une activité faisant apparaître des rendements fortement croissants. Le fait de la confier à un monopole, au moins au plan local, n'est donc pas aberrant, mais en outre, la centralisation dans les mains d'un petit nombre d'entreprises présentes au niveau national permet d'internaliser certains autres coûts et de centraliser le paiement de la taxe et la collecte d'informations.

Ce type d'organisation centralisée pose néanmoins certains problèmes de concurrence : par exemple, si cotiser auprès d'un monopole non régulé est obligatoire, il est à craindre que cette entreprise ne pratique des prix élevés, ou bien ne discrimine entre les entreprises clientes productrices d'emballages. Ce monopole apparaît alors comme un goulet d'étranglement et pose les problèmes de concurrence traditionnellement associés à ce type de configuration, comme les distorsions de concurrence entre les entreprises qui sont en concurrence en aval si celles-ci viennent à être discriminées.

Par ailleurs, la jurisprudence communautaire et nationale est riche de cas d'accords entre entreprises qui pour avoir des effets favorables sur l'environnement n'en ont pas moins des conséquences dommageables pour la concurrence. Le progrès économique peut dans ce cas être invoqué pour autoriser la mise en œuvre des accords pro environnementaux, mais à condition qu'aucune autre solution moins dommageable pour la concurrence ne puisse être trouvée.

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SUMMARY OF DISCUSSION

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 minimises total industry costs). Unit compliance costs are in general – for most environmental regulations in most countries – higher for smaller firms. This naturally favours more concentrated market structures. This is a positive from the point of view of minimising 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 behaviour. 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-labelling and product differentiation; voluntary agreements; land use planning.

The Chair then turned the floor over to Mrs. Perrot. Mrs. Perrot (France) addressed in her presentation some basic economics, starting with an acknowledgement that both policies - environmental policy and competition policy - aim at maximising 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 internalise 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 behaviour and this creates problems in evaluation. This is also true in a simple competitive situation when comparing the costs and benefits of a certain behaviour 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 internalisation 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 behaviours on these markets. Mrs. Perrot 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 behaviours 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 maximise 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 emphasised 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 monetisation, 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 asked Professor Heyes about his views on the system of CO2 emission allowance trading in the EU and how it compares with some tax for CO2 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, low 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 in the high polluting areas was 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 favour 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 Antitrust 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 specialised gasoline formulations might have some effects on the competitiveness of the market. First, by way of background, she clarified that federal legislation mandates in certain areas called “no attainment areas”, that the specialised 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 localised 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. She referred to a FTC complaint brought in 2003. This was against Unocal on grounds of monopolisation, 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 significant difficulty in many merger investigations obtaining 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 DOJ’s 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 behaviour 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 Africa 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 defence. 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 authorise 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 subsidise 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 authorised to allow the member state to subsidise 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 scrutinise 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 internalising 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 liberalised 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 Bundeskartellamt 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 Bundeskartellamt 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 internalise 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.

COMPTE RENDU DE LA DISCUSSION

Le Président du Comité de la concurrence, Frédéric Jenny, ouvre la séance par quelques observations générales sur l'organisation des débats et invite les délégués à réagir à tout moment pour que la réunion soit interactive. Il souhaite la bienvenue à M. Davies, vice-président du Groupe de travail de l'OCDE sur les politiques d'environnement nationales et l'invite à faire une première déclaration juste après les exposés introductifs de M. Heyes et de Mme Perrot (France).

M. Anthony Heyes (Royal Holloway College, Université de Londres) souligne certains aspects essentiels du document de référence qu'il a préparé pour le Secrétariat. Il observe que l'intervention dans le domaine de l'environnement est devenue l'un des principaux champs de l'activité gouvernementale, surtout depuis 20 à 25 ans. Les conséquences doivent en être examinées avec soin, de même que les possibilités de coordination entre politique de l'environnement et politique de la concurrence. La manière dont la politique de l'environnement est conduite n'est pas sans incidence sur la concurrence et inversement. La façon dont la coordination des deux politiques pourrait et devrait être gérée fait partie des questions à étudier.

Se référant à certains aspects abordés dans son document de référence, il évoque d'abord les effets possibles de la réglementation environnementale sur la structure naturelle des marchés (c'est-à-dire la structure qui réduit au minimum les coûts industriels totaux). Si l'on considère la réglementation en vigueur dans la plupart des pays, les petites entreprises supportent des coûts unitaires de mise en conformité comparativement plus élevés, ce qui favorise évidemment une concentration accrue des structures de marché. L'effet est positif du point de vue de la minimisation des coûts à l'échelle d'un secteur, mais une concentration accrue peut gêner la concurrence. M. Davies renvoie alors à une étude d'Éric Helland, un économiste américain qui s'est penché sur les liens qui existent aux États-Unis, à un niveau global, entre coûts de mise en conformité et rente économique. L'une des mesures de rente qui apparaît traditionnellement dans les études financières est le q de Tobin, qui correspond à la valeur boursière de l'entreprise rapportée à ses coûts de remplacement. Le rapport entre ces deux grandeurs est une mesure des rentes dans le secteur d'activité concerné. Aux États-Unis, pour les entreprises du quartile supérieur, une hausse de 1 % des coûts de mise en conformité est associée à une augmentation de 2 à 10 % de q . Par conséquent, le montant de la rente, le montant de bénéfice que peuvent escompter ces entreprises si leurs coûts de mise en conformité augmentent de 1 % est un relèvement de leur valeur q compris entre 2 et 10 %. Selon ce critère, les grandes entreprises, aux États-Unis tout au moins, peuvent généralement tirer avantage de la réglementation ; il ne faudrait donc pas s'étonner de les voir militer en faveur d'une réglementation environnementale.

Il évoque ensuite les obstacles à l'entrée, plus exactement la manière dont la réglementation en matière d'environnement influe sur les conditions d'entrée sur un marché et donc sur les résultats du secteur d'activité concerné. Théoriquement, il existe trois possibilités d'empêcher l'arrivée de nouveaux concurrents sur un marché :

- a) investissements à fonds perdus associés à l'entrée. Une entreprise voulant pénétrer dans un secteur d'activité donné peut devoir augmenter son investissement initial en raison de la réglementation environnementale, sans qu'il lui soit possible de récupérer les fonds à sa sortie du marché. La hausse des coûts irrécupérables entraîne une moindre contestabilité du marché, puisque la contestabilité est habituellement exprimée en proportion de ces coûts.

- b) Les réglementations en matière d'environnement peuvent engendrer des écarts de coûts entre les entreprises en place depuis déjà un certain temps et les nouvelles venues.
- c) Même en l'absence de tout problème d'entrée ou de sortie, la réglementation peut ralentir les procédures d'autorisation et d'homologation.

M. Heyes évoque alors l'étude consacrée au marché américain du ciment Portland. Les amendements de la loi américaine sur la pureté de l'air proscrivent presque totalement l'utilisation de fours à voie humide car leur nettoyage est plus onéreux. Certains petits cimentiers indépendants ont donc fini par se retirer du marché mais ils n'ont pas été remplacés par de nouvelles entreprises. Le rétrécissement du marché tient au fait que, pour les candidats à l'entrée sur le marché américain du ciment, les coûts irrécupérables (qui sont distincts des charges fixes) ont augmenté d'environ un tiers. En conséquence, la probabilité qu'au moins trois entreprises soient actives sur un sous marché est devenue huit fois moindre après l'adoption des amendements, ce qui s'est traduit par un recul de 10 % de la rente du consommateur.

M. Heyes traite ensuite du risque de comportement prédateur. Les possibilités d'influencer la réglementation environnementale peuvent être un moyen de pratiquer une éviction autre que par les prix (actions d'entreprises installées visant à relever les coûts de leurs concurrents ou de ceux qui pourraient le devenir). Un certain nombre d'études sectorielles, comme celle portant sur le marché américain de l'essence reformulée, indiquent en particulier qu'une entreprise bénéficiant d'un accès privilégié à une nouvelle « technologie verte » peut détenir un avantage concurrentiel sur ses rivales. Par ailleurs, depuis les 10 ou 15 dernières années, la politique de l'environnement tend à s'orienter vers des « accords volontaires » en vertu desquels un groupe d'« initiés » du secteur (entreprises installées) négocient la réglementation avec les pouvoirs publics, ce qui peut nuire aux autres entreprises (éventuellement plus petites) ou aux candidats à l'entrée sur le marché.

Pour finir, Anthony Heyes évoque quelques-uns des instruments qui figuraient dans les présentations de certains pays ainsi que les problèmes de concurrence qu'ils sont susceptibles d'engendrer : permis d'émission négociables ; programmes pour l'élargissement de la responsabilité des producteurs ; étiquetage écologique ; différenciation des produits ; accords volontaires ; planification de l'utilisation des sols.

Le Président donne la parole à Mme Perrot (France). Le document préparé par cette dernière part de considérations économiques élémentaires, notamment du fait que les deux politiques, celle de l'environnement et celle de la concurrence, visent dans une certaine mesure à accroître le bien-être. Évidemment, la mesure de ce bien-être devrait tenir compte de tous les effets des comportements économiques sur la rente du consommateur, y compris des préjudices environnementaux (comme les conséquences directes sur la santé ou les effets négatifs plus indirects sur la productivité des entreprises). On obtiendrait ainsi la mesure classique de la rente des consommateurs. Dans l'idéal, par conséquent, les deux politiques devraient aller dans le même sens, mais cet objectif pourrait se révéler difficile à atteindre.

Le but de la politique de la concurrence est une structure de marché concurrentielle. En effet, une telle structure débouche sur des prix bas et une augmentation de l'offre aussi bien que de la demande. Les répercussions sur l'environnement peuvent être négatives : i) le processus de production lui-même peut être polluant ; ii) la production de biens peut entraîner l'épuisement de certaines ressources naturelles (richesses minérales, forêts, etc.) ; iii) si le bien lui-même est polluant, le résultat est évidemment identique.

Ceci est particulièrement manifeste dans le cas de l'exploitation d'une ressource commune épuisable. L'exemple classique concerne les captures de poisson de mer et les entreprises de pêche qui se livrent concurrence sur le marché qui se crée en aval. Le terme de « tragédie des biens communs » décrit le fait

que, chaque entreprise étant incitée à pêcher de grandes quantités, sans se préoccuper de l'impact que la diminution des ressources halieutiques aura sur ses concurrentes, la ressource peut diminuer au point de devenir inexploitable. Dans un tel cas de figure, il va de soi qu'une entreprise en situation de monopole internalise bien mieux qu'une autre les effets de son comportement présent sur l'évolution de la ressource épuisable. Par exemple, dans le cas de deux entreprises dont les activités respectives dépendent du même cours d'eau, l'entreprise la plus en amont pollue la rivière et affecte la qualité de l'intrant utilisé par la firme située plus en aval : une fusion des deux concurrentes atténuerait et résoudrait le problème car l'entité résultant du rapprochement tiendrait compte de toutes les atteintes à l'environnement induites par le processus de production. Cet exemple très simple montre donc qu'un marché moins concurrentiel peut être plus favorable à l'environnement.

Dans la pratique, de nombreux autres problèmes se posent. Il arrive que les autorités de la concurrence aient du mal à évaluer l'incidence que peut avoir une pratique anticoncurrentielle simple (entente, abus de position dominante, etc.) sur la rente du consommateur. La difficulté est d'autant plus grande quand il s'agit de dégâts causés à l'environnement. En réalité, calculer les avantages et les coûts d'une mesure environnementale donnée, y compris en faisant abstraction des aspects liés à la concurrence, peut être compliqué même pour les responsables de la politique environnementale.

Il est vrai que la politique de la concurrence saisit mieux les effets à court terme qu'à long terme d'un comportement donné, ce qui est gênant pour l'évaluation. Le problème est le même face à un cas de concurrence simple pour lequel il faut évaluer les coûts et avantages d'un comportement donné à court et à long terme. Et l'exercice est sans doute encore plus délicat lorsqu'il est question d'atteintes à l'environnement.

Il existe aussi des points de convergence entre politique de l'environnement et politique de la concurrence. Comme le problème économique majeur est un problème d'externalités, la solution à la plupart des problèmes d'environnement consiste à créer des marchés dont ils sont justement absents, et d'arriver ainsi à internaliser les effets externes. Là où de tels marchés sont créés, la politique de la concurrence peut naturellement faire en sorte qu'ils fonctionnent bien et favorisent moins les comportements anticoncurrentiels. Mme Perrot fournit deux exemples à ce sujet. Le premier concerne les certificats d'économie d'énergie. Les fournisseurs d'énergie tels que les compagnies de gaz ou d'électricité bénéficient d'incitations pour investir dans des équipements spéciaux visant à réduire la consommation du bien qu'elles vendent : elles subissent donc doublement la politique mise en place. Il leur faut investir et leurs investissements servent précisément à faire baisser leurs ventes. Lorsqu'elles investissent, elles reçoivent un certificat. Généralement, il existe aussi des marchés secondaires où ces certificats se négocient. En vertu de ce mécanisme, les investisseurs les plus avisés décident eux-mêmes d'investir pour réduire la consommation d'énergie durant la production ; les autres se contentent d'acheter des certificats sur le marché secondaire. Dans l'un et l'autre cas, néanmoins, les pollueurs sont les payeurs.

Sur les marchés de ce type, toutes sortes de comportements stratégiques sont possibles ; des collusions ou des abus de position dominante peuvent créer des distorsions de prix sur le marché secondaire et, dans le cas des certificats d'économie d'énergie, les mécanismes incitatifs sont très complexes. Comme il a été expliqué, les investissements sont onéreux et diminuent la quantité d'énergie consommée. Un producteur est donc incité à investir pour réduire la consommation d'une énergie concurrente.

Il est difficile d'évaluer les effets d'un tel mécanisme sur la concurrence. En l'espèce, la politique de la concurrence serait utile pour déterminer les conséquences de ces incitations croisées sur des marchés complémentaires.

Dans le domaine des éco-industries, différents secteurs remédient aux problèmes de pollution en créant des entreprises communes, ce qui débouche sur un certain nombre de questions intéressantes pour la

politique de la concurrence. Premièrement, d'un point de vue horizontal, un accord interentreprises peut entraver la concurrence sur le marché de produits ; un compromis est à trouver entre les effets pour l'environnement et les effets anticoncurrentiels sur le marché en aval. On observe là aussi tous les problèmes qui peuvent aller de pair avec une structure verticale complexe. Si une entité commune est prise dans la chaîne verticale, une discrimination par les prix, des goulets d'étranglement ou le refus de traiter avec certaines entreprises extérieures à l'entreprise commune peuvent être à l'origine de toutes sortes de problèmes d'exclusion sur le marché de produits situé en aval.

À l'invitation du président, **M. Davies** formule quelques remarques introductives. Il explique que le Groupe de travail de l'OCDE sur les politiques d'environnement nationales étudie l'évolution des politiques et évalue les programmes au moyen d'analyses coûts-avantages. Le Groupe réfléchit depuis longtemps aux instruments économiques (taxes et réglementations environnementales, par exemple) qui seraient les plus à même de satisfaire aux objectifs de la politique de la concurrence, c'est-à-dire qui n'auraient pas d'effets anticoncurrentiels délétères. La question du coût de la compétitivité pour les entreprises l'occupe tout particulièrement, mais le Groupe n'a pas encore étudié en détail les politiques de la concurrence, du moins pas depuis un certain temps.

M. Davies suggère que les politiques de l'environnement et de la concurrence se fondent sur une logique d'imperfection des marchés. Dans les deux cas, il faut commencer par étudier le bien-fondé du principe des interventions gouvernementales et arriver à des thématiques et des mesures fondamentalement liées au bien-être social et aux moyens de le maximiser. Dans ce contexte, l'évolution des politiques environnementales de ces dernières années s'est caractérisée par un recentrage sur des mesures plus axées sur le marché. Le risque d'entrave à la concurrence est peut-être moins élevé avec ce type d'approche qu'avec les mesures autoritaires qu'elle a remplacées.

M. Davies récuse le point de vue exprimé dans le document de référence du Secrétariat au sujet des coûts des politiques environnementales et d'autres questions y afférentes. Il souligne que, du moins en termes de croissance et de résultats économiques, il n'est pas certain que la politique de l'environnement soit aussi dommageable que le document ne le suggère. Il met l'accent sur le fait qu'elle traite de questions tout à fait essentielles sur le plan du bien-être social et qui constituent des fins en soi : pureté de l'air, propreté des plages, questions liées à la survie même des pays (problèmes planétaires se posant à long terme), etc. Ce sont autant de points à prendre en considération par ceux qui examinent les conséquences des politiques. Dans certains cas, l'importance des questions d'environnement est telle qu'elles peuvent primer d'autres considérations politiques. Il est des circonstances dans lesquelles un environnement sain est bon pour l'économie ; les pays peuvent donc vouloir accroître ces avantages et ces complémentarités et œuvrer pour que l'élaboration des politiques environnementales favorise le progrès économique.

Le Président donne la parole à l'Italie.

Le délégué de l'Italie revient sur l'opinion de M. Heyes selon laquelle la loi américaine sur la pureté de l'air (*Clean Air Act*) a pu créer des obstacles à l'entrée sur certains marchés. Il considère quant à lui qu'il y a deux options possibles concernant les conséquences de cette politique : soit la loi sur la pureté de l'air est jugée inappropriée et il faut l'abroger, soit elle n'est pas remise en question, mais il incombe à l'autorité chargée de la concurrence de déterminer comment atteindre ses objectifs en pénalisant moins la concurrence dans l'industrie cimentière.

M. Heyes est d'avis que les concepteurs d'un régime réglementaire ne doivent ignorer aucun des coûts de la réglementation et les prendre tous en compte, y compris quand ils sont indirects. Le gros problème réside dans leur évaluation chiffrée, qui implique d'identifier les circuits par lesquels la réglementation peut avoir un impact ; toutefois, à moins de vraiment vouloir leur attribuer un montant —

en dollars, en euros ou dans une autre monnaie — on ne peut guère que dresser une liste des effets positifs et négatifs d'une politique donnée.

Le délégué de l'Italie fait observer que sa remarque se rapportait principalement au fait que la création d'un marché de permis pouvait contribuer dans une certaine mesure à l'atteinte des objectifs de la politique de pureté de l'air et atténuerait l'impact négatif sur la concurrence. De son point de vue, le travail des autorités de la concurrence serait de réfléchir aux moyens de tenir les objectifs de protection de l'environnement sans être trop restrictif, c'est-à-dire sans imposer une réglementation dressant des barrières à l'entrée.

Le délégué de la République tchèque demande à M. Heyes ce qu'il pense du système communautaire de permis d'émission de CO₂ négociables et de son efficacité par rapport à une taxe sur la production de CO₂. Dans son pays, les entreprises tchèques ont réduit leur production, notamment d'électricité, et des sociétés internationales comme Metal Steel ont réduit leur production d'acier et en ont délocalisé une partie vers des pays tels que le Kazakhstan. La Tchéquie ne participe pas au système d'échanges d'émissions de CO₂ et il est clair que 95 % des autorisations sont remises aux entreprises gratuitement. Ce système à très courte vue n'incite pas les entreprises à investir dans les nouvelles technologies et à produire et exporter des biens mais, plutôt, compte tenu du nombre d'autorisations, à produire et vendre des autorisations. Ainsi, les exportations tchèques d'électricité ont baissé de façon spectaculaire car il est plus rentable de vendre des autorisations à l'Allemagne ou à l'Irlande que de produire et de vendre de l'électricité.

Le délégué des États-Unis revient sur la remarque du délégué de l'Italie à propos de la loi américaine sur la pureté de l'air. Initialement, ce texte exigeait une réduction des émissions en pourcentage. C'est un choix et le but prescrit peut être atteint en fixant des cibles environnementales. Toutefois, ce choix a eu des effets particuliers sur la concurrence : la loi a découragé l'utilisation de charbon à faible émission de carbone et à la fois elle a eu pour conséquence une hausse des coûts du charbon et un niveau d'émission supérieur à celui qui aurait été enregistré si une norme d'émission avait été fixée au lieu d'un pourcentage de réduction. Les États-Unis ont finalement changé d'avis au profit d'une norme d'émission, ce qui a eu d'importants effets proconcurrentiels car le charbon local dans les zones fortement polluantes a cessé d'être protégé de la concurrence représentée par le charbon moins polluant extrait ailleurs ; en outre, le taux d'utilisation du charbon local a diminué, entraînant une baisse de la pollution. Ces différents arbitrages sont tout à fait transparents et peuvent être pris en considération pour la mise en œuvre d'une réglementation environnementale.

Le délégué de la Suède déclare que la contribution de M. Heyes ne semble pas indiquer l'existence d'éléments empiriques prouvant que le permis négociable est exploité à des fins d'éviction ; néanmoins, dans la mesure où le permis négociable est en quelque sorte une nouveauté dans la politique environnementale européenne, il est difficile de savoir exactement quels types de conclusions peuvent déjà en être tirées. Il lui demande s'il estime que l'ampleur et le champ d'application du système d'échanges influent sur le risque de manipulation à des fins d'éviction : le système est-il plus difficile à manipuler quand il englobe plusieurs secteurs d'activité et un grand nombre d'entreprises plutôt qu'un seul secteur et une poignée d'entreprises ? En outre, s'il est clair que la remise gratuite d'autorisations ne devrait en principe pas modifier le comportement ultérieur des entreprises, dans la réalité, cet argument est-il vraiment valable ?

Le délégué de l'Allemagne reprend à son compte les préoccupations de son collègue tchèque et rapporte que les importations d'électricité en provenance de la République tchèque ont effectivement diminué, entraînant un recul de la concurrence sur le marché. Une pénurie d'électricité s'est ensuivie et la hausse des prix a atteint 60 %. De surcroît, les quatre plus grosses entreprises ont obtenu gratuitement des certificats d'émission négociables, ce qui s'est traduit par une diminution de la concurrence sur le marché de gros allemand. Actuellement, elles répercutent environ 40 EUR par tonne sur les consommateurs alors

même qu'elles n'ont pas eu à payer les certificats. Pour l'opinion publique, cette situation est difficile à comprendre.

M. Heyes répond au délégué de la République tchèque sur les avantages des permis négociables en termes de gestion du problème environnemental : il estime que ces permis ne sont probablement pas plus efficaces que les taxes. Les arguments en faveur des permis négociables sont d'ordre politique ; les industriels ont plus à gagner avec un système de permis négociables qu'avec un système de taxes agissant au niveau des préjudices marginaux, le niveau le plus efficace.

Aux États-Unis, où nombre d'analyses économiques très rigoureuses penchent pour l'élaboration de règlements, il est difficile d'expliquer pourquoi une norme d'émission est préférable à une taxe sur les émissions. Là encore, M. Heyes pense que les considérations politiques sont déterminantes pour le choix des instruments.

Par rapport aux observations du délégué de la Suisse sur les risques de manipulation des marchés, il souligne que la possibilité de stocker le produit est un aspect capital. En termes d'efficacité économique, un système de permis verts donnerait de moins bons résultats qu'une taxe, mais, s'il fonctionnait bien, un tel système inciterait les entreprises à produire de façon rationnelle à la marge et à réduire la pollution là où la réduction à la marge est la moins chère.

Le Président Jenny précise que les autorités en charge de la concurrence apprécieraient énormément de pouvoir intervenir dans l'élaboration d'une réglementation environnementale. Les contributions prouvent que c'est rarement le cas ; il leur faut donc « faire avec » et la marge de manœuvre pour tenter de remédier aux conséquences est étroite. À cet égard, le cas des États-Unis et de la Commission fédérale du commerce (FTC) constitue un exemple extrêmement parlant. La FTC est considérée comme responsable du prix élevé du gaz ; pourtant, d'après la contribution américaine, ce n'est pas le manque d'initiatives de la FTC qui limite la concurrence en ce qui concerne les prix des carburants mais les règlements pour la protection de l'environnement. Voilà donc une illustration intéressante du fait que les coûts de la réglementation choisie pour des motifs d'ordre politique peuvent avoir fait l'objet d'une analyse rigoureuse et approfondie.

La délégué des États-Unis (FTC) précise dès l'abord que le document américain, qui reflète moins l'opinion américaine globale qu'une réflexion conjointe de la FTC et de la division antitrust du ministère américain de la Justice, se fonde clairement sur une analyse des effets concurrentiels de la réglementation environnementale. Ce travail porte sur la réglementation en vigueur dans le secteur de l'essence et en particulier sur les effets que les règles applicables aux compositions spéciales pourraient avoir sur la compétitivité du marché. Premièrement, pour éclairer le contexte, elle précise que le droit fédéral impose l'utilisation d'essence reformulée dans certaines « zones de non-conformité » et que cela représente près de 30 % de l'essence vendue aux États-Unis. La plupart des grandes zones urbaines d'environ 35 États sont concernées. Ces règlements fédéraux se doublent de règlements locaux, dont les plus connus sont ceux de la Californie : ils fixent des normes d'utilisation d'essence reformulée qui s'écartent légèrement des prescriptions fédérales et sont même plus strictes. Le respect des normes fédérales ne permet pas nécessairement de satisfaire aux normes du Conseil californien des ressources atmosphériques (*Californian Air Resources Board*, CARB), tandis que le respect des normes californiennes garantit de satisfaire aux normes fédérales. Il est donc compréhensible qu'une telle situation conduise à la fragmentation des marchés. Dans les zones où il est obligatoire d'utiliser un carburant reformulé donné, le nombre de fournisseurs de ce carburant risque de baisser. Le délégué souligne que le document américain évoque des économies d'envergure et d'échelle. Il semble que les normes de protection de l'environnement accentuent la tendance existante à produire de l'essence dans des raffineries de plus en plus grandes. On constate qu'un nombre non négligeable de raffineries plus petites se sont retirées du marché.

Le délégué revient sur ce qu'a dit M. Heyes au sujet des pratiques d'éviction autres que par les prix (relèvement des coûts de la concurrence), dans le contexte des normes californiennes relatives à l'essence de nouvelle composition. Elle se réfère à une plainte déposée par la FTC en 2003 contre Unocal, accusé d'avoir agi en monopoleur. La FTC affirmait que cette société avait abusé les concepteurs de la réglementation californienne en affirmant à tort que les normes sur lesquelles elle préconisait de fonder la réglementation étaient tombées dans le domaine public. La procédure administrative lancée par la FTC à l'encontre d'Unocal n'est jamais réellement arrivée à son terme car Unocal a été racheté par Chevron entre-temps. Dans le cadre de l'opération de fusion, Chevron a accepté que les licences deviennent publiques et Unocal a cessé d'exiger des redevances. La conduite d'Unocal, qui s'apparentait donc à un abus et non à une initiative de nature juridique, autant que nous puissions l'affirmer, ne manquait vraiment pas d'audace. Pour les conducteurs californiens, les économies réalisées grâce au versement des licences dans le domaine public a été d'approximativement 500 millions USD par an.

Au sujet des effets courants de la réglementation environnementale sur la mise en œuvre de la politique de la concurrence, le représentant du ministère américain de la Justice a ajouté que de grandes difficultés avaient été rencontrées dans le cadre de nombreuses enquêtes sur des opérations de fusion pour obtenir les permis de construire ou d'exploiter. L'obligation de produire ces permis représente donc un obstacle significatif à l'entrée, avec un impact non négligeable sur l'évaluation des effets concurrentiels. La collecte et le traitement des déchets municipaux solides illustrent bien ce problème ; au cours des six ou sept dernières années, cinq fusions ont eu lieu dans ce secteur pour lequel la décision du ministère de la Justice de rejeter les fusions se fondait principalement sur la difficulté qu'il avait à obtenir les permis ; de ce fait, il n'y avait pas de possibilité de pénétrer sur ce marché après la fusion et le secteur était déjà concentré ; par conséquent, la réglementation environnementale doit être prise en considération dans la mise en œuvre quotidienne de la politique de la concurrence et elle constituait un élément d'évaluation important pour le département de la justice dans un nombre de cas significatif.

Le Président note que, dans certaines contributions, c'est moins la réglementation environnementale qui est en jeu que le fait que le fonctionnement de marchés concurrentiels au niveau national engendre un problème de concurrence. Trois pays au moins (Turquie, Afrique du Sud et Suisse) fournissent des exemples de cas où l'autorité de la concurrence a accepté des opérations ou des mécanismes anticoncurrentiels parce qu'ils étaient bénéfiques pour l'environnement. En Turquie, par exemple, plusieurs fournisseurs de gaz de pétrole liquéfié (GPL) ont été autorisés, pour des raisons d'efficacité économique et de protection de l'environnement, à créer une entreprise commune afin de construire un système de raccordement des navires, un système de stockage et un mécanisme de pompage à Izmir.

Le délégué de la Turquie précise dès le début que la loi turque sur la concurrence ne se réfère en aucune manière à une réglementation ou des normes environnementales. Il reconnaît pourtant que les décisions du Conseil turc de la concurrence qui sont évoquées dans la contribution, tout particulièrement dans le cas du gaz de pétrole liquéfié, semblent montrer qu'il existe une certaine marge de manœuvre. L'article 4 de la loi turque sur la concurrence interdit explicitement les accords, les décisions et les pratiques concertées qui empêchent, faussent ou restreignent le jeu de la concurrence. Néanmoins, certains accords et décisions limitant la concurrence et tombant donc sous le coup de cet article peuvent, dans une certaine mesure, favoriser une amélioration de la production ou de la commercialisation de produits ou contribuer au progrès technique et économique. En vertu de l'article 5, ils peuvent donc bénéficier d'exemptions individuelles ou par catégorie qui rendent inapplicables les interdictions visées à l'article 4.

L'exemple de la distribution du GPL est étroitement lié au fait que certaines entreprises tenues de respecter des normes environnementales peuvent décider de passer des accords horizontaux pour éviter les risques financiers. En l'occurrence, trois fournisseurs concurrents souhaitent s'associer pour gérer la construction d'un système de raccordement des navires et un mécanisme de stockage interne et de pompage dans la baie d'Izmir ; l'entreprise commune prendrait fin à l'achèvement des travaux.

Pour être exemptés des dispositions de l'article 4, les entreprises doivent remplir quatre critères énoncés à l'article 5. Premièrement, l'accord, la pratique concertée ou la décision visant à créer une association d'entreprises susceptible de restreindre la concurrence doit déboucher sur des innovations ou des améliorations ou des progrès économiques ou techniques dans le secteur de la production ou de la distribution de biens ou dans le secteur des services. S'agissant de ce critère, le Conseil a considéré que, du point de vue des économies d'échelle, la construction d'un seul terminal au lieu de trois était un élément positif tant sur le plan financier qu'environnemental. Bien que les accords horizontaux soient illégaux quand ils restreignent, empêchent ou limitent le jeu de la concurrence sur un marché donné, ils peuvent être exemptés à titre individuel ou par catégorie de l'application de cette disposition s'ils remplissent certains critères. De surcroît, si certaines obligations de protection de l'environnement peuvent être considérées comme des barrières à l'entrée, l'évaluation de leurs effets concurrentiels dépend de leurs retombées positives pour l'environnement et de leur incidence sur le comportement des entreprises. La mise en œuvre de la loi turque sur la concurrence par le Conseil turc de la concurrence reflète l'importance accordée aux aspects environnementaux, l'effet des activités économiques sur l'environnement et la disposition des milieux d'affaires à établir un lien entre environnement et concurrence.

Le Président Jenny donne ensuite la parole à l'Afrique du Sud, dont la contribution évoque une fusion anticoncurrentielle opérée dans le secteur des plaques de granit et acceptée pour des motifs d'ordre environnemental. Il invite la délégation à décrire les aspects de cette fusion que l'autorité de la concurrence a jugés acceptables.

Le délégué de l'Afrique du Sud souligne que les considérations environnementales n'ont pas été prépondérantes. L'autorité de la concurrence pense que les efficacités au niveau de la production étaient supérieures aux effets anticoncurrentiels ; naturellement, il existe aussi un effet positif sur l'environnement puisque des progrès sont réalisés en matière de récupération des déchets et de réduction des quantités. Indépendamment de cela, l'autorité est capable de procéder à un arbitrage entre les efficacités et les effets anticoncurrentiels et a donc considéré que les premières étaient supérieures aux seconds.

Le délégué de l'Afrique du Sud cite également l'exemple d'une association d'entreprises dans le secteur du recyclage du verre pour laquelle la commission de la concurrence a été contactée. Estimant qu'un certain nombre de ses programmes pouvaient éventuellement restreindre le jeu de la concurrence, elle a demandé à la commission de la concurrence comment atteindre ses objectifs sans avoir à recourir à des restrictions ou si une exemption voire une approbation était envisageable. L'association regroupait un certain nombre d'entreprises ayant des liens horizontaux ou verticaux entre elles, mais le plus gros producteur de verre et le plus gros acheteur de calcin suggéraient qu'il pourrait être nécessaire de s'entendre sur le prix d'achat du calcin et de le relever pour encourager les collecteurs et soustraire de plus grandes quantités au flux de déchets ; ceci aurait naturellement constitué une restriction au jeu de la concurrence. À l'époque, la commission a refusé.

À l'invitation du Président, le délégué de la Suisse évoque le cas d'une fusion qui a été acceptée pour sauver une entreprise en faillite. Le numéro deux du recyclage de piles était dans une situation financière difficile. C'est pour cela et non pour protéger l'environnement que la commission de la concurrence a accepté le projet de fusion. Néanmoins, la commission de la concurrence a joué un rôle clé en obtenant de l'Office fédéral de l'environnement que l'interdiction d'importer et d'exporter des piles usagées soit levée, ce qui a eu pour effet d'élargir le marché.

Le Président Jenny aborde à présent la question de la coordination des politiques de la concurrence et de l'environnement et invite la délégation de la CE à expliquer en quoi la politique des aides publiques peut aider à gérer l'interface entre concurrence et environnement.

Le représentant de la CE renvoie en premier lieu aux directives concernant la protection de l'environnement, qui expliquent comment les instances communautaires entendent mettre en œuvre la disposition relative aux aides d'État pour soutenir la protection de l'environnement. Ces directives prévoient des niveaux d'aide très élevés, allant jusqu'à 100 % du surcoût — c'est-à-dire des coûts supplémentaires à engager pour pouvoir atteindre un objectif d'environnement donné — en particulier pour huit sources d'énergie mondiales et pour les installations de cogénération. Les investissements visant à réaliser des économies d'énergie peuvent aussi ouvrir droit à des aides (jusqu'à 40 % de ces coûts peuvent être couverts). Les directives mentionnent aussi la possibilité d'autoriser les aides d'État quand les normes nationales imposées aux entreprises sont plus strictes ou plus exigeantes que les normes communautaires ou constituent des améliorations volontaires décidées par des États membres.

Un autre instrument couramment utilisé est la réduction d'impôt ou l'exonération. À première vue, il peut sembler contradictoire de protéger l'environnement et de promouvoir le développement durable en accordant des exonérations d'impôt, surtout quand les bénéficiaires sont des entreprises qui consomment beaucoup d'énergie. Cependant, après avoir consulté les États membres, la Communauté européenne a décidé d'accepter ces exonérations afin que certaines taxes environnementales puissent être introduites sans compromettre la compétitivité de certains secteurs d'activité. Les exonérations ne concernent que les taxes conçues pour contribuer de manière significative à la protection de l'environnement et sont accordées sous réserve de ne pas diminuer les effets positifs des taxes concernées. En règle générale, malgré les exonérations dont bénéficient certains secteurs, l'introduction de ces taxes a un impact globalement positif.

Il peut arriver qu'un État membre soit autorisé à subventionner des entreprises obligées de prendre des mesures pour qu'il puisse respecter ses propres obligations internationales et communautaires en matière de protection de l'environnement. Au Royaume-Uni, par exemple, une aide étatique a été autorisée car elle visait à subventionner des entreprises grâce auxquelles l'État membre britannique pouvait satisfaire aux exigences de la directive communautaire concernant les déchets d'emballage.

Les chiffres montrent que les États membres pourraient davantage recourir aux aides d'État pour promouvoir le développement durable et qu'une tendance à l'augmentation de ces aides se dessine clairement. En 2004, 11,4 milliards EUR, soit 25 % du montant total des aides accordées à l'industrie, étaient destinés à protéger l'environnement. Néanmoins, seule une petite fraction sert à promouvoir spécifiquement le développement durable, c'est-à-dire à respecter des normes plus exigeantes que celles de l'UE ou à financer des investissements pour diminuer la pollution ou mettre au point des technologies à base d'énergies renouvelables. Si les mêmes exigences peuvent être satisfaites par le marché lui-même, la CE n'encourage pas nécessairement les États membres à octroyer de telles aides.

S'agissant des permis d'émission négociables, le représentant de la CE rappelle que l'UE a arrêté son choix et que, comme l'a mentionné M. Heyes, il peut être considéré comme un choix politique. Encore assez récent, le système des permis négociables est actuellement en cours d'évaluation et un débat approfondi doit avoir lieu avant que l'on ne puisse tirer quelque conclusion que ce soit, y compris sur ses éventuels effets anticoncurrentiels.

Le Président Jenny invite la délégation du Royaume-Uni à informer le Comité des différents moyens par lesquels l'État peut intervenir pour pallier les défaillances du marché et à lui indiquer quels sont les avantages et les inconvénients des instruments en question du point de vue de la concurrence.

Le délégué du Royaume-Uni déclare que différents outils peuvent être utilisés. Les réglementations traditionnelles qui modifient à l'évidence le jeu de la concurrence peuvent limiter directement ou indirectement l'éventail des entreprises ou peut-être limiter la capacité concurrentielle des fournisseurs, voire atténuer les incitations. Le Bureau de la concurrence étudie la réglementation et se livre ainsi à l'exercice d'évaluation de la concurrence auquel les responsables des politiques doivent se livrer lorsqu'ils

envisagent d'introduire une nouvelle réglementation. *A posteriori*, le Bureau de la concurrence réalise des études de marché qui portent souvent sur la manière dont la réglementation concernant un marché en particulier modifie la concurrence et les avantages qu'en retirent les consommateurs.

S'agissant des subventions publiques, qui englobent les aides d'État, elles peuvent également affecter le jeu de la concurrence par le biais de décisions de tarification et de production inappropriées ou éventuellement par le maintien sur le marché d'entreprises inefficaces qui ne pourraient survivre sans ces subventions. Elles peuvent aussi fausser les décisions concernant la recherche-développement et les investissements. En plus de l'examen des subventions publiques et de leurs effets sur la concurrence par le Bureau de la concurrence, certaines lignes directrices seront communiquées aux responsables des politiques concernées pour les aider à concevoir des subventions qui ne faussent pas la concurrence ou, s'ils en escomptent un avantage capital, des subventions reprenant l'approche la moins restrictive.

La contribution britannique se réfère également aux mécanismes de marché, c'est-à-dire aux outils de la politique environnementale qui s'appuient sur le jeu de la concurrence pour atteindre les objectifs de protection de l'environnement. Le document analyse également la manière dont la passation des marchés publics modifie la concurrence sur un segment et comment les acheteurs publics pourraient encourager la concurrence entre les fournisseurs d'installations de traitement des déchets pour que les installations dont le Royaume-Uni a besoin soient disponibles. Il s'est avéré que de nombreux acheteurs publics locaux combinaient marchés de mise en décharge et marchés de traitement. Comme il est difficile d'obtenir un permis d'aménagement ou un permis d'exploitation pour une décharge, ceci a réellement pour effet de limiter le nombre d'entreprises en mesure de soumissionner pour décrocher un double contrat. Il a donc été recommandé aux acheteurs publics de réfléchir aux avantages qu'ils escomptent tirer de la combinaison de ces deux types de marchés et de déterminer si cette formule limite vraiment le nombre de fournisseurs. Nouveau secteur en plein essor, le traitement des déchets constitue un autre exemple intéressant. Compte tenu des savoir-faire requis pour exploiter les installations de traitement des déchets, il semble que les compétences de certains autres secteurs pourraient être combinées avec celles d'entreprises de traitement de plus petite taille qui pourraient monter des consortiums pour répondre aux appels d'offres. Le Bureau de la concurrence a recommandé aux collectivités locales d'autoriser les soumissions de ce type pour élargir l'offre et tenter d'atteindre leur objectif, à savoir l'ouverture de sites de traitement.

Les permis négociables représentent un autre mécanisme de marché ; au Royaume-Uni, toutefois, les entreprises ne sont pas les seules à pouvoir acheter ou vendre des permis d'émission ; les concepteurs de ce système espéraient que les nouveaux arrivants sur le marché pourraient se procurer des permis autrement qu'auprès de leurs concurrents directs. Le système britannique englobe une série de gaz à effet de serre, avec des cours différents selon le type de gaz.

D'après le délégué du Royaume-Uni, les outils de la politique environnementale peuvent se servir de la concurrence, jusqu'à un certain point, mais l'aspect essentiel est la méthode de conception et de mise en application de ces outils. À cet égard, la sensibilisation à la question de la concurrence est primordiale. Il précise que le rapport publié dernièrement par le Bureau de la concurrence a été salué par le ministère de l'Environnement.

Le Président Jenny invite la Corée à décrire ses initiatives de sensibilisation et note que la Korea Fair Trade Commission (KFTC) est un organe de niveau ministériel, c'est-à-dire suffisamment éminent pour pouvoir intervenir très en amont, avant que les problèmes de concurrence ne se posent.

Le délégué de la Corée souligne que les mécanismes de coordination sont nombreux en Corée. Le plus important est le mécanisme consultatif intergouvernemental prévu par la loi sur les pratiques commerciales loyales. En vertu de la section 53 de cette loi coréenne, tout ministère, dont celui de l'Environnement, souhaitant introduire une réglementation portant sur des dispositifs antipollution et

contenant des éléments anticoncurrentiels doit d'abord consulter la KFTC. En 2004, quelques 430 projets de lois ou règlements visant à protéger l'environnement ont été présentés. La KFTC s'est exprimée sur 44 d'entre eux et ses recommandations ont été partiellement ou totalement suivies dans 33 cas.

Le Président Jenny invite le Japon à décrire les initiatives de sensibilisation décidées par la Commission japonaise des pratiques commerciales loyales (JFTC) pour défendre la concurrence.

Selon le délégué du Japon, la JFTC estime qu'il est très important que la politique de la concurrence aborde les questions d'environnement de manière positive et volontaire. La JFTC a demandé à un groupe de réflexion japonais de travailler sur les liens entre politique de la concurrence et protection de l'environnement. En premier lieu, le rapport affirme que des politiques environnementales appropriées peuvent améliorer l'efficacité du mécanisme de marché et donc augmenter sa crédibilité en supprimant les externalités associées aux destructions de l'environnement. Une telle configuration est propice à l'innovation technologique et à l'essor des secteurs d'activité concernés. Lorsqu'il s'agit de concevoir et de mettre en œuvre de véritables moyens d'internaliser le coût des atteintes à l'environnement, le marché peut être efficace s'il associe de multiples outils stratégiques de préservation de l'environnement, parmi lesquels figure bien évidemment la politique de la concurrence. Le rapport préconisait que les responsables de la politique de la concurrence ou la JFTC, en plus de veiller à l'application de la loi antimonopole dans le domaine de l'environnement, examinent plusieurs questions ; premièrement, ils devraient clarifier la position de la loi antimonopole japonaise vis-à-vis des entreprises agricoles communes, de façon à remédier à divers problèmes d'environnement ; deuxièmement, ils devraient émettre des avis et des propositions sur les moyens de mettre en œuvre la politique environnementale en tenant compte des impératifs de la politique de la concurrence.

Le délégué souligne également que la JFTC s'est saisie de toutes les occasions de communiquer avec le ministère de l'Environnement pour s'exprimer sur des questions liées à l'environnement. Récemment, par exemple, la coordination a pris la forme d'un projet de réglementation destiné à promouvoir des mesures de lutte contre le réchauffement planétaire. Introduite en avril 2006, cette réglementation était une initiative visant à réduire les émissions de gaz à effet de serre et imposait aux entreprises dont la taille dépassait un certain seuil de calculer et de publier le volume de leurs émissions de gaz à effet de serre. L'un des principaux gaz en cause est le dioxyde de carbone et le premier problème était de savoir quel « coefficient d'émission » utiliser pour calculer les émissions. En vertu du projet de réglementation, les volumes d'émission de CO₂ doivent en principe être obtenus en multipliant la consommation d'électricité de l'entreprise par le coefficient en question. La détermination de ces coefficients est cruciale pour la concurrence sur le marché japonais de l'électricité car, avec l'introduction de la réglementation destinée à lutter contre le réchauffement planétaire, les consommateurs d'électricité (entreprises comprises) considèrent le coefficient comme un critère décisif pour le choix de leur fournisseur. Cette question est essentielle du point de vue de la concurrence : actuellement, sur le marché japonais de l'électricité, la part de marché totale détenue par les nouveaux arrivants demeure assez faible, alors même que six années se sont écoulées depuis la libéralisation partielle du marché, en 2000. Dans ce contexte, la proposition initiale du ministère de l'Environnement était la suivante : un coefficient différent serait déterminé pour chacun des deux groupes de fournisseurs, le premier groupe étant constitué par les entreprises installées — c'est-à-dire les monopoleurs en place dans les régions qui n'avaient pas bénéficié de la libéralisation partielle — et le second par les nouveaux concurrents. Le ministère a proposé d'utiliser comme coefficient la moyenne des redevances d'émission de dioxyde de carbone de chacun des deux groupes. Les entreprises installées auraient donc eu un coefficient très nettement inférieur à celui des nouveaux entrants, car elles exploitent, au moins pour certaines d'entre elles, des centrales nucléaires, qui ne produisent pas de dioxyde. Le coefficient proposé pour le groupe des nouveaux entrants aurait alors été deux fois plus élevé que celui des entreprises installées. Naturellement, toutes choses égales par ailleurs, les entreprises auraient eu tendance à acheter de l'électricité aux fournisseurs déjà installés dans leur région. Quand la JFTC a examiné le cas individuel de chaque fournisseur, il s'est avéré que le coefficient d'émission de certains des nouveaux

entrants était en réalité inférieur à celui de certains fournisseurs installés. Elle a donc fait valoir que les chiffres réels ne pouvaient pas être utilisés et que, si le problème était principalement dû à une quantité insuffisante de données fiables, il fallait, en attendant mieux, se servir du même coefficient pour les deux groupes afin d'éviter toute distorsion de la concurrence sur le marché de l'électricité. Au départ, l'argument a rencontré une forte résistance, non seulement du côté du ministère de l'Environnement mais également de la part des entreprises en place et d'autres groupes qui leur étaient liés. Le ministère a fini par accepter les suggestions de la JFTC et il a été décidé que des coefficients identiques devraient être utilisés pour l'un et l'autre groupe en attendant de pouvoir utiliser les valeurs réelles.

À l'invitation du Président, le délégué de la Finlande souligne un certain nombre de points. Il fait observer que, dans les pays nordiques, les réglementations environnementales sont liées à une autre question d'importance, à savoir la production et les activités contrôlées par l'État. Une tendance générale à associer la défense de la cause environnementale à des producteurs contrôlés par l'État a été observée, tout au moins dans les pays nordiques, et a donné naissance à des droits monopolistiques dont les effets sont manifestes et assez fréquents. Il existe clairement de nouvelles pistes technologiques qui permettraient de mieux exploiter les déchets, par exemple, et de nouvelles possibilités d'atteindre les objectifs environnementaux ; en outre, les besoins d'investissement augmentent en raison des nouvelles réglementations, qui créent une forte demande de nouveaux services. C'est de ce point de vue que le problème des monopoles et de la stratégie monopolistique mise en œuvre pour promouvoir la cause environnementale est devenu tellement central en Finlande. Dans le domaine de la gestion des déchets, une nouvelle réglementation est en cours d'élaboration ; elle devrait sensiblement réduire le monopole des municipalités dans le secteur des déchets industriels. Par ailleurs, les réglementations environnementales font généralement leur apparition à un moment où certaines entreprises ont déjà lancé des initiatives visant à remédier aux atteintes à l'environnement et méritant vraiment d'être saluées. Il peut donc tout à fait arriver que la nouvelle réglementation coupe l'herbe sous le pied des entreprises qui avaient précisément eu le mérite de répondre à la nouvelle demande créée par les atteintes à l'environnement. Le problème s'est posé en Finlande, par exemple, quand la responsabilité du recyclage des épaves de voitures a été confiée aux constructeurs eux-mêmes, alors que de nombreuses entreprises devaient travailler dans ce secteur d'activité auparavant. L'autorité finlandaise chargée de la concurrence a réussi à convaincre le parlement d'introduire une nouvelle disposition dans la réglementation, qui retient l'attention de ces entreprises et interdit notamment aux responsables de l'organisation de la production de négliger complètement ces activités.

Un autre aspect a trait à l'organisation de la responsabilité des producteurs et au fait que les petites entreprises sont désavantagées en ce qui concerne la satisfaction des nouvelles exigences. Pour le système de recyclage des bouteilles, l'autorité de la concurrence a contribué à l'élaboration d'amendements législatifs qui ont clairement gommé ce désavantage et ouvert le marché finlandais à la concurrence.

Pour les droits d'émission négociables, le vrai test portera sur les relations entre nouveaux arrivants et entreprises déjà installées. Dans quelle situation se retrouveront les premiers ? Il sera peut-être plus difficile de changer de fournisseur si les droits sont accordés en fonction des antécédents d'émission.

Le délégué de la République tchèque présente le décret sur l'élimination des déchets électroniques. En septembre 2005, l'autorité chargée de la concurrence a été contactée par un groupe de fabricants de lampes lui demandant d'enquêter sur une possible constitution de monopole dans le secteur de l'élimination des appareils électroniques. La démarche faisait suite à la mise en œuvre, par le ministère de l'Environnement, de la loi tchèque sur les déchets. Le texte oblige l'ensemble des producteurs, importateurs et distributeurs de produits électroniques à créer un système de financement conjoint pour assurer la gestion des déchets issus des produits électroniques commercialisés avant octobre 2005. Toutes les entités concernées sont tenues de contribuer en proportion du volume de leur production actuelle. Le fonctionnement de ce système a été confié par décret à une entreprise choisie par le ministère, ce qui a créé un monopole de fait

dans le secteur. L'autorité de la concurrence a demandé au ministère de mettre fin à cette situation, en vain. Avec certains représentants des fabricants d'électronique, elle s'est donc tournée vers le parlement pour demander l'abrogation du décret. La requête introduite auprès de la cour constitutionnelle est en cours d'examen.

Le Président fait observer que, jusque-là, la discussion a consisté dans une analyse des liens entre politique de l'environnement et politique de la concurrence ; quelques cas de relative incompatibilité entre la configuration de la concurrence et les objectifs environnementaux ont été étudiés, ainsi que divers instruments, parmi lesquels les aides d'État — qui peuvent aider les pouvoirs publics à tenter d'accroître la cohérence entre la politique de la concurrence et l'environnement — ou encore les actions de sensibilisation. Il veut à présent aborder deux thèmes dont il est également question dans les contributions : le marché de l'élimination des déchets et la dimension internationale du problème.

Le délégué de l'Allemagne décrit le système dual d'élimination des déchets, ajoutant qu'il est un bon exemple des interactions entre politique de la concurrence et politique environnementale. Il est utilisé pour montrer que ces deux politiques peuvent être poursuivies et qu'un équilibre entre les deux est possible. En 1990, grâce à l'UE, l'Allemagne dispose d'une nouvelle réglementation sur les emballages qui impose aux fabricants et aux distributeurs de recycler leurs déchets et d'en réduire les quantités. Un système national de collecte et de recyclage devient alors nécessaire et le système dual allemand fait son apparition. À sa création, il est toléré parce qu'il sert à la mise en œuvre de la réglementation sur les emballages, ce qui était le but du législateur. Progressivement, des restrictions à la concurrence ont été observées, les fabricants sont entrés dans le capital de *Duales System Deutschland* (DSD), qui a fini par s'apparenter à un cartel dans lequel les consommateurs étaient également les actionnaires. DSD s'est alors trouvé en situation de monopole et a agi en conséquence : redevances excessives, obstacles à l'entrée de nouvelles entreprises, etc. L'Office fédéral des ententes (*Bundeskartellamt*) a donc décidé d'opter pour des mesures plus énergiques et n'a rien négligé, intentant des actions pour entente, abus de position dominante et boycottage. Les procédures ont donné de très bons résultats. Qui plus est, le *Bundeskartellamt* a mis un terme au contrat de fourniture à long terme que DSD avait signé avec les fournisseurs. DSD a cessé ses pratiques d'exclusion et de nouvelles entreprises se sont implantées sur le marché. La Commission a lancé des poursuites pour entente illégale et des opérations contre les fournisseurs qui triaient et collectaient les déchets pour DSD. Il s'est ensuivi une baisse de 20 % des montants facturés à DSD. Les redevances excessives ont également été revues sensiblement à la baisse (environ 40 %) et la composition du capital a changé car les fabricants ont revendu DSD à un investisseur financier, modifiant ainsi la structure de quasi-cartel. Au final, la baisse des redevances se traduit par une économie de 500 millions EUR pour les consommateurs.

Le Président donne ensuite la parole à la Norvège, qui a produit une étude analytique portant sur l'élimination des déchets. Ce document analyse la concurrence et passe en revue les politiques envisageables.

Le délégué de la Norvège se réfère à un rapport sur le recyclage et la concurrence paru en 2004 (et annexé à la contribution norvégienne). L'intérêt de la Norvège pour ces questions s'explique sans doute par le fait que la responsabilité étendue des producteurs y a été instaurée il y a déjà 10 ou 15 ans. De ce fait, les entreprises de recyclage couvrent un très large éventail de produits et de matériaux différents. Les arguments avancés pour défendre le principe voulant que les entreprises de recyclage soient détenues par les industriels du secteur concerné sont généralement les économies d'échelle, l'efficacité opérationnelle et la possibilité d'éviter que des produits ne participant pas au système n'en profitent indûment. Il a été noté que l'opportunisme était un problème et qu'un certain nombre d'entreprises de recyclage n'atteignaient pas les niveaux de collecte fixés. L'une des principales raisons à cela semble être l'absence d'incitations et de sanctions. Au vu du marché de l'élimination des déchets, le problème qui risque le plus vraisemblablement de se poser avec l'organisation d'un système de recyclage dans un secteur donné est

qu'un monopole induise des coûts et des prix plus élevés que ceux qui caractériseraient un marché concurrentiel. Ce risque est censé être neutralisé par le fait que les systèmes de recyclage sont des entités à but non lucratif, de telle sorte que le problème résiderait moins dans l'éventualité de rentes monopolistiques que dans des coûts d'équipement ou autres coûts excessifs se traduisant par des prix plus élevés que nécessaire. Plusieurs entreprises avaient prévu que tous les bénéfices seraient réinvestis dans le développement du système. Certaines se sont lancées dans des activités sans lien avec leur métier de base. Même si les exemples d'obstacles formels à l'arrivée sur le marché de systèmes de recyclage concurrents étaient peu nombreux, les prétendants rencontraient des difficultés importantes. Dans certains cas, les autorités ont consenti des avantages aux précurseurs, sous la forme d'une aide économique pour d'autres services, avantages dont n'ont pas bénéficié les concurrents arrivés plus tard sur le marché. Il faut que le système de recyclage soit de portée nationale, ce qui alourdit également les coûts. L'accord entre l'autorité chargée des questions environnementales et les industriels tend aussi à avantager l'organisation regroupant les professionnels du secteur.

Qui plus est, les acteurs dominants peuvent recourir à diverses stratégies pour empêcher l'arrivée de nouveaux concurrents sur le marché ; ils peuvent pratiquer une tarification agressive, par exemple. L'autorité de la concurrence est en train d'examiner une plainte déposée contre l'une des rares entreprises de recyclage qui avait des concurrents : en baissant de 75 % le montant de ses redevances, cette entreprise dominante est accusée de pratiquer des prix d'éviction.

Une des autres questions liées au marché de la collecte de déchets est le pouvoir d'achat des entreprises de recyclage, pouvoir qui leur permet de signer des contrats avec des sous-traitants au nom de l'ensemble du secteur. Ceci peut entraîner une concentration accrue de l'offre également. Il a été suggéré à une entreprise de recyclage de pneus de revoir sa stratégie en matière de contrats car elle avait signé un contrat de sept ans avec un seul fournisseur d'envergure nationale.

S'agissant des problèmes de concurrence sur ce marché de produits, la plupart étaient liés à la tarification. La concurrence est entravée par le fait que la coopération entre l'entreprise de recyclage et ses membres adhérents consiste à se coordonner pour fixer une partie du prix des produits. L'organisation du système fait qu'il est très facile de répercuter l'intégralité des coûts du recyclage sur les consommateurs et plusieurs sociétés de recyclage avaient passé des accords plus ou moins explicites avec leurs membres pour que la « redevance environnementale » apparaisse dans un poste à part sur les factures. Cette pratique est particulièrement séduisante s'il est possible, directement ou indirectement, de transférer les excédents de l'entreprise de recyclage à ses membres et propriétaires. Il existe des entreprises de recyclage qui rétrocèdent leurs bénéfices aux entreprises qui les détiennent. Elles peuvent aussi procéder à un transfert indirect de bénéfices en assurant des prestations qui incomberaient normalement à leurs membres (lobbying ou communication sur la vocation pro environnementale du secteur, etc.). Au démarrage de notre enquête, plusieurs entreprises de recyclage avaient accumulé des sommes considérables sans que la nécessité n'en soit clairement justifiée.

En règle générale, un réseau d'entreprises de recyclage couvrant tout un secteur d'activité facilite les échanges d'informations, ce qui peut nuire à la concurrence et faciliter les ententes entre les acteurs du marché concerné. L'enquête montre cependant que les participants à ce type d'organisation sont généralement très attentifs à ne pas échanger d'informations commerciales concrètes. Néanmoins, l'autorité de la concurrence a recommandé aux entreprises de recyclage de nommer des administrateurs indépendants pour accroître la transparence. Ce type de regroupement professionnel réduit également la concurrence en matière d'environnement : les entreprises de recyclage aux mains des professionnels d'un secteur donné ont généralement du mal à pratiquer une différenciation par les prix sur la base des coûts de collecte et de recyclage.

En outre, l'entrée sur le marché de produits peut devenir plus difficile. Certains cas semblent indiquer que les membres du réseau de collecte conjointe mis sur pied par différentes entreprises de recyclage d'emballages ont des pratiques abusives et l'autorité de la concurrence est en train d'examiner une plainte concernant la grille tarifaire du système de recyclage des bouteilles en polyéthylène-téréphtalate (PET), accusée de favoriser les producteurs qui dominent le marché et sont également les propriétaires du réseau.

Dans son rapport paru en 2004, l'autorité de la concurrence s'est efforcée d'aider les services de l'environnement à réfléchir à d'autres stratégies prenant en compte la totalité des coûts des atteintes à l'environnement imputables aux déchets. Les services compétents pourraient, par exemple, introduire une taxe sur les produits nocifs qui reflèterait également les dommages liés aux produits non recyclés. À condition que les produits en question subissent un traitement approprié, une partie de la taxe pourrait être restituée. Une taxe de ce type, en partie récupérable, stimulerait aussi la concurrence au niveau de la collecte et du recyclage, car les entreprises de collecte se livreraient concurrence pour obtenir les produits soumis à la taxe ; de plus, la perspective de pouvoir se faire rembourser une partie de la taxe inciterait davantage les consommateurs à recycler. La chaîne de valeur qui serait ainsi créée supprimerait le problème des « opportunistes », permettrait au jeu de la concurrence de s'exercer au profit de la défense de l'environnement et aboutirait à une dissociation du marché des déchets et du marché des produits.

En termes de politique de la concurrence, l'expérience que la Norvège a acquise en examinant le dossier et en défendant la « cause de la concurrence » souligne la nécessité d'une coopération plus étroite entre les autorités respectivement chargées de l'environnement et de la concurrence. Il est difficile de faire respecter les règles de la concurrence avec des dispositifs de coopération qui ont été promus et sont d'ailleurs considérés comme très efficaces par une autre instance du gouvernement. Un des résultats importants de l'exercice est que les services de l'environnement et les entreprises comprennent désormais plus clairement que les recycleurs doivent adhérer aux règles de la concurrence. L'idée d'une approche radicalement nouvelle telle que celle évoquée plus haut n'a pas suscité un grand enthousiasme parmi les autorités compétentes en matière d'environnement. La difficulté à estimer les dommages environnementaux provoqués par les différents produits et les coûts administratifs du système norvégien de taxe remboursable ont été les principaux problèmes cités. Sur le plan politique, l'avantage d'une stratégie fondée sur des « accords volontaires » dans les secteurs d'activité contrôlés par l'État est également mis en avant. De plus, le fait qu'une approche similaire soit introduite dans la réglementation communautaire et celle d'autres pays européens plaide en faveur du système norvégien actuellement en vigueur.

En réponse à notre rapport, l'autorité norvégienne de lutte contre la pollution (SFT) a déclaré que, si de nouveaux systèmes de recyclage devaient voir le jour, la priorité serait accordée aux produits susceptibles de nuire gravement à l'environnement. Dans le rapport sur l'environnement qu'il a remis au parlement en 2005, le gouvernement a déclaré qu'il allait réfléchir aux moyens de stimuler la concurrence dans ce secteur d'activité.

Le Président Jenny donne la parole à la Suède et à l'Afrique du Sud au sujet de la dimension internationale du problème et cite la contribution suédoise indiquant qu'il est urgent d'harmoniser les règles en matière de protection de l'environnement « *faute de quoi les entreprises suédoises risquent de perdre en compétitivité dans un marché européen de plus en plus ouvert* ».

Le représentant de la Suède souligne que la plupart des problèmes environnementaux ont une dimension internationale et que le besoin d'harmonisation des politiques dans ce domaine est très important. L'harmonisation est également capitale du point de vue de la politique de la concurrence quand plusieurs entreprises sont présentes sur le même marché mais ont des obligations différentes car elles ne sont pas soumises au même régime réglementaire. Cette configuration peut favoriser une certaine forme de concurrence déloyale et le risque tend à augmenter proportionnellement à la taille des marchés géographiques.

L'enquête conduite par l'Agence suédoise pour la croissance économique et régionale à la demande du gouvernement montre que les entreprises suédoises trouvent que le droit de l'environnement laisse une marge d'interprétation considérable, ce qui débouche sur des disparités au niveau local et sur une mauvaise lisibilité des orientations pour les entreprises présentes en différents endroits du pays (une grande partie du droit suédois de l'environnement s'applique au niveau local ou régional).

La nécessité de règles harmonisées est particulièrement urgente en Suède, comme dans tout pays où la protection de l'environnement est relativement développée.

Les taxes applicables au secteur des transports sont un des domaines dans lesquels l'harmonisation est souhaitable. Les transports sont depuis longtemps un secteur d'activité international et les taxes ont souvent des justifications environnementales ; le but peut être d'internaliser les externalités environnementales. En l'espèce, la société Svenska Cellulosa Aktiebolaget (SCA) a fait valoir que, dans la mesure du possible, la taxation devrait être identique pour les transporteurs suédois et leurs concurrents étrangers.

SCA a également demandé que la réglementation applicable au traitement des déchets soit clarifiée et harmonisée et sa mise en oeuvre améliorée.

SCA a recommandé une harmonisation des systèmes d'étiquetage écologique pour éviter une accentuation du découpage en marchés nationaux. Pour l'autorité suédoise qui en est chargée, la concurrence n'est pas seulement un moyen efficace de faire baisser les prix, elle peut également déboucher sur la fabrication de produits de qualité, respectueux de l'environnement.

Le délégué de la Suède conclut sur le fait que les intérêts de la politique de la concurrence et ceux de la politique de l'environnement sont généralement complémentaires et que les conflits peuvent souvent être évités. Les différents outils de la politique environnementale peuvent être plus ou moins favorables à la concurrence ; à cet égard, il précise que les instruments économiques entraînent des coûts moindres pour la politique environnementale et sont plutôt plus proconcurrentiels.

Le délégué de l'Afrique du Sud fait valoir que, dans un contexte d'internationalisation des échanges, les pays en développement se préoccupent de leur capacité à commercer avec l'étranger et redoutent que les droits nationaux relatifs à l'environnement ne soient une nouvelle forme de barrière tarifaire. L'harmonisation est une solution possible mais peut avoir des retentissements sur le marché intérieur. En Afrique du Sud, où un certain nombre de dispositions pour la protection de l'environnement sont disséminées dans différents textes législatifs, une meilleure coordination des politiques est nécessaire. En outre, une analyse appropriée de la concurrence ainsi qu'une évaluation des effets pro- et anticoncurrentiels doivent être réalisées avant d'intensifier les actions de sensibilisation au problème de la concurrence.

Le Président Jenny invite MM. Heyes et Davies à réagir à la discussion qui vient d'avoir lieu.

M. Heyes revient sur la question de l'harmonisation. Bien que l'harmonisation soit toujours présumée nécessaire, il faut aussi rappeler pourquoi des réglementations nationales sont mises en place : leur but est de protéger l'environnement local et les zones où vit la population. Il est normal que les sensibilités locales varient quant au niveau de salubrité considéré comme souhaitable.

Le second aspect est lié au fait que les instruments économiques sont systématiquement jugés moins préjudiciables à la concurrence que les réglementations « classiques ».

M. Davies revient sur la question du conflit entre politique de l'environnement et politique de la concurrence. Elle est inhérente au Système communautaire d'échange de quotas d'émissions (SEE) en raison des plans nationaux d'affectation des quotas. Ces plans ne sont pas conçus en fonction de la

politique de la concurrence, mais du souci de compétitivité des secteurs d'activité, en particulier de l'industrie. Et c'est précisément en raison de cette question de compétitivité que la distribution des certificats dans le cadre du SEE est devenue une source de litiges et un problème complexe.

Il note également que l'idée norvégienne d'instaurer un système de taxation afin de remplacer l'organisation actuelle du recyclage est restée lettre morte pour des raisons politiques.

En conclusion, le Président Jenny observe que de nombreuses réflexions ont été engagées dans une multitude de pays, non seulement sur les moyens de respecter les règles de la concurrence tout en protégeant l'environnement mais également sur les possibilités de concevoir un système optimal. Des actions de sensibilisation significatives ont été menées et ont obtenu un certain nombre de résultats. Un consensus se dégage également sur le fait que, nonobstant la nécessité de respecter les objectifs environnementaux, les autorités de la concurrence souhaiteraient disposer d'outils concrets pour rendre la politique environnementale aussi compatible que possible avec la politique de la concurrence et voudraient pouvoir