

The European common market and the environment: the case of the emission of NO_x by motor cars

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Mainstream economics tends to take for granted the welfare gains from international free trade areas. The Cecchini report which estimated the benefits of the single EC market from 1992 disregard the social costs of growth in their calculations. This applied especially to the area of environmental issues. Whilst we cannot consider all aspects of the environment we focus here upon the area of air pollution caused by motor car emissions. A detailed consideration of EC policy in this area is conducted. It is concluded that an effective policy in this area involves tensions vis-a-vis the anticipated benefits of the freer market after 1992.

I Introduction

In mainstream economics it is taken for granted that a common market of several countries leads to an increase in welfare. The more the market expands, the more producers are able to specialize, and economies of scale emerge. Producers are able to produce at lower costs. Consumers benefit from lower production costs by decreasing prices, which effects an increase in prosperity. Moreover, a common market leads towards a diminished necessity of government interference with goods and persons crossing the borders. This implies lower costs for the authorities, and thereby also for tax-paying civilians.

Based upon these issues, the European Commission has asked a special committee under the chairmanship of Paolo Cecchini to estimate the costs of the not yet completed common market. In their report the Cecchini group has calculated the economic advantages of the abolition of, in particular, the nontariff barriers between the member states of the EC.¹ Table 1 contains the most important results from the Cecchini-report.

¹ Examples of these nontariff barriers are inspections upon entering a country, custom formalities, different technical norms and standards, protectionists practices in government procurement, state monopolies of a commercial character, government subsidies.

Table 1 The most important economic results from the Cecchini report.

Growth of production (in % of GNP)	4.5
Decrease in price level of consumption (in %)	6.1
Decrease of governmental deficit (in % of GNP)	2.2
Increase of employment in mln jobs	1.8
Decrease of unemployment (in %-points)	1.5

Source: Cecchini report, 1988: 151-83.

The abolition of the nontariff barriers would yield a noninflationary increase in production of 4.5% of the GNP of the EC. This production increase could rise to 7.5% if the decrease of the governmental deficits (2.2% of GNP) are used for tax reductions and additional governmental investments. Moreover, unemployment in the EC would decrease by 1.5 percentage points.

The optimistic calculations in the Cecchini report have been criticized from different angles.² On the whole the picture that the commission presents of the completion of the common market is felt to be too optimistic. Institutional and cultural obstructions to the integration of Europe are minimized. Furthermore, the results of the calculations should be interpreted as potential rather than probable improvements in the economy. Although such comments do in some degree temper the euphoria initially caused by the Cecchini report, the general conviction is still that completion of the common market will yield substantial economic advantages, i.e., a substantial increase of production.

However, an increase of production not only diminishes scarcity, but will also create *new* scarcity, as recent history clearly demonstrates. Fresh air, clean water, a well functioning soil, quietness, variety of landscapes and the availability of fossil fuels and minerals have become very scarce goods as a consequence of the continuous increase in production. Additional production growth as a result of the completion of the common market, as interpreted and predicted in the Cecchini report, would also lead to increasing environmental deterioration.

On the other hand, the abatement of emissions of polluting substances, especially to air and water, is often frustrated by lack of international co-ordination. Problems such as acidification of the environment and poisoning of rivers and oceans will go on as long as individual countries can abdicate the environmental effects of their emissions to other countries. Theoretically, completion of the European common market in 1992 could offer a great opportunity to start what could be called a European Environmental Policy to abate, especially, continental environmental problems (such as acidification) and pollution that crosses borders (such as pollution of rivers and the North Sea). It is questionable, however, whether this opportunity for European integration will be utilized. For in official reports, like

² See e.g., Centre for Business Strategy (1989) and Central Planning Bureau (1989).

the one of the Cecchini group, and at the European summits of government leaders, integration with respect to hot environmental issues is not at stake.

It would be beyond the scope of this paper to evaluate the impact of the completion of the EC common market for all environmental issues. Instead, this article focuses on air pollution by motorcars, and especially the emissions of NO_x and CO_2 contribute substantially to two serious environmental problems on a continental and on a global scale: acidification and the greenhouse effect. Of these two acidification is seen as the most urgent, and as posing the most severe threat to man and the environment. Although acidification as an environmental problem is much older, it did not get much attention from the general public and from politicians until after the discovery at the beginning of the 1980s that, especially in central Europe, forests are dying on a large scale due to the emission of the acidifying substances SO_2 , NO_x and NH_x . As will be shown in Section III, the resulting European political agenda concerning air pollution caused by motorcars was mainly structured by the problem of acidification. Indeed, the greenhouse effect was known by the beginning of the 1980s, but acidification has been on the international agenda much longer. Nonetheless, it was only at the end of the 1980s that countries realized more and more that effective measures would have to be taken in the short run. Obviously, there was a time lag between the moment of awareness of the problem and the moment the first measures were taken. Thus, at first the greenhouse effect was pushed into the background.

Acidification is a continental problem, as is shown by the fact that by far the greater part of the acidifying deposition in a given country originates from abroad. Obviously, the abatement of the emission of acidifying substances could be organized most effectively and most efficiently on a European level. But despite the general concern about acidification, this abatement is being realized only slowly and with great difficulties. The most striking example in this respect is the attempt to reduce the NO_x emissions by motorcars. Over the past few years many meetings of the Council of Ministers, the European Commission and the European Parliament have been spent on the problem of how to reduce NO_x emissions by motorcars. So far the effects of these meetings on the environment have been negligible. In fact, NO_x emissions by motorcars have increased. Without a strict European environmental policy a further increase will be inevitable after the completion of the common market, especially if we realize that the use of cars is increasing more than proportionally in relation to production growth.

The aim of this article is to unravel the complex of forces at work in the European decision-making process, some of which hinder and others of which further the abatement of air pollution by motorcars. We will distinguish three aspects of the problem. First, what and who in Europe determine the goals of emission abatement? Why was the choice made to reduce NO_x emissions, and to disregard the need to reduce CO_2 emissions? In this

respect it was important to know how the choice was presented between a lean-mixture engine (an example of process-integrated technology) or the catalyser (an example of add-on technology). The considerations that led to the decision to promote the introduction of the catalyser are dealt with in Section III. A complicating factor is the change made in the European Community's decision-making process in 1987. The potential this has for the possibilities of reducing NO_x emissions by motorcars will be dealt with in Section II. Obviously, the choice for the one or the other technology of NO_x reduction is closely related to specific societal interests. There are at least three interests into play here: the interest of a sound environmental quality, the (differing) interests of the European motorcar industry and its consumers, and the interests of other emittents of acidifying substances, such as refineries, power plants and farms. In this paper the role played by other acidifying sectors is only touched on. The aspects of goals, interests and formal decision rules will be brought together in Section IV, which describes the most important historical events regarding the attempts on the European Community level to reduce the NO_x emissions by motorcars. In Section V concluding remarks are made with respect to the question of whether the completion of the EC in 1992 will offer better or worse opportunities to abate NO_x emissions by motorcars.

II The EEC decision-making process

As a result of the completion of the common market even economies of scale have to be calibrated. Otherwise consumers – buying quantitative gains with qualitative losses – could find the scales falling from their eyes. But the setting of the scales is a political process. This was realized from the beginning, as a major part of the effort to establish the common market was the decision making on common standards and common policies.³ The question remains of whether the political machinery set up by the EEC Treaty was fitted to the tasks that have to be performed. For the first 30 years the answer is negative, not because the blueprint given in the treaty was wrong, but because the member states did not live up to the obligations they so solemnly accepted upon signing. Roughly speaking the treaty envisaged decision making by majority voting in the areas of the EEC's exclusive authority. However, common standards were to be achieved by unanimity through the process of harmonization: the approximation of such provisions laid down by national law, regulation or administrative action in member states as directly affect the establishment or functioning of the common market.

In practice the distinction between majority voting and unanimity was

³ Examples of common standards are harmonization of phytosanitary measures and standards. The best known common policy is the Common Agricultural Policy.

lost, as all decisions were made unanimously. This turned out to be an excellent procedure for not reaching any decision at all, as compromises satisfying the six, nine, 10 and later 12 national bureaucracies and the one EEC bureaucracy, could be frustrated by any one of them saying no. The EEC habit of nondecisions took one of two forms: either nothing was done at all, or unyielding points of view were glossed over by vague or contradictory legal texts. Public decision making became a paradise for private lobby activities: you only have to succeed in one of 13 capitals to successfully ward off any unwanted EEC regulation, or harmonization of national standards. Thus leaving the field open for different national regulations and the protectionism that may be enshrined in them.

This gave rise to an arduous process of testing whether these national standards could be allowed to infringe the free movement of goods normally required in a common market. In order to do so these national standards had to fulfill the requirements of article 36 which did not preclude prohibitions or restrictions on imports, exports, or goods in transit justified on grounds of public morality, public policy or public security; the protection of health and life of humans, animals or plants; the protection of national treasures possessing artistic, historic or archaeological value; or the protection of industrial and commercial property. In the litigation before the Court of Justice these grounds were expanded by the 'rule of reason', stating that as long as the decision-making process was stagnated on the EEC level, it was reasonable to accept national divergence.

Another factor weakening the EC capacity to set up an effective policy is the so-called democratic gap, pointing to the fact that contrary to west European tradition, law making in the EEC is not done by the representatives of the people, but by representatives of national governments meeting in the Council of Ministers and acting on the advice of the EEC Commission. This democratic gap severely hampers public debate about possible measures to be taken, as there is no really relevant parliamentary debate, and decisions on EEC regulations and guidelines are shrouded in the secrecy of the Council.

The European Parliament's frustration about its merely advisory capacity, and the frustration of major industries about the continued fragmentation of the common market into national markets, combined in a drive to change the treaty. The result of this process left the European Parliament somewhat short-changed: the political solution of the European Union is not to be found in the additions to the old treaty. The advocates of the real common market appear to have carried the day, as the original goals were restated, this time under the catchword of the internal market. Majority voting was once again adhered to, and for the first time extended to the harmonization process. The political negotiation process set up for harmonization under article 100 (requiring unanimity) was derogated by article 100A which requires a qualified majority for the adoption of measures necessary for the

internal market. Although the adherents of the completion of the internal market may have carried the day, this might by no means be enduring, as exemption from article 36 was built into the decision-making procedure, allowing a member state to deviate from the majority. This might make possible the differentiated integration advocated by Hey and Jahns-Böhm (1989).

Still the enhanced status of majority voting made the democratic gap more painful. Therefore a new co-operation procedure was written into the treaty, binding the law-making Council of Ministers to the European Parliament in a delicate procedure. The outcome of this procedure can be that a qualified majority in the council, acting in accordance with the commission, can give an absolute majority in the European Parliament the opportunity to force a majority decision on the council. This is so because amendments made by parliament, and accepted by the commission, can only be amended by the council if it acts with unanimity. A lobby now needs one member state acting in accordance with the commission and the absolute majority in parliament, to enact the latter's wishes. Put in an other way, a negative lobby has to be successful with either the commission, the majority in parliament or all 12 national capitals in order to ward off an unwanted regulation or guideline.

The new co-operation procedure breaking the national veto power, and the enhanced concern for the environment written into the treaty, paved the way for decision making on the reduction of NO_x emissions.

III The international agenda

The development of goals to reduce the NO_x emissions of motor cars is not only affected by European decision procedures, flawed or not. Developing emission reduction goals and subsequently emission standards on EC level is even more determined by the extent to which acidification is perceived as a serious problem and as a problem that can only be handled in an international context.

Roughly speaking, 50% of the acidification in Europe is due to SO₂ emissions, 20% is due to NH_x emissions and 30% is due to NO_x emissions. Traffic is by far the most important emittent of NO_x. Moreover, the share of traffic in acidification has sharply increased in the last 20 years and will further increase in the near future because of: 1) the reduction of SO₂ emissions of refineries and power plants; and 2) the continuously increasing number and use of cars in Europe.

Already in the 1960s there was a lot of knowledge concerning the damaging effect of SO₂, NO_x and NH_x on materials (e.g., erosion of buildings, corrosion of metals, deterioration of cultural goods like paintings and books), on public health (irritation of the eyes and the conspiratory tract) and on nature (distortion of oligotrophic ecosystems). Unfortunately, the

dying of forests on a large scale, first noticed in 1980 in central Europe, was needed to make it clear that 'acid rain' has extensive ecological consequences and to put acidification as a problem on the international political agenda.

Before 1980, policies directed against the emission of acidifying substances were primarily national ones.⁴ In this line of thought, air pollution was a national phenomenon and it seemed obvious that national measures should be taken against it. One of the methods employed most, was the construction of tall factory chimneys, as a result of which pollution in urban areas decreased considerably. This created the idea that effective measures were being taken.

In the course of the 1960s, Sweden was increasingly confronted with the occurrence of acidification in its lakes. According to Sweden these problems were caused by emissions of sulphur oxides elsewhere in Europe. Such an allegation did not automatically lead to restrictive measures in SO₂ emitting countries. It became evident that it is not easy to get these problems on the international agenda. In 1969 and 1972 the matter was brought up by Sweden for discussion on OECD and UN level.

In 1972 the OECD started an investigation of the transnational character of air pollution. The results confirmed the outcome of the Swedish investigations (OECD, 1977). This study concluded that favourable effects of emission-restrictive measures in a given country occur only partially on its own territory, while the rest occurs abroad. This means that it does not seem to pay for a single country to take measures. An international approach is needed.

In 1978 there was a follow up to the OECD investigation. Within the framework of the Economic Commission of Europe the so-called EMEP-programme was set up: a co-operative programme for the monitoring and evaluation of long-range transmission of air pollutants in Europe. Twenty-six countries participated in this programme, among them the eastern European countries. The first phase of this investigation concerned the origin of the sulphur deposition in Europe over the year 1980. The results of this investigation were spectacular. In some countries the sulphur deposition originates for a very large part from abroad. This percentage was 92 for Norway, 82 for Sweden, 77 for The Netherlands and 90 for Switzerland. For the UK this percentage is only 20. It was established for well over three-fourths of the European countries that half or more of the sulphur deposition originates from abroad (ECE-EMEP, 1981). In the second phase of the research programme the transnational character of NO_x pollution was investigated. In addition to research, efforts were made to achieve a joint reduction of emission.

⁴ At first attention was focused on the emission of SO₂. This is connected with the chemical properties of SO₂, which give SO₂ a larger effect on acidification than NO_x. Originally SO₂ had a larger share in the acidifying substances, but after 1960 emission of NO_x by motor cars increased much more sharply.

As we have seen attention has only recently been focused on the emission of NO_x . Furthermore, it has only just become clear that the sharp increase of the emission by traffic is a big threat to the forests in western and central Europe. The dying of forests first occurred in the FRG, around 1980. Initially there was no clear insight into its causes. It took several years until it was firmly established that acid rain damages the roots and stomas on leaves or needles in such a way that trees wither. In the course of the 1980s this phenomenon was also found elsewhere in Europe on a large scale. According to an investigation of the Economic Commission for Europe, the forests in Italy have been affected for 15%; for 31% in France and for 56% in the UK. In The Netherlands the percentage is 57 and in the FRG 52 (Termeer, 1989). Although the percentage of damaged forests in the UK is approximately as high as in the FRG, the surface area of forests in the latter country is much larger. The value attached to forests in the FRG is traditionally much higher as well. Furthermore, in the low mountain ranges and the northern edge of the Alps, there is great concern about more erosion on the slopes of the mountains after the trees disappear. It was self-evident that the FRG would take the initiative in the European Community and advocate international measures to be taken against NO_x emission by motor cars.

In the first instance, the discussion was mainly about the nature of the measures. The UK took the view that a so-called lean-mixture engine would be the most desirable solution. In such an engine, fuel is burnt in a special way, resulting in less heat from combustion. The lower temperatures lead to a lower emission of CO_2 and NO_x . With such an engine a reduction of NO_x by 70% is possible. The fuel consumption in this engine is lower than in a regular engine because of the more effective combustion. However, this engine is still in an experimental phase.

The FRG preferred the installation of catalysers, because this can result in a reduction of NO_x by 90%. If one wants the reduction of NO_x to meet the strictest requirements, the installment of a catalyser is the only solution. However, when a catalyser is used, petrol consumption increases by 10 to 20%, as a result of which CO_2 emission also increases. In the European Community, the level of the NO_x standard has been discussed at great length. Once the decision was made in favour of strict standards, the choice of the catalyser was also made. A further development of a lean-mixture engine was given a low profile.

IV The policy of the European Community with regard to the reduction of the emission of NO_x⁵

1 The situation of the car market in Europe

The policy of the European Community can only be judged on its merits when the different positions of car-producing countries are considered. The West German car industry produces more cars with heavy engines than the UK, French and Italian car industries do. Moreover, the competition force of the car industry differs from country to country. The position of the West German car industry is considered to be strong, while the UK car industry is generally considered to be the most outdated in Europe. The Italian and the French car industries take up a middle position. The Japanese car industry has been able to secure a strong position in different European countries. In the UK and France in particular there is great concern about competition from the FRG and Japan.

Against this background it is feared in particular that the installation of a catalyser will raise the price of small cars relatively more than the price of the bigger (West German) cars. Part of the small car market may be lost because of this price rise. A large-scale loss of employment is a powerful political argument which feeds on the memories of the phasing out of the metal industry and the textile industry, which used to be important branches of industry. A similar development in other traditional branches, such as the car industry, is feared. In EC decision making, countries with important manufacturers of small cars tended to weaken or postpone decisions on NO_x emission.

2 The negotiations in the European Community

In the FRG, both the interests of the car industry, which is an important employer, and the importance of the forests, which cover almost 30% of the land, are at stake. A high value is set on both of these. In 1984 the home secretary put forward a plan to equip all cars with a catalyser as of 1 January 1986. This plan was defeated in the *Bundesrat* (Strabbing, 1984a). A compromise was reached by stipulating that between 1 January 1986 and 1 January 1988 a 'clean' car would be introduced step-by-step. Also, the West German government had to put pressure on the EC to introduce 'clean' cars in the EC on the same time schedule.

The European Commission, however, drew up a plan according to which the catalyser car would be introduced gradually between 1989 and 1995. This slow progress was found unacceptable in the FRG. The Minister for Economic Affairs was told to exert pressure in Brussels to hasten the procedure. The *Bundesrat* also insisted that the FRG should bring the measure into force on its own, if the European Community would not agree to the

⁵ This section was written on the basis of Dutch newspaper articles.

date of 1 January 1988 (Strabbing, 1984a). The West German initiative did not lead to quick results in the European Community: opposition from the UK and France, in particular, was too fierce.

Discussion in the EC centred around three issues:

- 1) Which standards were to be set, and would they be differentiated according to engine capacity?
- 2) According to which timetable would these standards be introduced?
- 3) Were tax benefits to be allowed in the intermediary period to stimulate the voluntary buying of a more costly catalyser car as long as the catalyser was not imposed?

To break the deadlock between the West German position and the UK-French opposition, the Dutch minister tried to find a compromise solution. Early in 1985 he put forward a plan to restrict the emissions of motor cars step-by-step. Motor cars with an engine capacity of more than two litres had to produce less nitrogen oxides in 1989. A year later medium-sized cars of 1100 to 2000 cc should follow suit and small cars should change between 1992 and 1995. The French minister agreed to this plan in general, although some adjustments had to be made. This compromise proposal did not break the deadlock. The FRG wanted to apply strict US standards to every motor car, whereas the UK, in particular, wished to apply a more flexible standard for small cars.

A compromise was possible only if the question of the standards was postponed; they would be fixed later. The following timetable was agreed upon on 20 March 1985. As of 1 October 1988 every new model with an engine capacity of over two litres would be dealt with. A year later, this requirement would come into force for every new car of this size. Two years later the same would apply to all new models with an engine capacity of between 1400 and 2000 cc. Four years later it would apply to every car in this category. A separate arrangement applies to cars under 1400 cc. In the early part of the 1990s they have to be somewhat more clean. In 1987 further decisions would be taken, while the standards for these cars, which in the EC have as yet to be settled, will come into force in 1993-94. As of 1 July 1985, countries may grant fiscal advantages in order to make the purchase of a 'clean' car more attractive. Finally, it was decided that as of October 1989 lead-free petrol must be for sale all over Europe.

This compromise was not even remotely in accordance with the original West German plans. Since the fleet of cars will be replaced in approximately 10 years, this compromise means that in the year 2004 the last 'dirty' small car will disappear from the roads in the European Community. The environmental movement denounced the compromise (Luyten, 1985).

Despite all the compromises and the marathon sessions, it soon became apparent that neither the UK nor France intended to give the watered-down compromise an opportunity to succeed. The FRG announced that a favour-

able fiscal measure for 'clean' cars would be brought into force on 1 July 1985. At that moment the UK made a fuss and stated that the FRG was moving too fast. If the FRG persisted, further consultations on the standards would be subjected to great pressure. The FRG announced that, if need be, it would take unilateral measures (Klein, 1985d).

Early in June the proposals which the European Commission would take to the Council of Ministers on 25 June 1985 were published. More detailed standards were involved here. The proposal of the commission with regard to cars with an engine capacity of more than two litres, was roughly in conformity with the strict US standards. The FRG had made a proposal regarding medium-sized cars of 2.5 grammes nitrogen oxide per test.⁶ The UK proposed 6.5 grammes. The compromise of the European Commission was 4.0 grammes. Again the compromise was quite remote from the original FRG aim. The European Environment Bureau stated: 'First we were up against watered-down target dates, now the Commission supplied us with matching watered-down standards' (Klein, 1985e).

The Council of Ministers of 25 June had difficulty in reaching an acceptable decision. After long meetings and much squabbling a flexible European standard was reached (Klein, 1985e).

On 25 November 1988 a meeting of the EC ministers for the environment was held. They came to an interim agreement in which flexible European standards were set up. The standard adopted was the one finally suggested by the UK, France and Italy, namely: eight grammes nitrogen oxide per test (Aarden and Garschagen, 1989). Greece, The Netherlands and Denmark voted against these standards.

3 The fiscal advantage

Before the date on which the first car was going to drive with a catalyser, the fiscal settlement for this needed to become effective. The Netherlands finally did not go beyond the original plans of March 1985, since these had been approved in principle by the Council of Ministers. The special consumer tax for cars was rearranged. A compensation of 1700 guilders (1 US \$ is 2.0 guilders) is given for cars with an engine capacity of over 1400 cc. For cars under 1400 cc this compensation is 850 guilders. Furthermore, the price of leaded petrol is 4.5 cents more per litre than the price of lead-free petrol. By means of these measures 'clean' driving was thought to be made more attractive (Geradts, 1985).

The Dutch measures would lead to a speedy introduction of 'clean' cars. Research had shown that the majority of the Dutch buyers would purchase such a car if it was not more expensive than a 'dirty' one. When 'clean' car

⁶ A so-called standard test is meant here, by which, under certain specified circumstances, nitrogen emission is measured.

are bought voluntarily and *en masse*, the car fleet will be 'clean' sooner than might be expected on the basis of the mandatory data that had been agreed upon.

Late in 1988, the EC commissioner for the environment announced that the Dutch fiscal measures were contrary to the rules in the European Community with regard to the common market. The matter was going to be taken to the European Court of Justice (*De Volkskrant*, 1988). The Dutch Minister disputed the point of view of the commission. The Dutch fiscal arrangement does not put a single car manufacturer at a disadvantage, because everybody in The Netherlands is free to buy a car with or without a catalyser. Every car industry already produces cars with catalysers for Sweden, Austria, Switzerland and the USA. Therefore there is no question of certain factories being unable to produce cars with catalysers. Moreover, nobody and nothing is supported by state subsidy. There is only a financial transfer between users of cars with and without a catalyser (*De Volkskrant*, 1988).

The European Commission and The Netherlands got into a pitched law court battle. The commission started to investigate whether or not the fiscal advantage given in The Netherlands would distort competition by state aids. If so, this would lead to procedures under articles 92 and 93 of the EEC Treaty. These procedures have a suspending effect: the Dutch government cannot introduce the fiscal measures in the meantime. The Dutch government initiated summary proceedings against the commission at the European Court of Justice, challenging the commission's authority to apply the treaty provisions on state aid in this case.

During this manoeuvring it turned out that there was not a majority in the commission in favour of applying the articles on state aid. At most there was willingness to apply articles 30 and 36 of the treaty which deal with the free movement of goods. This would not have a suspending effect (Garschagen, 1989a). Ultimately, it appeared that disagreement had arisen within the commission about the plan to summon The Netherlands at all. Some commissioners felt it was not a realistic policy to start a legal procedure against a member state because it was taking environmental measures, a few months before the European elections.

4 The 1989 miracle

As with all miracles there is something unexplained about the sudden acceleration in EC decision making after the attempt to block the Dutch fiscal stimuli for catalyser cars. The Italian commissioner for the environment, Ripa di Meana, concluded that the fiscal measures should not be the only issue, but also the previously fixed standards, which were experienced as being much too watered-down. Before the European parliamentary elections, Di Meana wished to put proposals with stricter standards to the

vote in the European Parliament. The new co-operation procedure (see Section II) plays a part in this. In this new situation, a proposal with regard to stricter standards would stand a chance.

It turned out that he had accurately judged the balance of power in the commission. The Netherlands would not be summoned to appear in the Court of Justice. That meant that they could carry out their fiscal plans. Furthermore, Di Meana reopened the discussion on the standards successfully. In April the European Commission proposed to have all cars manufactured in Europe comply with the strict US standards, not later than 1 January 1993. In practice this means that catalysers will be installed. This proposal was drastic compared to the compromise that had been reached earlier (Garschagen, 1989c). It was hotly debated by France, the UK and Italy. Pressure in favour of the proposal was still further increased by the FRG, The Netherlands, Belgium, Luxemburg and Denmark. The European parliamentary elections put so much pressure on the meeting of the EC ministers for the environment, that none of them would take the responsibility for the failure of an environmental conference. As a result, they not only decided to accept the US standards, they even advanced the date by which the standards will take effect by six months.

V Concluding remarks

The EC 1992 programme is heavily based on the neoclassical theory that free international exchange of commodities and production factors will increase total production. In estimating the benefits of the completed common market (that is evaded costs, in particular the nontariff barriers) the Cecchini committee disregarded the social costs of production growth. Especially the fact that the use of energy and the related environmental pollution, which both increase more or less proportionally to production growth, could even outweigh the benefits of the completed common market. A striking example is the use of motor cars, which is increasing more than proportionally to production growth. Increasing NO_x emissions by motor cars will make the problem of acidification worse, while European society is already faced with huge social costs at the current level of acidification. Moreover, increasing use of motor cars will increase CO_2 emissions, which contribute to the greenhouse effect. Given these effects of production growth that will result from the completion of the common market, the question arises as to whether agreements can be made on the European level to reduce NO_x and CO_2 emissions by motor cars, and, if so, whether the agreed emission standards actually contribute to reducing the acidification problem and the greenhouse effect. More generally, the existence of substantial external diseconomies requires intervention in market processes, especially when the external diseconomies can be interpreted as a collective good, as is the case with NO_x and CO_2 emissions from motor cars.

Originally there were two technical options for reducing environmental pollution by motorcars: the lean-mixture engine and the catalyser. The EC chose the catalyser because a catalyser reduces NO_x emissions up to 90%, while a reduction of only 70% can be attained with the lean-mixture engine. This choice indicates that acidification was regarded as a far more threatening problem than the greenhouse effect. By setting aside the lean-mixture engine, the opportunity was missed to reduce petrol use by motor cars and so to reduce CO_2 emissions substantially at the cost of a somewhat less far-reaching reduction of NO_x emissions.

From the beginning the car industries of the UK, France and Italy tried simultaneously to postpone decisions which introduced emission standards for cars and to weaken the standards that were introduced. Their argument concerned the market position. The greater part of the cars produced in these countries are small and relatively cheap. When a catalyser is added, the price of small cars will rise relatively more than the price of large cars. The car industry in the UK, France and Italy feared a decrease in demand as a result of this price rise more than the car industry in the FRG.

At first the car industry succeeded in their strategy of retarding and frustrating the set up of effective NO_x reduction standards. The possibilities to influence and manipulate political decisions were large, because in practice the right of veto was operative at the highest decision level in the EC, the Council of Ministers. A well organized lobby, such as that of the car industry, can easily succeed, then, because only one or two national governments have to be won over to its point of view. Moreover, due to the 'democratic gap' in EC decision procedures, decisions of the council cannot be corrected by the European Parliament. As a consequence, the influence of pressure groups is more hidden than it would be if parliament had the final word.

The typical culture in the EC of continuously seeking compromises, leaving a lot of room for exceptive clauses and temporary measures, is of hardly any use in the case of the reduction of NO_x emissions by motor cars. The very mobility of the pollutive sources, and the need for a common infrastructure in the form of lead-free petrol stations, force some sort of common decision making. On the one hand, the movement of cars across national borders cannot be hampered without interfering with the free movement of goods. On the other hand, this mobility excludes the escape from common standards available for dealing with nonmobile pollution sources. For refineries and power plants disagreement on common standards can be hidden behind 'regionally differentiated' standards.

Despite these difficulties a surprisingly far-reaching decision was taken within the short period of the first six months of 1989 concerning the introduction of the catalyser. All newly produced European cars should comply with the strict US standards no later than 1 January 1993. At first sight it is not clear why this breakthrough was possible after years of dead-

lock. Several events and circumstances offer partial explanations, such as the breaking of the unanimity rule, the oncoming European elections, and the specific attitude of Commissioner Di Meana. But these events and circumstances should be put together logically in order to get a total picture of the forces at work in the 1989 breakthrough.

With respect to the debate of the EC 1992 programme it can generally be concluded that the EC level has offered better opportunities to abate NO_x emissions by motor cars than can be expected on the national level. These better opportunities do not result from the abolition of any (nontariff) barrier between the member states of the EC. Rather, the set up of common standards was made possible by a transfer of authority and a change in the decision-making procedure. Decisions of the council no longer require unanimity and, although structured in a complicated way, the influence of the European Parliament on decisions of the council was enlarged. These changes in the decision-making procedure were a necessary condition for the rapid change in attitude of the council and the commission during the first half of 1989 regarding the introduction of NO_x emission standards for motor cars. The initiative of the commission to start proceedings against the Dutch government who intended to give catalyser cars a fiscal advantage, met with a lot of negative publicity. In the media the commission was frequently accused of hampering environmental improvements on the false grounds that the Dutch fiscal measure limits competition in the European car market. This negative publicity, combined with the oncoming elections for the European Parliament in which environmental issues got a lot of attention, forced the commission to withdraw the complaint against the Dutch government at the European Court and pressed the commission and the council to break the existing deadlock concerning the NO_x reduction standards for motor cars. The political actions of Commissioner Di Meana could only be successful in the context of a European Community that had just changed the rules of the (decision) game and in which environmental problems had rapidly gained the attention of the population and thus of the politicians competing with each other in the European elections. So, in our view, it was not the enlarged market, but the changes in the legal, political and social structure of the EC, that led to the decision to abate NO_x emissions more effectively.

Finally, setting up standards and a timetable for the introduction of these standards cannot be the last EC decision on this subject. Although it is beyond the scope of this article, it is obvious that, from an ecological point of view, the standards attained are insufficient effectively to abate air pollution in general and acid rain in particular. Although the NO_x emissions per motor car will decrease, the growth of car use can and will easily outweigh this effect. To avoid this, more technical measures could be taken e.g., by constructing a package introducing the catalyser for the intermediate period, while at the same time the further development of the lean-mixture

engine is forced by setting standards and timetables for the reduction of petrol use and CO₂ emission per motor car. However, despite such technical improvements, only a radical decrease of car use in favour of public transport can decrease the air pollution due to transport of passengers and cargo to a level that corresponds to the carrying capacity of nature.

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