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Environmental Regulation Through Fiscal and Economic Incentives in a Federalist System

Eckard Rehbinder*

INTRODUCTION

Economic and fiscal incentives are emerging as the preferred instruments for implementing environmental policy. Some Member States of the European Community (EC) have had experience with old forms of economic incentives, based on a reactive conception of environmental policy. The European Community, however, is beginning to recognize the important role charges and taxes can play as modern, proactive tools of environmental control. This Article outlines the changing role of economic and fiscal instruments in European Community environmental policy and focuses on the Community’s efforts in the areas of global climate change and transportation policy—the areas in which the EC has made the greatest use of economic incentives.

Part I of this Article presents a brief history of economic incentives in the European Community and considers the shift in Community attitude towards economic incentives. Part II investigates the competence of the European Community to impose taxes and to harmonize Member State tax policy for environmental ends. Part III evaluates some of the benefits and liabilities of economic and fiscal incentives as instruments of environmental policy. In particular, Part III considers the potential adverse distributional effects of economic intervention at the Community level. Finally, Part IV looks at Member States’ experience with economic incentives and, because Member States are beginning to experiment with new forms of proactive economic regulatory techniques, addresses the issue of Community pre-emption of state law.
REDEFINITION OF THE ROLE OF ECONOMIC AND FISCAL INCENTIVES IN COMMUNITY ENVIRONMENTAL POLICY

A. Historical and Institutional Background

Since the early 1970's, the European Community and the Member States have largely relied on traditional command and control instruments, such as prohibitions, permit requirements, standards, and planning obligations, to implement their environmental policies. "Old" economic incentives, based on a curative and reactive style of environmental policy, played a minor role. The primary examples of use of these old economic incentives are the effluent charges that France, Germany, and the Netherlands levied on direct dischargers. Germany has also experimented with a limited, and only partially successful, transferable permit program.

A final exception to command and control regulation has been the use of subsidies. Subsidies are undesirable in view of the "polluter pays" principle as set forth by the 1975 Recommendation on Cost Attribution, but the Community has realized that a dogmatic insistence on strict observance of the polluter pays principle would endanger the progress of its environmental policy. As a result, there has been a limited recognition of state aids as a means of promoting the implementation of environmental policy goals. There is also a degree of direct Community subsidization of environmental investment in the framework of the EC regional policy, especially for wastewater treatment plants.

The Member States may have to reconsider their subsidization policies. It may be argued that it is improper under the EEC Treaty for Member States to continue shifting the cost of environmental damage from industry to taxpayers. Article 130R of the EEC Treaty endorses...
the polluter pays principle; it does not mention a taxpayer pays principle. However, since article 92 (which permits certain state aids) has been retained and, moreover, because article 130R(3) calls for the consideration of the economic and social development of the Community and the balanced development of its regions, it would seem that environmental subsidization is not entirely prohibited.

As for the Community's own subsidization program, one must ask whether environmental concerns are sufficiently considered in this policy. The integration clause of article 130R(3)(ii) requires the consideration of environmental protection requirements in all other Community policies, including regional policy. Therefore, in the future, the Community will have to avoid, or at least mitigate, adverse environmental effects of its subsidization of regional projects.

B. The Recent Community Shift Toward Modern Economic Instruments of Environmental Policy

The Fourth Environmental Action Programme began a (not yet entirely concluded) reorientation of EC environmental policy, placing more emphasis on economic and fiscal instruments. When the Community organs speak of economic and fiscal instruments of environmental policy in the modern sense, they do not mean subsidies—or at least they do not accord subsidies a central role in promoting environmental policy objectives. The Community now focuses on negative incentives in the form of charges and taxes, thereby setting a price on the utilization of natural resources.

One should also include the transfer of pollution rights in any modern discussion of economic incentives. Transferable permits are based on the concept of total loadings limitations, with the distribution of pollution rights among economic agents subject to the market process. The Community has as yet neglected transferable permits as an alternative to charges and taxes. This neglect is mainly due to the nature of Community policy development, which is largely linked to policies already existing in one or more Member States. Transferable permits have as yet not played a major role in the domestic environmental policy of the Member States. This reserved attitude toward transferable permits will probably not change in the near future, although the Fifth Environmental Action Programme briefly mentions transferable permits and calls for a more intensive discussion of this instrument of environmental policy.

The EC's shift towards the use of modern economic and fiscal instruments can be related to several factors:

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The Single European Act (SEA) formulates the polluter pays principle as a principle of environmental policy. The polluter pays principle had been developed earlier simply as a principle of trade policy, i.e., as a means of coping with distortions of competition caused by public financing of environmental costs.

Some Member States have recently introduced, or are about to introduce, charges and taxes for fostering the implementation of environmental policy objectives. These incentives include differentiated taxes that effectively subsidize environmentally friendly activities. A disorderly application of these charges and taxes, in the opinion of the Commission, would have disruptive effects on the internal market. In light of the SEA's program for the establishment of the internal market, some efforts at coordinating, if not controlling, Member State activities in this field appear warranted.

Article 99 mandates the harmonization of indirect taxes. To the extent that article 99 can be invoked as authority for Community control over environmentally motivated taxes, it may provide a powerful means for Community-wide coordination of environmental policy.

Some recent, high-priority problems of Community environmental policy have characteristics that make them suitable candidates for the application of economic and fiscal instruments. These problems include stabilizing and eventually reducing CO₂ emissions in order to prevent global warming, mitigating the adverse environmental effects of transportation both between and within the Member States, and preventing waste. Because of their complexity, the difficulty of devising clear policy objectives, the lack of available technical solutions, the need for deep structural changes, and the unpredictability of negative distributional effects, these issues are not very amenable to traditional command and control regulation. Rather, they require soft regula-

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10. See supra note 3.
12. See EEC Treaty art. 8A (as amended 1987).
13. See discussion infra part III.B.1 (discussion of energy/CO₂ charges as excise taxes). Commission proposals regarding harmonization provide that in the future only excise duties on tobacco, alcoholic beverages, and mineral oil products should be retained throughout the Community. Commission Proposal for a Council Directive on the General Arrangements for Products Subject to Excise Duty and on the Holding and Movement of Such Products, 1990 O.J. (C 322) 1 [hereinafter Proposal on General Arrangements for Products Subject to Excise Duty]. The imposition of excise duties on other goods is not welcome, but such taxes are not excluded by the program so long as interstate commerce is not affected.
tion which can be corrected at any given point in time. This flexibility can be more easily achieved by economic and fiscal instruments.

C. The Community Process of Reappraisal of the Role of Economic and Fiscal Instruments

The Fourth Environmental Action Programme, for the period between 1987 and 1992, contained explicit language about economic incentives as a means of implementing the polluter pays principle. In the Programme, the Commission announced that it would carry out further studies with the aim of strengthening the use of economic instruments, such as charges and liability rules, for the implementation of Community environmental policy.14

During the same period, the Environmental Council took its first action in the field of economic and fiscal instruments: at its Dublin meeting in June 1990, the Council endorsed the proposition that Community environmental policy should diversify by including economic and fiscal instruments as implementation strategies.15 The Council charged the Commission with a reappraisal of Community policy relating to the choice of instruments.

The results of this reappraisal were submitted by the Commission to the Council in September 1990. The Commission communication called for a reformulation of the polluter pays principle, interpreting article 130R(2) to mean that the polluter should not only bear the cost of regulation but, also, should fully internalize the social costs caused by its polluting activities. The Commission viewed charges and taxes as the means by which to achieve this internalization.

At its meeting on October 29-30, 1990, the Council acted on this communication and adopted conclusions on economic and fiscal instruments in an attempt to integrate economic and environmental concerns.16 The Council generally approved the Commission's reformulation of the polluter pays principle and the idea of at least supplementing traditional command and control regulation with economic and fiscal instruments. The Council also denoted CO₂ emissions as one of the priority areas for such economic incentives. The Council adopted a target of stabilizing CO₂ emissions by the year 2000 (base year: 1990). It recommended that a charge or tax be devised for implementing that goal. The Council also called for a reformulation of transportation policy as part of the strategy to stabilize CO₂ emissions.

16. BULL. EC 10-1990, at 43-44.
In 1991, following the mandate of the Council and relying on the findings in the International Panel on Climate Change (IPCC) report on global warming, the Commission further developed the Community strategy for reducing CO₂ emissions and improving energy efficiency. This strategy is based on a combined energy and CO₂ tax, designed to save energy and reduce CO₂ emissions from fuel-burning sources of energy without increasing the overall tax burden on industry.

In a December 1991 meeting, the Council recognized this Community strategy as an important step towards reaching the CO₂ stabilization target. The most important result of the meeting with respect to the planned energy/CO₂ tax was the mandate that, parallel to devising the new tax, the Commission should investigate the economic, social, energy, competitiveness, and legal aspects of Community taxation. The Council charged the Commission with submitting concrete proposals by May 1992, especially for the Community-wide energy/CO₂ tax.

These proposals were submitted to the Council in March 1992; but in view of international competition, the Commission proposed the tax only under the condition that major industrial countries outside the EC follow suit.

In the framework of the Fifth Environmental Action Programme, the Commission generally advocates a cost internalization concept of environmental policy via artificial price setting or fixing of total loads of pollution. However, the Commission does not describe the relationship of these policy implementation devices to traditional command and control instruments. The cost internalization concept was generally endorsed by the Council in its May 26, 1992 resolution on the Programme.

While the Community organs were consciously redefining the role of economic incentives under the Fourth and Fifth Environmental Action Programmes, they were simultaneously taking other economic actions that would have environmental consequences. Neither the harmonization of the Member States' systems of road costs imputation under article 75 nor the harmonization of excise taxes under article 99

17. Intergovernmental Panel on Climate Change, Policymakers' Summary of the Scientific Assessment of Climate Change, Report to IPCC from Working Group I (1990); Intergovernmental Panel on Climate Change, Policymakers' Summary of the Potential Impacts of Climate Change, Report to IPCC from Working Group II (1990).
20. Commission Proposal for a Council Directive Introducing a Tax on Carbon Dioxide Emissions and Energy, 1992 O.J. (C 196) 1, 2; see also COM(92)246 final, ¶ 26 (the final version of the CO₂ strategy). This position has been endorsed by the Council and maintained after the Rio Conference.
was viewed as the implementation of environmental policy, although the environmental impacts of these programs must be considered under the integration clause of article 130R(2).

In 1987, the Commission presented a far-reaching program for the harmonization of road-cost imputation systems. Due to a lack of acceptance, the program had to be scaled down in 1990. The program postponed the imputation of environmental costs to road users to a later date, however, and concentrated on infrastructure costs instead. A 1992 amendment to the program proposes a transitional regulation, setting minimum truck taxes and empowering the Member States to levy non-discriminatory road-user charges that reflect actual use of the relevant roads.

Also in 1987, this time in the context of the harmonization of excise duties, the Commission proposed a differentiated tax scheme for leaded gasoline, lead-free gasoline, and diesel. This proposal granted diesel a considerable tax advantage. A more recent proposal reduced this tax advantage, but left the Member States considerable discretion to increase the tax advantage unilaterally, even beyond the original extent. The proposal was accepted in principle by the Council in its meeting of July 27, 1992.

II
THE COMPETENCE OF THE EC TO IMPOSE CHARGES AND TAXES FOR THE IMPLEMENTATION OF COMMUNITY ENVIRONMENTAL POLICY

Charges and taxes are of undoubted utility for the implementation of Community environmental policy goals. Nonetheless, these economic instruments may have significant impacts on the Member States' budgetary systems because they redirect the tax flow. If a particular Community regulation also determines the allocation of the funds generated by the charge or tax, use of these instruments may also encroach upon the

24. COM(92)405. For a discussion of transportation costs and harmonization, see infra part III.B.2.
Member States’ fiscal and budgetary prerogatives. Thus, in light of the EC’s increasing recourse to economic instruments, the issue of Community competence in this area is gaining importance.

Generally speaking, the basic competence for fiscal matters has remained with the Member States. The Community, however, has the authority to harmonize indirect taxes, including excise taxes. The field of energy/CO₂ taxes provides a primary example of how the Community can act under the harmonization power.

Inasmuch as the energy/CO₂ tax is designed as a pure excise tax, the Community can harmonize the Member States’ tax systems where necessary for the establishment or functioning of the internal market. It is not clear whether the harmonization authority can also be used for purely environmental purposes.

In 1991, the European Court of Justice decided the so-called “Titanium Dioxide” case. In that case, the Court held that emission standards for polluting facilities in the titanium dioxide industry had to be based on article 100A rather than on article 130S. The Court based this holding on the fact that the rules were not only designed to achieve environmental policy objectives but also served as a means of removing distortions of competition. Article 100A relates to all measures of harmonization of Member State regulation for achieving the internal market. While a literal reading of this provision, especially in light of its reference to article 8A, suggests that it is limited to product requirements, the Court expanded its scope to include process requirements.

Analogizing to the Titanium Dioxide decision, one could argue that article 99 is the appropriate legal basis for harmonization actions when at least one of their purposes is to prevent distortions of competition. This would be the case with respect to the energy/CO₂ input tax because it is designed, in part, to avoid disruptive effects on commerce caused by individual state taxation for the reduction of CO₂ emissions. Environmental concerns would then have to be considered by virtue of the inte-

27. EEC Treaty art. 99.
28. A pure excise tax would be attached to energy or carbon inputs into production processes and would not bind Member States with respect to the use of the proceeds.
31. Article 130S lays down the voting procedures for environmental measures encompassed by article 130R. EEC Treaty arts. 130S, 130R (as amended 1987).
A purely environmental excise tax would be encompassed by article 130S, as an instrument of environmental policy. Since it would not be designed to prevent distortions of competition, it could not be based on article 99. Economic instruments other than excise taxes would have to be based on article 100A or 130S.

Finally, it should be noted that it is unclear whether an energy/CO₂ input tax whose proceeds must be used for a specified environmental purpose or a CO₂ emission tax could be qualified as excise taxes encompassed by article 99 or whether such taxes should be considered as other charges or taxes covered by articles 100A or 130S.

The delimitation of the different bases of competence is significant because of different voting and procedural requirements. Articles 99 and 130S require unanimity, while decisions taken under article 100A are subject to a vote by qualified majority. Moreover, the former provisions call only for consultation of the European Parliament; but the European Parliament has certain veto powers under the cooperation procedure of article 100A.

Since articles 100A and 130S do not specifically empower the Community to impose charges and taxes, one may question the competence of the Community to create such economic incentives for environmental purposes. These charges and taxes are an alternative to regulation, and they are arguably encompassed by the usual Community powers for environmental regulation. Nonetheless, because they may have a profound impact on the Member States’ budgetary and taxation sovereignty, these devices should be used cautiously and with consideration of potential adverse financial effects on the Member States. In the context of the energy/CO₂ tax, the Commission has tried to address this problem by making the new tax revenue neutral. However this does not resolve all conflicts with Member States’ taxation powers.

34. Article 149(2) sets forth the roles of the Council, the Commission, and the Parliament in the cooperation procedure. EEC TREATY art. 149(2) (as amended 1987).
35. See Community Strategy to Limit Carbon Dioxide Emissions, supra note 11, ¶ 23 (calling for a reduction of taxation of individuals or tax incentives as compensation for the increase of financial burdens due to the CO₂ tax).
III
ENVIRONMENTAL BENEFITS OF ECONOMIC AND FISCAL INSTRUMENTS: HOPES AND REALITIES

A. The Market Potentials of Economic and Fiscal Instruments

Once a jurisdictional basis for Community action is clearly established, the particular roles for economic and fiscal incentives in shaping environmental policy can be examined. These instruments offer the great benefit of controlling pollution through the harnessing of market forces. Without careful control, however, economic instruments can yield undesired market effects.

Generally speaking, governments use economic and fiscal instruments to provide incentives for the reduction of emissions, to introduce the social costs of pollution into sources' cost bills, and to achieve more cost-effective solutions than those obtainable through traditional command and control regulation. Economic and fiscal instruments can promote smooth structural changes, can decrease transaction costs for finding new pollution control techniques, and are relatively easy to correct when new information becomes available.36

By introducing economic and fiscal instruments in the framework of the global warming policy, for instance, one hopes to enhance the market position of environmentally friendly sources of energy, especially renewable ones. An energy/CO₂ tax is designed to give a long-term price signal, to induce economic agents (including consumers) to shift to more environmentally favorable sources of energy, and to promote reduced emissions from the energy sector, increased energy efficiency, and energy savings.37 Similar considerations apply to other uses of charges and taxes, such as in the field of transportation policy.

Although the benefits of economic and fiscal instruments are great, the appropriateness of these instruments in the environmental policy arena is not beyond doubt. A charge or tax predicated on an incentive rationale is but a continuation of an interventionist environmental policy by new means. Before imposing economic incentives, one must devise clear policy targets (and assume the concomitant political responsibility for these targets) and gear the charge or tax to those targets. For example, a CO₂ tax should be limited to those CO₂ emissions beyond certain

allowable base loadings. In contrast, a comprehensive tax on all coal inputs could amount to overregulation.\textsuperscript{38}

The alternative to making policy choices based on politically defined emission reduction targets would be a pure internalization concept.\textsuperscript{39} The internalization model suffers not only from a lack of information about the extent and probability of possible environmental damage and the impossibility of calculating the cost of environmental risk, but also from a marked unwillingness on society’s part to bear the economic consequences of full social cost internalization. These deficiencies may lead to incorrect price signals, as evidenced by the recent Commission amended proposals on the taxation of motor vehicle fuels.\textsuperscript{40}

The 1987 Commission proposal would only have included road infrastructure cost in setting the motor vehicle fuel tax. It is clearly not sufficient to attribute only the variable and remaining costs of road infrastructure to trucks and, eventually, to passenger cars. Such a system is particularly inappropriate if imputation of variable road costs is accomplished by a differentiated taxation of fuel consumption that unduly favors trucks and buses. Rather, a rational transportation policy would include environmental costs and differentiate among transportation modes with a view toward internalizing their full respective social costs, including the costs of regional traffic congestion. This type of policy could redirect traffic to less-polluting modes of transportation and reduce total traffic. We are far from such a Community policy.

Finally, recent discussion of the Commission’s global climate proposals has explored the potential dysfunctional effects of charges and taxes.\textsuperscript{41} The problem is that, by taxing away the necessary financial resources, environmental charges and taxes may limit the capability of economic agents to effectuate structural changes. More generally, economic and fiscal instruments assume that the economy has the potential for unlimited technological innovation. Therefore, these instruments continue to operate beyond achievable emission reduction or energy efficiency rates. In reality, what is technically achievable differs among economic sectors and even Member States—rendering distributional problems particularly delicate. Of course, some of these problems can be solved by the

\textsuperscript{38} Given the global nature of such a comprehensive tax, it would hurt those fossil fuel users that already meet the targets.

\textsuperscript{39} A pure internalization tax would attempt to set a price on all environmental damage and let the market determine the level of pollution.

\textsuperscript{40} See supra notes 25-27 and accompanying text.

design of the charge or tax. For example, tax-free allowables may be granted, based on total loadings or achievable technology. With such an alternative, however, one forgoes most of the dynamic effects of economic and fiscal instruments. The choice between the Scylla of overkill and the Charybdis of suboptimal utilization of charges is not an easy one.

Faced with these concerns, many environmental economists favor transferable pollution rights based on total loadings limitations in lieu of artificial price fixing via charges and taxes. While the deficiencies of charges and taxes are evident, I would not advocate transfers for tackling global climate or transportation problems within the EC. These problems are so complex that the design of a system of transferable pollution rights would go beyond the policy-making capability of the relevant decision-making bodies.

B. International Distributional Problems of Economic and Fiscal Incentives

Many authors have discussed the distributional effects of economic and fiscal instruments in the national context, with the usual system of progressive taxation providing the conceptual background. It is widely believed that economic and fiscal instruments have a regressive effect that may necessitate compensatory measures (such as subsidies) in favor of disadvantaged members of society. Compensatory measures, in turn, attenuate the desired incentive effects.

The international distributional effects of economic and fiscal instruments, namely the resulting distortions of competition and their economic and social consequences, have attracted less attention. At the outset, it should be noted that the phrase "distortion of competition" is a catch-all that comprises not only entirely unjustified cost differences between competing states, but also cost differences based on varying factor endowments, including environmental control costs. A cautious use of the term is, therefore, necessary.


1. **Climate Policy**

Within the framework of the Community's global climate policy, the marked differences amongst the Member States regarding the structure of their energy sources and their technical innovative capacity may yield severe distributional impacts. The combined energy/CO$_2$ tax not only promotes energy efficiency, but also favors energy sources that are not (or are less) associated with CO$_2$ emissions, i.e., renewable energy sources and, of particular consequence in the EC, nuclear energy.

The practical implications of a preference for nuclear energy become clear when one considers that the EC Member States' reliance on nuclear power for their electricity supply ranges from zero to more than 70%.$^{45}$ By the year 2000, the burden of the proposed tax on one coal equivalent will be 20 ECU for the nuclear power industry but about 45 ECU for coal-fired power plants. The per capita tax burden would correspondingly vary greatly across the Community. In France, a country that is heavily reliant on nuclear power, the per capita tax burden would amount to 125 ECU per year; in the United Kingdom, it would be 180 ECU; and in Germany, it would be 230 ECU.$^{46}$

The Commission's proposal contains an exemption clause to reduce the tax burden of energy-intensive industries,$^{47}$ but the clause does not remove the competitive disadvantages of Member States that previously had relied primarily on coal as a source of energy supply. The distributional impacts of the energy/CO$_2$ tax might be considered tolerable if the tax were imposed only on top of a cap of allowable base loadings and emissions that are technically unavoidable. Provisions for the transfer of tax credits between different sources would further ameliorate the program. In its present form, however, the energy/CO$_2$ tax represents a unilateral advantage for nuclear energy and, furthermore, will not compensate for the competitive disadvantages of renewable sources of energy relative to nuclear power.

Moreover, global warming policy is preventative in nature. It is not designed to cope with pre-existing or proven imminent harm. Rather, global warming policy is designed to respond to more or less uncertain, future risks. If this analysis is correct, one wonders why nuclear energy is not similarly compelled to internalize the social costs associated with nuclear risks. At a minimum, the hidden subsidization of French and British, state-owned nuclear industry should be terminated. In a recent resolution, the European Parliament called for such an integrated view of all energy-related risks.$^{48}$ Of course, given the strong sovereignty claims

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46. Michaelis, *supra* note 41, at 6; see also CANSIER, *supra* note 37, at 72-79.
47. See Fifth Environmental Action Programme, *supra* note 5, ¶ 22.
48. See 1992 O.J. (C 94) 279 (text of the European Parliament's resolution on a common
of some Member States regarding the economic regulation of nuclear energy, it remains to be seen whether the goals of environmental efficiency and distributional (competitive) fairness will be reconcilable.

2. Transportation Policy

Comparable problems of distortion of competition among different Member States arise in the field of transportation policy. The Member States have quite different systems for imputing to carriers the infrastructure and environmental costs of transportation. Some states have two-component systems, consisting of motor vehicle taxes and excise taxes on fuel. Other Member States have cost-imputation systems that consist of three components, adding road user charges. Since all of these systems contain both taxes that are levied only on national carriers and taxes that are imposed on all users (according to the principle of territoriality), and, in addition, because the structures and rates of the taxes differ from country to country, the competitive conditions that result vary significantly amongst the Member States. In the past, the resulting distortions of competition were mitigated by national protectionism that accorded foreign carriers only limited access to the domestic market; but, in light of the upcoming deregulation of transportation policy in the internal market, harmonization of national cost-imputation systems appears necessary. However, the extensive harmonization proposals that the Commission made in 1987 and 1990 have met with enormous political, economic, and technical obstacles.

Each of the components of Member State transportation tax systems discussed above impacts domestic and Community fiscal and environmental policy differently. Fuel excise taxes are an important source of revenue. Their isolated reduction would thus deprive high-tax Member States of a part of their revenue. Accordingly, fuel excise tax harmonization is always accomplished by levelling upwards. However, an isolated increase might lead to national compensatory measures, reducing other transit-related taxes in order to mitigate competitive disadvantages of domestic carriers. Such a reaction would pose significant difficulties: since road user charges are technically difficult to harmonize, and simple motor vehicle taxes are unrelated to infrastructure and environmental dam-

49. See Modified Proposal for Transport Infrastructure Costs, supra note 23.

50. See Proposal for Transport Infrastructure Costs, supra note 22; Modified Proposal for Transport Infrastructure Costs, supra note 23.

51. In the aftermath of the European Court of Justice’s decision in the case of the German user charge for trucks, there is a movement of the European transportation policy towards setting a uniform minimum for truck taxes and empowering the Member States to impose road user charges. See infra text accompanying notes 93-97; COM(92)405, supra note 24. However, the new Commission proposal is very controversial, and an agreement within the Council is not yet in sight.
age, establishing such a relationship by setting the relevant tax rate is difficult, at the least. In any case, the isolated harmonization of any single element of the complex national cost imputation systems might aggravate pre-existing distortions. With this in mind, the Commission has repeatedly attempted to offer comprehensive solutions. First, it proposed a unitary diesel tax, and later, it proposed a system of differentiated taxes that are credited to one another.\textsuperscript{52}

An optimal solution would entail the consideration of both mileage and regional congestion and their adverse impacts on infrastructure and the environment. It would require harmonization of tax structures as well as the creation of technical monitoring systems. Such an approach would still result in nationally or regionally different tax burdens, but these differences would not constitute distortions of competition. The variations would instead reflect the varied social costs of traffic. This consideration permits a general conclusion as to the proper role of Community and Member State regulation via economic incentives: there should be minimum harmonization, but beyond that the Member States should be able to increase the tax rate in order to express their own environmental and economic conditions as well as interests and values.\textsuperscript{53}

Above all, for environmental purposes, an optimal proposal would include all modes of transportation and promote the more environmentally friendly ones.\textsuperscript{54} Arguably, such a proposal would lead to a preference for rail and inland waterways. However, such a preference would confront Member States that have a thin network of railways and waterways with serious competitive disadvantages. This effect, again, illustrates the need to seek regional solutions. Due to the limited scope of this Article, I cannot address this issue in more detail. I can say with certainty, however, that deregulation of transportation in the Community, coupled with the imputation of all social costs caused by the various modes of transportation, resembles the quadrature of the circle. It is understandable that the Commission tries to achieve progress through an incremental approach. From the environmental point of view, however, it has taken the wrong first step by concentrating on road infrastructure costs and granting diesel fuel a high tax advantage.

\textsuperscript{52} See Proposal for Transport Infrastructure Costs, supra note 22; Modified Proposal for Transport Infrastructure Costs, supra note 23.


IV
MEMBER STATES' EXPERIENCE WITH ECONOMIC AND FISCAL INSTRUMENTS FOR THE IMPLEMENTATION OF ENVIRONMENTAL POLICY

A. Experience of Member States with "Old" Economic and Fiscal Instruments

In the past, the Member States of the Community made only infrequent use of economic and fiscal instruments in the field of environmental policy. One notable exception was the introduction of effluent charges in France, Germany, and the Netherlands in the 1970's. These charges served either as a device for financing public investment for wastewater treatment plants (France, Netherlands) or as a means of promoting compliance with, and voluntary reduction beyond, emissions standards (Germany). Charges were also used in some Member States as a means to control airport noise. Another exception was Germany's limited use of transferable permits in the field of air pollution control.

Effluent charges and Germany's transferable permits are examples of "old" economic tools of environmental policy, however, because they are either pure financing instruments or operate primarily as a dependent element of command and control regulation. As such, they do not make full use of market forces in the framework of a proactive environmental policy. Nonetheless, since these old economic tools are precursors to, and share part of their technical design with, modern economic and fiscal instruments, experience with them is instructive for the future development of instruments of environmental policy.

The experience of the Member States with these old economic and fiscal instruments has been mixed. The instruments' effectiveness has fallen somewhat behind the high expectations of environmental economists and some policy makers. I will support this assessment by examples taken from Germany since I am most familiar with its experience.

1. Germany's Effluent Charge

The German effluent charge had a dual purpose: it was primarily designed to promote compliance with federal effluent standards, but it

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56. Id. at 131-33.
also aimed to foster voluntary reduction of discharges beyond these standards. This dual purpose is reflected in the structure of the charge, which is levied on all effluents including "residual" effluents (i.e., those which cannot be avoided even by using best available control technology (BAT) or which meet more stringent quality-based effluent standards). The Effluent Charge Act set the initial rate of the charge at a moderate amount. The charge would then gradually increase over time to a level that reflected average treatment costs. Amendment of the Effluent Charge Act lengthened the time period over which increases would occur and increased the rates for each of the new levels.59

The German effluent charge has had the ironic effect of greatly improving the implementation and enforcement of traditional command and control regulation. One reason for this effect was that all permits had to be reviewed and new parameters added in order to levy the charge. Furthermore, implementation of the Act required improvement of the monitoring system. These extrafunctional effects largely supplanted the intended incentive effect—or at least obscured it. Another reason the effluent charge reinforced traditional regulation was the rate differential between avoidable and unavoidable effluents. The differential incentives pushed direct dischargers into compliance with federal effluent standards but only provided slight pressure towards voluntary reduction of effluents beyond BAT standards.60

Polluters who limit their effluents below BAT or quality-based effluent standards pay a reduced rate per pollution unit for the residual effluents. This reduced rate was changed several times between 1981 and 1990. Initially, it was 50% of the full rate. Later it was dropped to 20% for hazardous substances, while conventional pollution continued to be taxed at the 50% rate with proportional reductions according to the extent of overcompliance with BAT standards. In 1990, the reduced rate was reset at 25%, to go up to 60% after 4 years and to 80% after 4 more

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59. The original rates as set forth in the Act started as of January 1, 1981 and increased every year until January 1, 1986; they were DMK 12, 18, 24, 30, 36, and 40 per pollution unit. Beginning in 1991, the amendment added new tiers every two years and will do so until January 1, 1999, namely DMK 50, 60, 70, 80, and 90 per pollution unit.

60. See M. BOHLM, DIE WIRKSAMKEIT VON UMWELTABGABEN AM BEISPIEL DES ABWASSERABGABENGESETZES 60-69 (1989). For a more positive assessment, see Hansmeyer, Abgaben und Steuerliche Instrumente der Umweltpolitik—Wirkungsweise, Erfahrungen, Möglichkeiten, 10 ZEITSCHRIFT FUR UMWELTPOLITIK UND UMWELTRECHT 251, 256 (1987); D. EWRINGMANN & J. SCHAFAUSEN, ABGABEN ALS ÖKONOMISCHER HEBEL IN DER UMWELTPOLITIK 95-98 (1985) (stressing also, however, the impossibility of attributing concrete effects to the charge due to the existence of administration regulation); Brown & Johnson, supra note 58, at 940-49.
years.\textsuperscript{61} The frequent changes in the design of the residual effluents charge indicate a certain uneasiness on the part of the legislature as to the environmental effectiveness of the charge.

The charge on residual effluents, and especially the amendments' increased charges, has been attacked by industry. Industry maintains that the charges have the perverse effect of discouraging, rather than ensuring, process and treatment innovation and the diffusion of technology.\textsuperscript{62} Industry claims that the charge deprives it of the funds needed for installing new equipment. It further asserts that overcompliance does not result in a lasting cost advantage because any potential savings will be consumed by the incremental rate increase and by the ultimate redefinition of BAT. Finally, industry argues that there are areas where no further development of technology can be expected or where further reduction of effluents is unnecessary.

While I do not think that all of these arguments are tenable, the German experience does illustrate the difficulties of a mixed system that imposes charges on top of direct regulation. It also indicates that the reliance on infinite technological innovation underlying the incentive approach may be questionable, and it shows that a charge may have an "overkill" effect—an issue that is being discussed in the context of the Community energy/CO\textsubscript{2} tax.\textsuperscript{63}

Finally, it is important to note that setting the rate of the charge is difficult. This difficulty is a function of the fact that the market does not set the price. The charges are merely artificially set prices for the use of the absorption capacity of environmental media. Thus, in reality, the charges are not market instruments. They are but a special type of interventionist strategy that makes an instrumental use of the market, forcing firms to internalize the state-determined costs of environmental degradation. By contrast, transferable permits are more purely market instruments. They involve a simple subdivision of allowable total emissions, so their price is the result of market forces and need not be set artificially. In this respect, transferable permits have clear advantages. However, it should be noted that when creating a transfer system, one must still set the allowable quantity of emissions "artificially," based on highly uncertain assumptions as to the absorption capacity of the relevant environmental media. This leads us to the development of Germany's use of transferable permits in the field of air pollution control.


\textsuperscript{63} See Michaelis, \textit{supra} note 41, at 13-14, app.; Mors, \textit{supra} note 41, at 60-61, 79-80; Barrett, \textit{supra} note 37, at 73-84.
In order to enable the reconstruction and significant modification of facilities in non-attainment areas, in 1964 West Germany began developing a policy of allowing offsets of new emissions by the reduction of existing emissions through plant closures. This offset policy required only relative improvement of ambient air quality. It did not require that ambient air quality standards be met.

The policy underlying the German program of encouraging replacement of outdated equipment has been quite successful. It would seem that this success can be attributed primarily to the informality of the program and the flexibility of local air pollution control agencies. Most of the progress towards meeting the air quality standards in the 1960's and 1970's in the industrial state of Northrhine Westphalia can be attributed to the offset program, and this experience encouraged the united Germany to introduce a simplified variant of the offset policy in Eastern Germany. However, the disappearance in Western Germany of non-attainment areas (for the listed pollutants for which industry is mainly responsible) combined with the general shift of German air pollution control policy from an ambient quality to an emissions-oriented strategy that addresses total loads has decreased the importance of offsets. Germany's new policy emphasizes a bubble concept for existing facilities in clean air areas.

In 1986, the Federal Emissions Control Act formally introduced the bubble policy. For various reasons, especially the territorial and time constraints built into the program, very few transactions have taken place.


65. Bundes-Immissionsschutzgesetz [BImSchG], 1974 BGBI. I 721, § 67a(2), as amended by BImSchG, 1990 BGBI. II 885, 889, at 1114, Annex I, chapter XII, § II.


67. Bundes-Immissionsschutzgesetz [BImSchG], 1974 BGBI. I 721, §§ 7(3), 48 No. 4, as amended by BImSchG, 1985 BGBI. I 1950, § 7(3); No. 4.2.10 Technische Anleitung zur Reinhaltung der Luft [Administrative Rules for the Control of Air Pollution of Feb. 27, 1986], 1986 Gemeinsames Ministerialblatt 95.

68. Transactions were allowed only in geographically limited areas and for a duration of eight years, plant closures were excluded, and existing source standards were very stringent—subject to adjustment delays, they are equivalent to new source standards. BImSchG 1974,
Examples of successful transactions have occurred in the ceramics industry in Rhenania Palatinate. This industry and region offered ideal conditions for operation of a bubble program—many sources located in close proximity to one another, different sizes and production methods (continuous and discontinuous operations), very different cost structures, overlapping dispersion areas, and logistical support by a research project. Outside Rhenania Palatinate, not more than four or five transactions have occurred. In response to the failure of the 1986 bubble program, the Federal Emissions Control Act was amended last year with the effect of liberalizing the program. The liberalization is limited, however, because new sources continue to be excluded from the program and emission reductions achieved by plant closures still cannot be used for acquiring credits. It remains to be seen whether this rather timid reform will lead to more encouraging results in practice.

All told, the early examples of economic and fiscal instruments in Germany have proved somewhat disappointing. The effluent charge has not successfully attained its primary goals, and the transfer program has met with few successes. It may be assumed that one would make similar findings upon careful examination of the situation in the Netherlands and in France.

B. The Role of “New” Economic and Fiscal Instruments in the Member States

The Member States have only recently discovered economic and fiscal incentives as regular instruments for the implementation of environmental policy. This development is linked to the shift in environmental policy from a predominantly curative, reactive approach to a more preventative, proactive orientation. Recent examples of economic and fiscal instruments or legislative proposals along these lines include enactments regarding CO₂ emissions, prevention of toxic waste, reduction of plastics in consumer products, creation of a bottle deposit-refund system, promo-
tion of clean cars and lead-free gasoline, and curbs on road traffic.\textsuperscript{73} A total "ecologicalization" of the whole taxation system is even being discussed—much to the dismay of traditional tax lawyers who foresee a perversion of taxation.\textsuperscript{74}

However innovative these national experiments with economic and fiscal instruments may be, a proliferation of them may have a disruptive effect on the internal market and even on the coherence of Community environmental policy. Therefore, the question of what limits Community law places on Member State powers to use economic instruments when they surpass the sphere of merely local regulation is of major interest.

\textbf{C. Preemption}

Preemption of state measures by virtue of the Supremacy Clause as developed by the European Court of Justice\textsuperscript{75} plays a key role in the field of excise taxes. Preemption is also an important factor in areas where the Community already has enacted exhaustive direct regulation.

In principle, once the Community has harmonized excise taxes for gasoline and diesel fuel under article 99, the Member States will be barred from applying a preexisting or newly created higher tax rate. Only specific authorization by Community law would permit an exception. But harmonization of excise taxes requires unanimity.\textsuperscript{76} For unanimity to be achieved, environmentally active Member States will demand either a Community policy of high taxation or corresponding protective clauses that take account of the environmental effects of road traffic.

It should also be noted that the Commission itself put forward an escape clause in its proposals for the harmonization of excise taxes. The escape clause provided that outside the field of tobacco, alcoholic beverages, and mineral oil products, purely internal excise taxes\textsuperscript{77} could be


\textsuperscript{74} See Report of the Committee on the Environment, Public Health and Consumer Protection on Economic and Fiscal Instruments of Environmental Policy, EUR. PARL. DOC. (A3-130/91) (1991) (Manfred Vohrer, Rapporteur). Adherents of such a fundamental change of the entire tax system would divide taxes into three categories, each raising about one third of the total tax revenue: ecological taxes, direct income taxes, and indirect taxes.


\textsuperscript{76} See supra part II.

\textsuperscript{77} A purely internal excise tax is one that is not levied at the entrance into, or refunded at the exit from, the national territory.
maintained or introduced by the Member States. Although the harmonization proposal is not applicable to all economic and fiscal instruments, it sets an important political precedent to the extent that it would permit the Member States to increase tax rates.

The precedent is especially important in the field of a CO₂ tax. The Commission apparently does not want national taxes in the energy/CO₂ field, but it will probably not be able to prevail upon the Member States. As a matter of policy, coexistence of Community and state taxes would be preferable, allowing increases beyond the basic Community rate in light of local conditions and political preferences.

Other Community charges and taxes, such as refundable charges or emission taxes, rely on legal bases aside from harmonization. Certainly article 130T (and arguably article 100A) leaves each Member State the power to introduce higher rates if justified by its particular conditions. Of course, the higher tax must also comport with the general standards of review of Member-State-imposed burdens on interstate commerce under articles 30 and 36.

Beyond a simple comparison of Community and Member State uses of economic and fiscal incentives, one must also ask whether traditional command and control regulation of a field by the Community preempts economic and fiscal instruments introduced by Member States. In cases where the Member States tried to use preferential taxation to promote sales of lead-free gasoline or clean cars before Community-imposed, command and control deadlines, the Commission tended to argue that state action was preempted. Nonetheless, the Commission's view has never been tested by the European Court of Justice—mainly for political reasons.

78. Proposal on General Arrangements for Products Subject to Excise Duty, supra note 13, at 2.
81. The primary event that has kept the issue from the European Court was the reaching of an agreement on a Community margin for differentiated taxation. See Club de Bruxelles, EC Environmental Policy - A Challenge for the 1990's, pt. I, ¶¶ 1.17-1.18 (1990); Krämer 1, supra note 4, at annot. 75 ¶¶ 9-11.
In my view, a national tax for the promotion of environmentally friendly products on top of existing direct Community regulation is objectionable and should be considered preempted. Community directives which set a deadline for the introduction of such products normally do not empower the Member States to compel earlier compliance by industry. Likewise, Member States should not be able to evade the protection accorded to industry by imposing negative tax incentives.

Of course, an EC directive may expressly empower the Member States to use charges or taxes in order to encourage early compliance with Community standards. Such an approach may be seen as a compromise between an environmentally undesirable, lowest common denominator harmonization and an outright "two-speed" harmonization which runs counter to the very idea of integration.

D. Limits on Member States' Charges and Taxes in the Absence of Community Regulation

The fact that the Community has not adopted charges or taxes in a particular field does not necessarily mean that the Member States are entirely free to make use of such incentives. Rather, the normal standards for review of national measures that have an effect equivalent to a tariff are applicable.82

National charges and taxes are permissible when they are justified for the protection of the environment, do not discriminate against foreign producers, and do not impose unnecessary or disproportionate burdens on commerce within the Community.83 In the famous Danish Bottle Case of 1988, the European Court of Justice upheld a Danish regulation that, among other things, provided for deposits on beverage containers to encourage consumers to return used containers for recycling.84 Other nondiscriminatory charges also are likely to withstand European Court scrutiny. The European Court of Justice has long taken the view that, absent Community regulation, the development of environmental policy, especially the assessment of environmental risks, rests within the Member States' responsibility.85

The Court's attitude enables Member States

82. These standards have been developed by the European Court of Justice under EEC Treaty arts. 30, 36.
83. See EEC Treaty art. 36.
to pursue a preventative environmental policy via charges and taxes, unless this policy is evidently unreasonable when measured by an international standard.

Another limitation on Member States appears in article 95.86 The first paragraph of article 95 does not establish outer limits to Member States’ powers for imposing charges or taxes, so long as they are equal for domestic and foreign goods. However, article 95, paragraph 2 prohibits protectionist measures that favor domestic production by imposing higher taxes on domestic and foreign substitute products if the taxes on the foreign products may have a substantial effect on consumption.87 The Alcoholic Beverage cases of 198088 show the difficulties in developing criteria for qualifying a tax as discriminatory. In any case, differentiated taxation does not constitute protectionism in the meaning of article 95 when it is used solely as an alternative to direct regulation that would otherwise be justified under articles 30 and 36 (i.e., where taxation serves as a means of raising the price of environmentally harmful products and thereby favoring substitute products that are clearly less harmful). Likewise, although article 92, which limits Member State power to grant state aids, is applicable in addition to articles 30 and 36,89 a tax subsidy for environmentally favorable products would seem not to be encompassed by article 92.90

Additional limitations on Member State imposition of charges or taxes may be applicable in areas encompassed by specific standstill obligations, barring Member States from imposing new burdens on interstate commerce. The standstill obligation arguably implicit in article 99, when the Commission has already made a harmonization proposal relating to excise taxes,91 is not a significant problem in this respect because, as

86. No Member State shall impose, directly or indirectly, on the products of other Member States any internal taxation of any kind in excess of that imposed directly or indirectly on similar domestic products.


91. As to this controversial question, see the references in Kloepfer & Thull, supra note
noted above, with the exception of tobacco, alcoholic beverages, and mineral oil products, the Commission intends to limit harmonization to those excise taxes that are geared toward the transfrontier movement of goods.

The standstill provision of article 76, on the other hand, is relevant within the framework of the common transport policy. This provision was construed by the European Court of Justice in its May 19, 1992 decision, regarding the German proposal for a new global road user charge for trucks. The Federal Republic of Germany (which, because of its central location, had become a major transit country) planned to reduce direct taxation on German trucks and to introduce a new global road user charge that would be imposed on all trucks using German roads. The rate to be charged would vary according to the payment period. The relatively highest charge would be imposed on those paying by the month, the shortest payment period available.

The European Court of Justice enjoined Germany from introducing the global road user charge on the grounds that, in conjunction with the reduction of the tax on German trucks, it was discriminatory and violated the article 76 standstill obligation. The Court was of the opinion that the measures were protectionist because they were not intended to divert transportation from road to rail or inland waterways but were intended to, and would, result in a shift of market shares from foreign to German road carriers.

In my view, the Court's decision is not convincing. It should be noted that, in dictum, the Court did recognize, correctly, the legitimacy of tax preferences for environmentally friendly modes of transportation. This is an important indication for the future. On the other hand, the Court did not explain its rationale for jointly considering the effects of the global road use charge and those of the truck tax imposed on nationals only. In accordance with the principle of territoriality, the global charge was to be levied on all road users, independent of their national-

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33, at 200 n.52.

92. Article 76 prohibits a Member State from changing preexisting provisions concerning transportation to the disadvantage (direct or indirect) of foreign enterprises as compared to domestic ones. EEC TREATY art. 76.


ity. On its own, the global charge's only potential for a discriminatory effect would lie in its payment system. The Court's logic of considering the two charges in conjunction would entirely bar a Member State from changing the structure of its system for the imputation of circulation costs, for example by resorting to a unitary diesel or road user charge. Even an isolated reduction of a tax on the trucks of the state's nationals would be impermissible. This effect constitutes a serious encroachment upon the taxing sovereignty of Member States.

Aside from the shortcomings of the Court's economic analysis, its decision is flawed in other respects. One might accept the holistic consideration of all specific transport taxes, which appears at least economically realistic; but the Court's construction of the standstill principle is unconvincing to the extent that it requires Member States to maintain existing distortions of competition at the expense of national carriers until the Community is able to reach agreement on the common transport policy under article 75. The decision is particularly unsatisfying when one considers that the harmonization mandate has not been complied with for three decades, the European Parliament had to take court action to compel the Council into acting at all, and an agreement regarding transportation policy is nowhere in sight. Furthermore, the Court's construction is at odds with article 3(f)'s goal of creating a system of undistorted competition. Moreover, the German measure was arguably consistent with the basic assumptions underlying the Commission's circulation tax harmonization proposals that favor a full imputation of road infrastructure costs to carriers. Therefore, the proper question would have been whether the new tax simply equalized existing distortions or created new ones. I believe the overall financial burdens on German carriers relative to their non-German competitors would have remained higher after the adoption of the tax package. Only with respect to Denmark would a small reduction of the German tax potentially have been warranted. In any case, the Court's decision offers insights into the complexity of conflicts that will arise in the future between transit-oriented Member States, on one side, and peripheral and transportation-services-oriented Member States, on the other, regarding the development of the common transport policy.

CONCLUSION

As an alternative to traditional command and control regulation, environmental charges and taxes offer a variety of advantages both for the Community and the Member States. Environmental charges and

95. Non-German users are more likely to pay for the shorter periods, thus incurring somewhat higher costs.
97. See Ebenroth et al., supra note 94, at 2129.
taxes are more consistent with the philosophy of a market economy,\textsuperscript{98} they offer flexibility to economic agents according to their individual cost structures, and they enable the Community or the Member States to regulate in "grey areas" of environmental policy that are characterized by uncertain environmental risks, unclear policy objectives, and the need for structural changes of the economy.

However, economic and fiscal instruments are not a panacea. Many problems presented by direct regulation must also be solved when applying charges or taxes. Furthermore, because they enable the regulator to blur the distinction between regulation and non-regulation, charges and taxes may result in overregulation and aggravate conflicts between different economic agents, economic sectors, and Member States.

To date, Community-level experience with economic and fiscal instruments of environmental policy has been limited, for the most part, to the energy/CO\textsubscript{2} and transportation areas. The application of economic and fiscal instruments to these areas, however, clearly shows that such tools do not make environmental politics easier.

The present enthusiasm for economic and fiscal instruments for implementing environmental policy tends to underestimate the problems inherent in their application. European policy makers should not succumb too quickly to the temptation of using seemingly easy, market-oriented tools. For example, the EC must not avoid difficult political determinations as to total pollution loadings and best available control technologies. Rather, the Community should make a prudent use of charges and taxes and should impose them only after considering the differences between the Member States. Recognition of the varying environmental problems and political concerns of the various Member States would lead to the rule that Community and Member State charges and taxes should be allowed to coexist.

\textsuperscript{98} Tradeable permits may be superior in this respect.