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Christian Hey

Internalization of External Effects of Road Freight Transport in the EU 1987-1995

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EURES
Institute for Regional Studies in Europe
Schleicher-Tappeser KG
Basler Straße 19, D-79100 FREIBURG
Tel. 0049/ 761/ 70 44 1-0
Fax 0049/ 761/ 70 44 1-44

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This paper is Chapter 3 out of the EU-study of the above mentioned project.

Christian Hey
Born 1961. Degree in Public Administration from Constance University. Worked in the German Parliament (focal points: EU single market, international trade issues). Editor of the "Eco News ("Öko-Mitteilungen") of the Ecological Institute (Öko-Institut) in Freiburg. Active as a free-lance scholar and journalist dealing with the environmental consequences of the single market in the EU. Co-founder of the EURES Institute, where he has been responsible for the area of European environmental policy since 1990.

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1 Introduction

This is the first of two case studies in the framework of a research programme on the “Incorporation of the Environmental Dimension into Freight Transport Policies in the EU”. The second case study analyses the history of Strategic Environmental Impact Assessments for the Trans-European Networks.

Both policy analyses apply a special model - the “temporal sorting” or “garbage can” model. This is a tool to explain the background of the “agenda-setting” process. Both instruments for the incorporation of the environmental dimension are still in the initial phases of the policy-making process. Up to now (January 1996), the Commission has not made a specific proposal for environmental taxes on road freight transport. According to the temporal sorting model, politics do not function in a clear sequential or rational order (from problem-perception over estimation to selection and decisions). Solutions and instruments, actors’ attention to a specific issue; and problems may be characterized as rather independent streams floating around. Occasionally they come together, but often they do not. Sometimes existing technological solutions may look for new marketable problems. In certain constellations, a problem may attract the attention of strategic actors. In other situations, their attention is occupied by other issues. There might be problems without solutions, actors without interest for a specific problem, or solutions which do not find strong protagonists. Different processes and initiatives may take place at the same time. Therefore, a simple chronology may be not sufficient to give an accurate picture of the agenda-setting process.

According to HUBER (1995), one can identify several networks, such as the definition network, the solution network, and the decision network. The definition network focuses on the identification of problems. It is most likely based on the natural sciences. In this "network," a debate over the "definition power" (Beck 1986, 1988) takes place. This means someone defines what the problem is and what is not. The solution network analyses alternative options and offers solutions. This network selects viable options from the "market of ideas and concepts". Secondly, the decision network makes the decisions. All three networks must mobilize their resources to promote a policy. Therefore, proper timing and the coincidence of several independent factors may explain successful agenda-setting

more than a specific problem to be solved. According to this model, a solution has chances to come on the agenda if (see Huber 1995; Kingdon 1984):

- there is a high level of attention for a certain issue (caused by a certain event);
- actors who want to promote a certain policy have strong resources (economic, social, political, symbolic);
- technically-viable solutions and instruments are available.

Such coincidence of different factors is sometimes called a "policy window" (Kingdon 1984, according to Huber 1985). As observed, several initiatives and attempts may be started before a "policy window" may be found.

The discussion on the internalization of external effects in the transport sector can be well understood in the framework of a "temporal sorting model" (Kingdon, 1984). One can distinguish several parallel political streams, which occasionally touched each other but which have yet not come together. The discussion on the environmental dimension of transport and the use of fiscal instruments, to reduce the ecological pressure, which takes place since 1989, was weakly linked to the decision-making processes on the Energy/ CO_2-tax and on the harmonization of Diesel[1] and vehicle taxes. As will be shown, events in one political stream had ramifications on the others-nevertheless every political stream and the participating policy networks had their own logic and continuity.

Four parallel political streams will be analyzed in this case study:

- the debate on the environmental impact of transport since 1989;
- the decision-making process on the allocation of infrastructure costs to heavy vehicles;
- the "failure" of the pilot project for environmental taxation: the proposal for an energy/ CO_2-tax.
- the debate on the instrument: the use of fiscal instruments for transport since 1989;

An overview is given in the following figure.

[1] Tax harmonization on diesel again was part of an additional political process to harmonize indirect taxation (see: Mette 1992 and 1994).

2 EURES

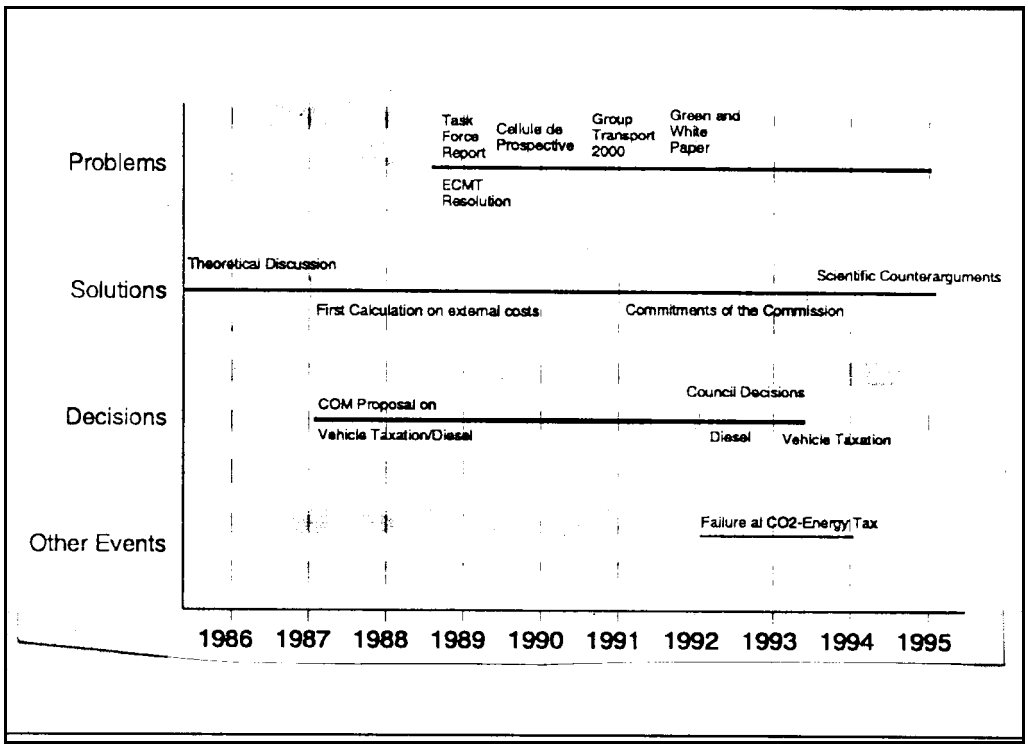

Abbildung 1 The history of environmental taxation for freight transport in the EU

The discussion on the "problem", the environmental impact of the transport sector became a major issue at the European Conference of Transport Ministers in 1989 (ECMT 1990). Since then, several reports identified the environmental impacts of (freight) transport and different mitigation options. The use of economic and fiscal instruments was evaluated from the beginning of this process .

Even before the problem was seriously evaluated and before the solution was elaborated, the idea of "external effects" reached the Council's agenda in 1987 as a tactical argument. The first proposals of the Commission on the allocation of infrastructure costs to heavy vehicles contained this principle. The environmental dimension also played a certain role when the harmonization approach for diesel taxation was changed from total to minimum harmonization between 1987 and 1989. However, since no clear concept on "external costs" existed at this time, the idea dropped from the agenda of the Council. The negotiations on the harmonization of heavy vehicle taxation lasted between 1987 and 1993. The discussion primarily focused on competition issues and on the distribution of tax income among countries. It was marked by three Commission proposals in 1988, 1991, and 1992 and the German "Alleingang" in 1990, which was finally refuted by the European Court of Justice in 1992.

Between 1992 and 1994, another process had an impact on the slow dynamics of “internalization” in the freight transport sector. The protagonists of environmental taxes in the EU had started an ambitious pilot project with the energy/ CO_2-tax proposal, which was not approved by the Council in December 1994. This “ defeat” was a lesson for the protagonists to choose a less ambitious and more success-oriented approach for the transport sector.

A discussion on the instrument itself started in 1989. After a relatively long phase of “symbolic policies” were the Commission and the Council formulated commitments on the principle the methodological and technical work on pricing policies for the transport sector started in 1994. But the initiatives of the Commission were preceded by a discussion of economists on the comparative advantages of economic and fiscal instruments, which already started in the beginning of the 70ties. So one must ask, why their arguments found political backing only after 20 years of discussion. While the principal idea on the application of environmental taxes in the transport sector was accepted rather soon, economists were unable to find a consensus on defining the right level of external costs. They disagreed on the methodology to calculate external costs and on the appropriate strategy to internalize them. This methodological discussion mirrors and underlines the arguments and positions of the different stakeholders. After a first wave of discussion between 1989 and 1991, the discussion on methodological and technical questions began in 1993/1994, at both the EU and ECMT levels. With its “Green Paper on Fair and Efficient Pricing in 1995" the Commission made first choices on the controversial discussion among economists and stakeholders. Furthermore the Commission reacted with a proposal on the request of some member states to increase the level of taxation and to a recent decision of the European Court, which requires the renegotiation of the taxation compromise.

An opportunity that the different policy streams may come together in the near future has been created by the recent initiatives of the Commission.

2 The Problem Networks

2.1 The networks involved

The discussion on the environmental impact of the freight transport sector became an issue for actors networks on the EU level since 1987. DG XI initiated a discussion on the environmental dimension of transport in 1987 in the framework of the Fourth Environmental Action Programme (Hey 1996). This discussion was intensified by the TASK Force report in 1989 and found strong backing from the President of the Commission and DG XVII. Finally DG VII took over the lead over the discussion process and drafted the Green and White Papers in 1992.

The discussion on the environmental impact of transport also was promoted from outside the EU - namely the OECD and ECMT. The OECD published a report on "Transport and the Environment" in 1988. Similarly, the ECMT established an "ad hoc working group" in May 1988; this group produced a report for a "Special Session of the Council of Ministers" at the end of 1989 (ECMT 1990). In 1991, a special report on "Freight Transport and the Environment" was published (ECMT 1991). In 1991, the "Pan-European Transport Conference" took place in Prague, where environmental issues played an important role (Europäisches Parlament 1991d). The conference was open to the European Parliament, as well as to business and environmental organizations.

According to several interviews (No. 15, 20, 36) the role of expert groups within the OECD and ECMT should not be underestimated. Both produce authoritative reports that are cited as reference on the EU and national levels. Important innovative international discussions are initiated from those levels. Furthermore, expert groups play an important role in "network building". The OECD expert groups form international scientists networks, which can be interpreted as "epistemic communities" that gradually penetrate different political levels with their ideas (Haas 1990; Adler/ Haas 1992). At the international level, a consensus on the principle to correct the price-system in the transport sector was found rather early.

Finally, the "environmental dimension" played a strong role during the Alpine transit negotiations.

As will be shown below, those problem-oriented networks started to interprete the environmental problems of the transport sector from the beginning as a problem of wrong price incentives. The use of fiscal instruments seemed to be the natural conclusion from this analysis. Even if their work found little response within the Council, who negotiated the harmonization of vehicle and diesel taxes between 1987 and 1993, they continued their work and prepared further inititatives within the “solution networks”.

2.2 Problem Definitions

Between 1989 and 1994 the different Commission services have financed a number of reports on the problems of transport growth and the policy-options to mitigate them. Taxation was one of the instruments, which were evaluated from the beginning. One can identify two types of approaches during this period: (1) a more prospective and technical; (2) and a more political.

Four technical reports (ECMT 1991; EG-Kommission 1989b and 1990za; Samaras 1994; EG-Kommission 1992: c) started with an environmental balance sheet for different modes of transport. They listed the specific and total emissions from different modes of transport, and then calculated probable growth rates of emissions for the next 20 years. They identified the growth of road transport as a major challenge. Despite of considerable progress in reducing specific emissions by emission-norms, transport growth overcompensated much of this. Some pollutants, especially CO_2-emissions, continue to grow considerably; meanwhile, other reduction-oriented targets are difficult to achieve by technical standards alone.

In one of its policy scenarios, which should present ideas on the impact of alternative policy choices, the Commission assumed a radical policy change for transport policies, such as reducing the modal share of road freight transport by 25% (EG-Kommission 1989b).

Two years later, DG XI commissioned two studies to evaluate different strategies for greenhouse containment from the transport sector (Tanja u.a. 1992; Samaras 1994). Both studies analyzed the potential of economic instruments to contain the growth of CO_2-emissions. Both reports were rather optimistic on their effectiveness.

The qualitative part of the analysis of TANJA (1992: 127) concluded that "price related measures and transport market regulation measures" are "most effective

to reduce CO_2-emissions". But TANJA (1992: 112) also referred to the limitation and risks of such strategies because of two main reasons: (1) price elasticities in the freight transport sector are lower than in passenger transport; (2) and opposition to raising transport costs will be high. By the use of a policy mix, including a high level of diesel tax harmonization (260 ECU/1000l) and a gradual increase of 3% annually, it was calculated that a stabilization of CO_2-emissions by the year 2000 would be possible. By a price increase of 5% annually, even a reduction of 15% could by possible compared to 1990 (Tanja 1992: 144).

The second scenario study by SAMARAS (1994) also compared different strategies to contain greenhouse gases, especially the application of "best available technology", the redirection of infrastructure policies, and the application of fiscal instruments. In its calculations, the SAMARAS report assumed an increase of fuel prices in three steps - by 15% in 1995, by 25% in 2000, and by 50% in 2005. The study concluded that no single strategy would be sufficient to achieve the stabilization goal of the EC (Samaras 1994: IX). Nevertheless, the scenario concluded that fiscal instruments would be the most effective single strategy. They would be able to stabilize CO_2-emissions from freight transport until 2000 and to reduce the predicted growth from 49% to 19% by 2010. In the framework of this strategy, the modal share of railways would double from 13.7% in 1990 to 27.7% by 2010.

The early prospective studies of the Commission not only highlighted the high level of future problems, but they also included the potential to solve the problem by using a policy mix, including the gradual increase of fuel taxes. First studies were optimistic on the economic problem-solving capacities.

Earlier political reports were more comprehensive, including the wider transport policy framework of the EU - both in a critical and in a normative perspective. The TASK FORCE Report (1993: 100f) on the "Internal Market and the Environment" focused on the impact of the internal market on transport growth and on the fiscal harmonization as major problems. The report warned that fiscal harmonization should not prevent member states from applying indirect taxes (such as fuel prices) as a tool for environmental policies. In this respect, the TASK FORCE welcomed the new approach of the Commission for minimum harmonization of fuel taxes instead of prescribing a fully harmonized tax level.

The TASK FORCE report must be seen in the context of the emerging discussion on economic and fiscal instruments (see below). Its purpose was to highlight the contradiction that the EC promoted market principles with its internal market concept without also applying such principles for environmental policies (see: Sprenger 1991: 200). The report suggested a potential solution: the use of economic and fiscal instruments to correct the change of relative prices, especially where it might be negative to the environment.

Also in other reports (“Forward Studies Unit" (1990) and Group Transport 2000 the issue of cost allocation played an important role in the analysis: " If users will be unaware of external tranport-related costs, these will be ignored when calculating the real cost of transport" (Group Transport 2000 Plus 1990: 20). The analysis and the recommendations of this expert group asked for a far-reaching change: "To realize this, there will have to be a total change in transport mode preferences away from unlimited private car and road haulage growth towards public and multi-modal freight transport. This will not happen automatically and a ‘push-pull' approach is needed including financial incentives (these need to be economically justifiable in the long term)" (p. 29). The expert group confirmed the analysis of the TASK FORCE on the internal market: "Creating an internal tranport market without calculating the external costs will be problematic to say at least" (Group Transport 2000, 1990: 66). The social costs for transport were estimated in a range of 0.10 ECU/vehicle km (ibid.).

The official Commission "Green Paper" and even more so, the "White" Papers did not fully share the "gloomy prognosis" (O´Riordan 1991) of the earlier documents, especially concerning the environmental impact of the internal market. The "Green Paper" was in essence, a technical documentation of the environmental impact of the transport sector. Nevertheless, the “Green Paper” recommends a policy mix, including the use of fiscal and economic instruments as part of a strategy that "reduces operational pollution, slows down unnecessary tranport demand, reduces traffic and congestion, and promotes efficient use of existing tranport and infrastructure capacity" (EG-Kommission 1992c: 43). Furthermore, it analyzes users’ choices, which highlights the limits to any strategy for modal shift (see: EG-Kommission 1992c: 39f).

The limitations and restrictions to change transport trends have received even more attention in the White Paper. It not only discusses the "problems," but it also identifies the "problems with solving the problems".

Like the other documents, the White Paper refers to the price system: "As prices do not reflect the full social cost of transport, demand has been artificially high" (EG-Kommission 1992m: 31). It favours the internalization of external effects on several occasions (i.e., EG-Kommission 1992m: 19; 39ff; 61). The White Paper points out some significant issues: the threat of congestion and limited road infrastructure capacities, underused rail and shipping capacities, as well as road transport growth. These issues may be explained by both changed market conditions towards flexibility, speed, reliability, and frequency, in addition to the shift of relative prices. The report stated, "The constant relative reductions in road costs charged to users stimulated this process" (EG-Kommission 1992m: 39). However, there are also arguments that emphasize the limits of such strategies. For in-

stance, the White Paper argues that there is a limited potential for modal shift in short distance transport (p. 11; p. 40). According to the White Paper, there is a necessary link between transport growth and economic growth (p. 7), and there are methodological problems to measure the level of externalities. Nevertheless, the White Paper contains strong arguments in favour of cost internalization by environmental charges.

In total, the crisis of the transport sector was not only defined in purely environmental terms, but it also addressed the economic dimension. The negative feedback mechanism of an unregulated dynamic became obvious to policy makers. Environmental taxes were soon identified as an effective tool for “reflexive modernization” (Prittwitz 1993: 37), which corrected the risks of a one-sided modernization process in the framework of the prevailing neoliberal, market-oriented philosophy. The problem orientation was stronger in the prospective thinktanks than in the responsible DG. The final policy document, which developed the official policy orientation of the EU, was much more cautious than the first “gloomy prognosis” and previous “brain-storming” sessions. At the same time, the responsibilities shifted from the rather problem-oriented “think-tanks” (Scenario analysis of DG XVII; Task Force on Internal Market and Environment; Forward Studies Unit 1990, Scenarios for DG XI) to the political-oriented director of DG VII.

3 The Decision-Making Process

When the environmental impact of transport came on the EU agenda, it encountered an ongoing decision-making process on infrastructure cost allocation and taxation in the Council. This process started with a Commission proposal in 1987, and ended in 1993 with a compromise on vehicle taxation. The process only was partly influenced by environmental considerations. Attempts by both the Commission and the German government to widen the complexity of negotiations with environmental arguments failed. The debate was dominated by the need to complete the internal market and respective fiscal and transport policy motives. The environmental dimension (and respective protagonists) were excluded in order to reduce the intensity of the conflict.

Solving the taxation issue was necessary because it was linked to liberalization of European freight transport, as requested by the European Court. Therefore, one had to find a compromise that respected the requirements of the internal market and avoided distortions in terms of competition due to high tax differences. Nevertheless the major conflict between the memberstates was rather a fiscal conflict on the distribution of tax income.

Despite of the unanimity voting hurdle and the high intensity of the issue, a compromise could be found. This compromise reduced the national differences of vehicle taxes, which were considered to distort the terms of competition. The harmonization took place at a low common denominator. On the other side, limited scope to increase other taxes was given, especially for diesel taxes. Finally, the possibility was introduced for Member States to apply optionally a time dependend charge for the use of motorways: the Eurovignette. Thus, from the perspective of the negotiating ministries, a pareto-optimal solution could nearly be found. Most countries could maintain their fiscal and transport policy objectives, while at the same time, the path towards liberalization of cross-border freight transport in the EU could be opened.

The price of this pareto-optimal compromise was the exclusion of the internalization debate from the decision-making process and its postponement to a later review. Furthermore, the compromise set legal and market-related constraints to national measures for internalization. In this sense, supporters of the environmental dimension had lost the first round of the decision-making process.

The analysis of the decision-making process focuses on two major controversial players: Germany and the Netherlands.

3.1 Actor Preferences and Institutions - A recapitulation

Differences in taxation levels between member states are high. This can be shown on the basis of a model calculation presented in the following table.

Relative Changes of Taxation	I	UK	D	IRL	P	E	F	GR	NL	DK	B	L
Index 1992[1]	140	136	130	111	101	99	87	86	85	85	83	53
Harmonized levels of diesel tax[2]	-37	-16	-13	-12	-16	-14	1	-2	13	14	20	84
including autonomous national increases[3]	-11	15	6	5	0	-10	27	-2	37	18	38	79
Index 1994[1]	110	139	122	103	90	79	98	74	104	90	101	84

Explanation: Relative changes of harmonized and non-harmonized taxation levels 1992-94 (including diesel tax, vehicle tax and tax disk on the basis of a 40t vehicle running 120.000 km/ year and using 35l/100 km
1 The index is based on the difference to average aggregated tax levels in 1992 and 1994
2 This assumes relative changes on the basis of the harmonized diesel tax-level of 245 ECU/1000l
3 This assumes overall relative changes, which took place

Table 1 Index of national road freight taxation before and after the EU tax compromise in 1993 (own calculation on the basis of: Committee of Enquiry 1994: 37)

Before 1993, Germany and the U.K. were the only EC countries that had both a high level of diesel taxation and a high level of vehicle taxation. Ireland and Italy had a high level of diesel, but a relatively low level of vehicle taxes. These four countries had a level of taxation which up to 40 % above EU-average (in the case of a representative 40t HGV, running 120,000 km per year and using 35 l/100km). All the other EU countries had an estimated average level of 10,730 ECU (with a 15% deviation). During the review period, one can observe two especially low-tax countries, the Netherlands and Belgium (and less pronounced: Luxemburg),

considerably increased their overall level of taxes during the period of negotiations from 1987 to 1993. This can be interpreted as a shift of their preferences over the period. Denmark abolished its diesel tax refund system for commercial vehicles in 1991and has gradually increased diesel taxation since then. Only Luxemburg had considerably lower taxes than the average (ca. -50%).

This aggregated analysis did not fully confirm a simplistic view of a "center-periphery" conflict. Peripheral countries did not support their road transport freight sector by having low taxes more than some central countries, which might face congestion problems (especially the BENELUX countries). A certain center-periphery conflict, however, can be derived from the perspective of market access. Peripheral countries (in the regional sense, including the Netherlands and Denmark) were interested in having cheap access to the markets in the economic centers of Europe. The “transit countries,” especially Germany, articulated a strong interest in maintaining a higher infrastructure cost coverage of foreign hauliers. A conflict line exists between "transit countries" and "transport exporting countries". Transit countries prefer full cost coverage by foreigners (to protect their own hauliers) and transport exporting countries prefer cheap access.

For Germany, as high taxation and transit-country, three major arguments overlapped in the discussion[2]:

- transit traffic was perceived as a major problem because of its contribution to overall transport growth, environmental problems, and especially low-cost coverage. Several studies confirmed that foreign hauliers covered infrastructure costs by about 14 % (Hopf u.a. 1994: 70);
- the railway reform, which was perceived to be necessary at the end of the 1980s, required additional financing and a sound competitive basis; and
- due to German reunification, major investments were necessary to reorient and reconstruct its national infrastructure net, which required additional financial sources.[3] Furthermore reunification caused a sharp increase in public budget deficits (Röder 1996c).

Hence, the German Ministry of Finance had a strong interest in maintaining a high level of taxation.

German hauliers have argued that they have paid higher vehicle taxes in Germany than abroad. They feared disadvantages for their business by such tax diffe-

[2] Das Gewerbe will Unebenheiten glattbügeln", HB 13.4. 1989. “Mehr gegen als für das Nutzfahrzeug"; Handelsblatt 17.12. 1992."Und jetzt die Autofahrer", Der Spiegel, 13.7. 1992.

[3] "Aufregung über deutsche Strassengebühren" NZZ 15.7. 1992; "Signale angekomen", Der Spiegel 22.10.1990

rences. The German government supported this argument in principle. However, this was not the most important motive. The German government did not agree to a harmonization on a low common denominator because this would reduce tax income. The problem of competition, in theory, could be easily solved by harmonization on an average or low level; however, this would imply lower tax income to the German Ministry of Finance. The German position to link tax harmonization to the fiscal motives complicated the conflict situation (Interview 17; as well: Young 1994: 21). The problem was not only a regulatory one, but also one of redistribution.

On the issue of the transit problem, Germany could only find limited support from other big countries who were affected by transit (France and Italy) because they already had established motorway toll systems, which allowed better cost coverage by foreign hauliers (see: Erdmenger 1989: 179). Transit was also a major problem in Belgium. Belgium tried to introduce a toll for foreign hauliers in 1987 - but failed to do so because of strong international pressure.[4]

Other high taxation countries (U.K. and Italy) where less affected by transit, could live with a national taxation strategy or had basically fiscal motives. So they didn´t ally with Germany.

The major protagonist to a harmonization on a relatively low level was the Netherlands. As home country to the most important European harbours and a major supplier of transport services, the Netherlands wanted to maintain the competitiveness of its haulier sector. Since the level of wages and of social standards were considerably higher in the Netherlands than for many competitors, the Dutch transport policy tried to compensate those costs by keeping taxes relatively low.[5] Especially in 1987 and 1988, Dutch freight transport workers were relatively successful with increasing wages. The national hauliers' federations asked for compensations if diesel taxes would be increased. A similar strategy was promoted in Denmark, where tax compensation for diesel taxes was provided until 1991 (Togeby 1995). In both countries, the vivid environmental debate and the discussion on the use of fiscal instruments to protect the environment modified contributed to a gradual reorientation of taxation policies. Tax refunds were abolished in Denmark and in the Netherlands . Diesel taxes were constantly increased during

[4] Gebührenfrei ist längst die Ausnahme; Die Welt 12.8. 1987;"Keine Autobahngebühr in Belgien", FAZ 30.10. 1987;"Widerstand der EG gegen Belgiens Autobahngebühr": HB 7.9. 1987; "Wird die Vignette für die Belgier zum Bummerang?"; FAZ 20.8. 1987; "Opposition de la France, RFA, des Pays Bas et des Transporteurs"´Echo de la Bouse, 7.8. 1987;

[5] "La grande peur des camions neérlandais"; Le Monde 7.3. 1989: Wage costs in Netherlands are 10-15 % superior to its competitors. "Holland: Höhere Kosten im Straßentransport"; FAZ 4.8. 1988.

the period of negotiations. As will be shown later those internal policy changes helped to find a compromise with Germany.

Peripheral countries applied relatively high taxes internally, but they had a fundamental interest of low cost access to the economic center to compensate for their peripheral status. The position of those countries was above all “user-driven”. Export-oriented industries asked for low transport costs to be competitive in central markets. Therefore, at the beginning of negotiations there was an alliance between the peripheral countries, and the Dutch and Danish protagonists. Those countries were prepared to find a compromise with Germany on the level of taxes, but not in a way that income would be raised by the German Finance Ministry-for example by a motorway toll. Therefore, they were opposed to the “territoriality principle”, which would offer an opportunity to the German government to levy taxes on foreign transit traffic.

The original constellation between member states was perceived as a “zero-sum game”: Either the export industries of peripheral countries or the Ministry of Finance in Germany would lose. The counterparts of the conflict were Germany and Netherlands. Denmark, although having a similar position as the Netherlands, was trying to mediate between the two countries.

The strategic differences between those three countries were accentuated by the different ways in which they dealt with the problems of congestion and environmental degradation. For instance, car-producing Germany focused its containment strategy on transit traffic caused by foreign hauliers. Denmark and the Netherlands were rather lenient with the road freight sector, but instead they were more restrictive with private passenger transport.

This difficult constellation was further complicated by the institutional setting, which is characterized by unanimous voting rules and issue linkage to the liberalization programme for freight transport. Especially the German government linked any concessions on freight transport liberalization to the harmonization of taxes (Erdmenger 1988: 209; Erdmenger 1992: 198).

Countries that had preferences for a high level of taxes had a minority position in the Council of Ministers. High taxation levels were basically based upon fiscal motives, and less on transport policy motives. However, as the analysis of the institutions shows, taxation requires unanimious voting. Unanimity strengthened the position of high taxation countries in the Council. The veto power, however, was limited by the issue linkage of taxation to the completion of the internal market (see: Young 1994). This issue-linkage created a strong pressure to find a compromise.

The minority has an institutional right to block a harmonization on a low level -- however, low taxation countries have the same right. According to the theory of negotiation systems, any solution beyond a relatively structure conservative pareto-solution, therefore, would be improbable. The internalization of external costs negatively would affect low-tax countries. A harmonization on a low common denominator would not be acceptable to high-tax countries. One can assume that the negotiation process can be characterized as a search for such a pareto-solution, accepting the status-quo of every country.

Since the European Parliament and the Economic and Social Council only play an advisory role in the negotiations, they could not really influence the decision-making process itself-but they played a certain role during the problem-solving discussion.

3.2 The first Commission proposal in 1978

The Council of Ministers had already found an agreement on the harmonization of vehicle taxation in 1978 (Neumann/Pastowsky 1994: 49). This agreement however, was not formally endorsed because Italy vetoed it since harmonization would have led to an increase of vehicle taxation (Interview 17).

Therefore, the Commission had to start a new approach. In 1986, it published a communication on the structure of taxation systems in member states (Mc Kay 1987: 77[6]). The political message of this communication was that the existing tax differences would distort the terms of competition in member states. The communication only partially confirmed the German argument that the harmonization of the taxation systems would be a precondition of the liberalization of the freight transport markets.[7] The Commission also argued that all taxes would only contribute to 4 to 10% of transport costs -- so that the taxation issue should not be exaggerated from a competition point of view. Furthermore, the communication confirmed the German argument that as a transit country, it was more traffic importing than exporting.

6 Für die Lkw-Steuern ist ein neues Konzept notwendig; in: DVZ from 13.1. 1987

7 So a position paper of the federal Government in 1987: Harmonisierung der verkehrsspezifischen Steuern und Abgaben in der EG,June 1987; "In diesem Jahr sind erste Lösungsvorschläge zu erwarten"; HB 10.1. 1987

This communication was to be an initial outline of the Commission's future strategy. The long-term option that they proposed was a weight and distance dependent road charge, which should be taxed according to the "territoriality principle". The "territoriality" principle of taxation states that a tax should be levied in those countries where the vehicle is driving. This principle allows national differentiation without any distortions to competition. The territoriality principle is opposed to the then prevailing "nationality" principle, which says that taxes are levied in the country of origin of the vehicle. The vehicle tax is a typical tax based on this principle. High differences in the level of such taxes will negatively affect the competitive position of hauliers from high-tax countries. The Commission proposed the use of "telematics" to introduce road user charges without maintaining border controls.

On the basis of this communication, the Commission presented its first proposal on infrastructure cost allocation to heavy vehicles in 1988 ((Kom 87) 716 from 15.1. 1988). In this proposal, the Commission formulated a number of principles, but it did not make a specific tax proposal. Some of those principles were:

- the gradual harmonization of taxation structures (not of the taxation levels);
- the full coverage of infrastructure costs;
- the coverage of external costs, including air pollution and noise (Article 4);
- procedural requirements to avoid distortions of competition;
- the introduction of the territoriality principle.

In the 1988 proposal, the Commission was obliged to specify the principles by July 1989. The concept of the Commission was a tiered approach. It planned to start with the harmonization of tax structures, and then during a second phase, it would introduce the territoriality principle.[8]

The introduction of the concept of "external costs" certainly was an innovation at this time. However, during the negotiations it was used as a strategic argument for a high level of taxation, which was applied to find German support during the negotiations. There was no concept on the level of "external costs" at this time that really could be applied. During the negotiations, there was no serious discussion at the level of the tax and the right instrument to internalize those external costs. The Dutch and Danish delegations argued that a higher diesel tax would be the best instrument. In contrast, the German delegation emphasized that a diesel tax would not be a secure source of income, since one could fill up their tank abroad (Interview 17).

[8] Steuerangleichung nach dem Territorialitätsprinzip" in: DVZ Nr. 153 from 24.12. 1987

The Commission's proposal did not find much support among member states. One of the reasons for this was it lacked technical specification and theoretical foundation of the new principles (Schmitt 1993: 308). The territoriality principle was not accepted by the BENELUX countries, nor by Denmark, who feared higher costs for their international hauliers. Similarly, the U.K. was opposed to the new approach.[9] Furthermore, a number of countries perceived technical difficulties with applying the territoriality principle without reintroducing border controls. Technical means, such as the use of telematics, would be available in principle, yet too expensive to be introduced (Erdmenger 1989: 178).

The negotiations even became more difficult when Germany announced plans to introduce a tax disc for the use of its motorways at the national level. This would be compatible with the territoriality principle, but it would result in higher costs of foreign hauliers. Furthermore, Germany's plans were combined with the intention to reduce vehicle taxes for its national hauliers (Erdmenger 1989: 179).

Since no progress could be made until the Transport Ministers Council's meeting in 1990, the German Parliament and the Federal Government decided to introduce a national tax disc, while simultaneously reducing vehicle taxation for its national hauliers. This decision would later contradict with the standstill Article 76 of the EC treaty, as the Commission had communicated to the German government already in June 1989. Nevertheless, on the basis of a legal analysis (Selmer u.a. 1989), the German government was convinced that its initiative would be compatible with EC law.

The background of the "German Alleingang" will be illustrated below.

3.3 The Debate over the German motorway user fee

Preparations for a German motorway user fee started as early as 1988. Insufficient cost coverage by foreign hauliers and competitive problems of national hauliers were two major reasons for this initiative.[10]

9 "UK fights Euro lorry tax" The Guardian 10.3. 1988

10 "Warnke will Wegekosten auf LKW voll abwälzen"; HB 22.2. 1988. "Warnke: Mit der Straßengebühr für Lkw wird ein Steuerausgleich erreicht" ; HB 20.10. 1988

However, the initiative was not without internal political controversy within the government. The liberal coalition partner perceived contradictions with this initiative to the internal market project.[11]

The planned national measures were used as a tool to exert international pressure. The strategic objective of German Transport Ministry was to exert pressure on the other countries to make concessions on the territoriality principle. It was clear to the government that a national measure would only have a transitionary characteristics until an acceptable agreement at the European level could be found.[12]

In October 1989, the Cabinet of the German Government decided to introduce a weight-dependent annual tax for national and foreign motorway user of 1000 to 9000 DM and to compensate this by vehicle tax reductions for national hauliers.[13]

This decision caused strong international protest. A number of countries announced retorsions, and consequently, the German government became rather isolated in the Council. Nevertheless, the use of this strong instrument in international policies also contributed to a first compromise proposal from the Dutch government. It proposed a harmonization of vehicle taxes at an average level, and later it also suggested an increase of diesel taxation, instead of the national vignette.[14] However, it did not accept the German tax. In 1990, the Dutch government started a number of diplomatic activities to avoid the introduction of the tax - however, it was without success.[15]

The new tax was introduced in April 1990, but it had to be withdrawn in July 1990. The European Court of Justice ordered to withdraw the new tax until it had made a decision on this issue. According to the Court, the German tax would violate the standstill requirement of Art. 76 (Hesselhaus 1992: 311f). This standstill requirement prohibits any national measure that changes the competitive position of foreign hauliers. The intention of this standstill requirement is to create incentives to promote integration by the need for making compromises. The German government tried to improve the competitive position of national hauliers by reducing their taxes. Therefore, the European Court doubted the credibility of environmental

11 Widerstand gegen Warnkes Politik wächst"; HB 23.3. 1989

12 "Warnke: Schwerlastabgabe nur eine Übergangslösung" HB 4.5. 1988

13 "Zimmermann will auch Druck auf die EG ausüben " HB 25.10. 1989

14 Widerstand gegen Warnkes Politik wächst"; HB 23.3. 1989; "Hollands Spediteure leiden unter der Straßengebühr"; SZ 6.11. 1989

15 "Straßenbenutzungsgebühr aus Umweltgründen"; FAZ 18.3. 1989; "Bonns Straßenbenutzungsgebühr hat den Charakter einer Schicksalsfrage erhalten"; HB 5.6. 1990; "Man meint Bonn und schlägt Mercedes" HB 24.4. 1990; “Der Druck der Straße darf nicht von den Brüsseler Versäumnissen ablenken” HB 3.5. 1990

arguments of the German government. According to the Court, the German measures were not effectively protecting the environment, but rather its national hauliers. The remarkable argument of the Court was that environmental protection in principle would have justified national measures (Hesselhaus 1992: 313). If a national tax follows the purpose of promoting cleaner transport modes, then it is justified.

The German government certainly had not been well-consulted when they expressed their belief that their measure would be non-discriminatory and compatible with the treaty. However, by its national measure the government proved its determination to continue to apply national measures, if other countries would not respect Germany's vital fiscal interests and the competitive problems of its national hauliers. This should be a credible threat to its antagonists.

3.4 The Commission's 1991 Proposal

In its proposal from 1991 (Com(90)540 endg. from 8.2.1991), the Commission chose a more differentiated approach. The proposal was prepared in cooperation with a high-level expert group from the national ministries of transport and finance, which was established in 1990 upon an initiative of the European Council (Erdmenger 1991b: 186). This expert group exerted some pressure on its transport and finance ministers to find an agreement before the symbolic date of 1992.

The 1991 proposal took into account the three taxation systems existing in the Community: (1) road tolls on motorways (2) taxes on mineral oils; and (3) annual circulation taxes. It proposed a pragmatic approach on the basis of the existing taxation structures. Furthermore, the proposal developed a system of rebates to avoid double taxation. The Commission proposed a two-phased approximation towards full infrastructure cost coverage. During the first phase, the 1991 proposal admitted that the proposed taxation level will be lower than infrastructure costs caused by road freight transport. The Commission wanted to "avoid a tax increase which is too strong and too immediate" (Com(90) 540 endg. from 8.2.1991). The infrastructure cost share paid by road freight transport therefore, would be considerably lower than the share calculated by independent experts.[16] For the second phase, the Commission wanted full cost coverage. Again, the environmental dimension was included in the proposal, indicating that the internalization

[16] Com (90) 540 end. From 8.2.1991

of external costs should take place during the second phase (EG-Kommission 1991s: 15). Full cost coverage should take place on the basis of data provided by member states (ibid: 21).

The proposal specifically identified two types of taxes -- diesel and vehicle taxation. The Commission referred to its 1989 proposal concerning diesel taxation (see below). As to the taxation of heavy vehicles, the Commission proposed a gradual increase from an average level between countries. Minimum taxation for a 40t vehicle with 2x3 axles should be gradually increased from 1,652 ECU in 1992 to 2,754 ECU in 1994. Furthermore, the proposal defined the level of taxation on heavy vehicles, thus, providing for the possibility to deduct fees paid on motorways from this tax (Art. 11, p. 25).

In fact, the proposal was a partial step back towards the original nationality principle.[17] Therefore, it could not find much support. To Germany, the proposal would mean an unacceptable decrease of its vehicle taxation without appropriate compensation. For a number of other countries, it would imply an increase in their vehicle taxation. Some countries, especially Italy, perceived enforcement problems of a vehicle tax; instead, it preferred a high diesel tax.[18]

In March 1992, the Commission announced a revised proposal. Meanwhile, the ECOFIN-Council had found a compromise on the other element of the taxation package: diesel taxation.

3.5 Diesel taxation 1987-1991

Compared to the transport ministers' negotiations, negotiations on vehicle taxation and negotiations by the finance ministers on diesel proceeded more smoothly.

In 1987 the Commission made a proposal for diesel taxation that was based on the principle of "total harmonization" which was calculated on the average level at this time. This proposal was rejected by member states because it was too rigid and it did not respect the different levels of and the dynamics of diesel taxation (Constans 1989: 8).

In 1989 the Commission proposed a more flexible approach and slightly higher minimum tax levels. Like the previous proposal, the proposed tax level was the

17 Hopf u.a. 1994; Hey u.a. 1992, 34; Oftendahl 1993; Aberle 1989b; Riedel 1989

18 "Toll proposal imminent", Transport Europe, Aug./Sept. 1992

average tax level at this time. The Commission defined a span of minimum values and target values in its 1989 proposal (Dechamps 1989: 6).

The final compromise that was found by the ECOFIN-Council in 1991, was a “minimum harmonization” of 245 ECU/1000 l, which was slightly less than the average level at this time (Erdmenger 1992: 197).

Environmental considerations played a certain role for the choice of the harmonization approach and the level of taxes. A group of economists argued for environmental considerations based on the “Task Force on the Environment and the Internal Market”, which strongly supported minimum harmonization instead of total harmonization in 1989. But the diesel tax compromise has no relationship to the level of external costs. It is a compromise on a low common denominator.

Over the period from 1987 to 1991, national tax increases were much more dynamic than the proposed tax levels. Due to a decline in world oil market prices, finance ministers could increase tax levels without increasing the price for diesel. This unique opportunity was grasped even without EU harmonization. The EU added value of this level, therefore, was rather limited.

There is some evidence DG XXI had an even more ambitious approach in the pipeline, but it never came out as an official proposal.

The diesel tax was formally adopted only a year later because it was part of a wider package of eight different excise duties. This package included the controversial issue of Value Added Tax (VAT) (the negotiations on VAT are analyzed in Mette 1992 and Mette 1994).

3.6 The 1992 proposal for vehicle taxation

In 1992, the Commission made its third proposal on infrastructure cost allocation (Kom (92) 405 endg. from 30.9. 1992). This proposal enlarged the number of taxes taken into account:

- it made new proposals for the taxation on heavy vehicles in comparison to the 1990 proposal. For instance, the minimum tax level was considerably reduced from 2,754 ECU (in the reference case for 1994) to 700 ECU for 1995.
- it defined the conditions for the introduction of time dependent user charges for highways, especially emphasizing their non-discriminatory characteristics

and qualitative conditions-the so-called “Eurovignette”: they should contribute to infrastructure costs and they should not require border controls.

This proposal already contained some of the most essential elements of the final compromise. The reduction of the minimum levels for vehicle taxes was a concession to the countries with low taxes. The other element was a concession to Germany’s interest to apply the territoriality principle.[19]

After its defeat at the European Court of Justice, Germany started to formulate a new initiative for a national motorway tax sticker, now in compliance with European law.[20] Furthermore, the German Transport Minister emphasized that the issue of taxation would be linked to the liberalization of cabotage. Cabotage was one of the last elements for a fully deregulated road European transport market to be realized before Jan. 1, 1993.[21] Germany’s threat to go ahead with a national solution and its issue linkage with cabotage were perceived to be credible by the Commission and some member states.[22]

The concession of the Commission to adhere to Germany’s interests was necessary to come to a solution. It did not set a ceiling for a motorway disc. Germany’s original 1990 measure was accepted, in principle, because it was similar to the French and Italian motorway tolls.[23]

The proposal was not acceptable to the Netherlands, because this would mean a complete defeat for the Dutch position. Denmark, which was about to take over the Presidency in the Council, was more interested in solving the conflict. Their main interest was to avoid a national solution of Germany that would damage the interests of its export industries. Instead, they suggested that Germany should be controlled in the framework of a European solution, even if this would imply some concessions to the German demands. To find a compromise, especially between the German and the Dutch counterparts, the Danish delegate developed a strong diplomatic activity.

Denmark’s proposal, which was presented shortly before the Council’s Session in December 1992, envisioned a “Eurovignette” for all European countries. The Netherlands could not be convinced of this proposal. Instead, it proposed an opt-out strategy for Germany. On the other side, Germany successfully found tactical

19 "Brüssel will vor der Einführung von Vignetten Lkw-Steuern harmonisieren" HB 1.10.1992

20 "New German Proposal", Transport Europe, July 1992

21 Krause setzt auf Karel Van Miert, DVZ from 16.6. 1992

22 "EC close to road tax plan for lorries", Financial Times, 1.10. 1992

23 "Proposal for Motorway Financing", European Report, Oct. 2, 1992

allies on the cabotage questions, so that the issue linkage between cabotage and taxation could be made credible. A breakthrough in the negotiations took place after the Netherlands made first signs that a tax disc in a strict European framework might be acceptable.[24]

During the Council meeting in March 1993, member states could not reach an agreement. The Netherlands and Belgium both feared that their hauliers would have to pay too many taxes abroad. Instead, they proposed an increase in diesel taxation. The Danish compromise proposal was still received with scepticism. The debate only came closer to a compromise after Germany signalled its willingness to accept a low level for the motorway toll (compared to its own proposals) and an upper limit.[25]

Germany's compromise initiative can only be understood on the background of a policy shift within Germany. Transport taxation had to be increased to finance the rather expensive railway reform and the ambitious infrastructure programme to link the former Eastern Germany to the western part of the country. In 1992, a tax disc for private cars on German highways was discussed, but finally refused. A cabinet decision from February 1993 met so considerable opposition from all kinds of stakeholders and politicians, that the idea of a motorway toll for passenger and freight transport was skipped soon (Röder 1996c). Instead, the government politicians reevaluated the option of a mineral oil and diesel tax increase.[26] There must have been an internal policy shift although the German government officially decided on mineral oil tax increases only in June-a few days after the final compromise on taxation could be found in the Council. The policy shift was legitimized with the need to adapt to the EU-taxation compromise (Röder 1996c). Yet it must have come earlier, because it was the essential precondition to find the EU compromise.

The internal German policy shift towards higher diesel taxes allowed concessions in the EC negotiations and a realignment with the Dutch position. The Netherlands had argued that an increase in diesel taxation would be a more acceptable ap-

[24] "Last chance for Road Cabotage?": European Report, Dec. 4, 1992: "Road Haulage Package out of Circulation until December 21," European Report, Dec. 8, 1992: "No single Market for Road Hauliers yet," Transport Europe, Dec. 1992: "Hauliers reluctant to put Ministers in the Dock," European Report, Feb. 12, 1993

[25] Danish Tax Disk Idea Leaves EC Partners Perplexed" European Report, March 5; "Hold-up on Road taxation", Transport Europe, March 1993

[26] "No Tax Sticker Before 1995, but Petrol Price Rise in the Offing", Transport Europe, March 1993; "Das Ziel einer marktwirtschaftlichen Entlastung des Straßenverkehrs wird verfehlt"; Handelsblatt 19.11. 1992

plication of the territoriality principle to them than an introduction of a motorway tax disc. This argument was refuted by Germany-until March 1993.

In March 1993 Germany signalled acceptance of a low motorway tax and a low vehicle tax (while at the same time planning to increase the diesel taxation instead). The fall of vecicle tax income was equivalent to the increase of diesel tax income from road freight transport (Röder 1996c).

This German concession opened the way to the final compromise, which was found after two Transport Minister Council sessions on June 19, 1993.

3.7 The 1993 compromise

The final package from 1993 contained elements which respected the interests of nearly every country in the EC (see: Directive 93/89, in: OJ L 279/32 from 12.11. 1993; Minutes of the 1668th Council Meeting from June 19, 1993 and the evaluation in chapter 3.3.2):

- Countries with a low level of vehicle taxation (F, GR, S, I) received a transitional period until the end of 1997, when they only had to charge half of the minimum vehicle tax.
- The minimum vehicle tax was set at a low level (as proposed by the Commission in 1992) so that it was acceptable for most countries.
- The opportunity was given to Member States to introduce a user charge, often reffered to as Eurovignette, which would allow the use of motorways for a specific time period. Two or more Member States could introduce a common user charge system applicable on their combined territory. Actually five countries (BENELUX, Denmark, and Germany) decided to introduce this system. The maximum level was set at 1,250 ECU, which was much less than the 4,500 ECU that Germany originally suggested. This solution satisfied Dutch and Danish interests to contain the German tax, even if they had to compromise. Germany got a part, but not all, of the financial contribution from foreign hauliers that it requested.
- The low minimum levels for vehicle taxation gave the Netherlands and Denmark an opportunity to compensate their national hauliers for the introduction of the Eurovignette.

- There was an implicit German-Dutch agreement to increase diesel taxation instead. Both countries had increased their diesel taxation autonomously much beyond harmonized EC levels between 1989 and 1994. Germany therefore, could maintain its overall tax income; meanwhile Dutch hauliers were not negatively affected because higher diesel taxes did not increase diesel prices (due to the decline of world oil market prices).
- The directive requires the Commission to present a report by the end of 1997 and-if necessary-new proposals to improve infrastructure cost coverage. By this revisal clause the directive got a dynamic character, which offered opportunities for tax increases in the future.
- The Council decided to develop a harmonized approach for road pricing systems, which would allow for the full application of the territoriality principle without the need of border controls.

External costs were no longer mentioned in the final decision, however, an implicit option remained open in the framework of the review process and the development of road pricing systems.

Thus, at the end of the Council meeting, each participant could be satisfied. A solution was found that reduced distortions to competition by different levels of taxation. As could be shown in Table ? the gap between the highest the lowest tax levels was slightly closed. The way towards the completion of the internal market for the transport sector was opened. This was the primary concern.

The compromise required tax increases for member countries who had a fundamental interest in low transport costs, but within certain limits. As will be shown later, higher tax levels are not equal to transport cost increases. Real and nominal fuel prices could be kept stable despite of a considerable increase of diesel taxation in most countries.

It also satisfied the fiscal needs of reunified Germany-it slightly improved the competitive position of national hauliers without reducing government income. In this sense Germany was the relative winner of the compromise-even if it could not fully achieve its goals.

This result seems to be paradox and not in line with the theoretical arguments presented above. The compromise contained an element of “redistribution” and nevertheless it satisfied every participant, so that all could agree. There are four points which might explain this “paradox”:

1. Preferences of former antagonists of Germany had changed due to environmental and fiscal reasons, so that higher taxation levels for their national hauliers, were more acceptable, than at the beginning of the negotiations.

2. The three elements of the compromise package offered sufficient flexibility for every country to adapt its tax structure to the national preferences. This explains why overall harmonization took place at a low common denominator, whereas actual tax levels where above the harmonized levels. Furthermore this proves, that differences of tax levels within certain margins may be acceptable to national transport industries.

3. The core of the conflict was a zero-sum game on the distribution of taxes. The solution of this distributional conflict had an external helper: OPEC. What seemed to be a plus-sum game within Europe was actually a redistribution of oil-rents between oil exporting and oil importing countries. Finance ministries could increase taxation on oil products without imposing additional costs to the transport sector. This was the world market-based reason for of the informal Dutch-German realignment that guaranteed cheap transport for the Dutch and high government revenue from transport for the Germans.

   The following figure shows the development of taxation and diesel prices in Germany and the Netherlands. Despite continuous diesel tax increases between 1988-1994 in both countries, the nominal diesel price was lower than or equal to the price in the first half of the 1980s. The real diesel price declined considerably (T&E 1994b).

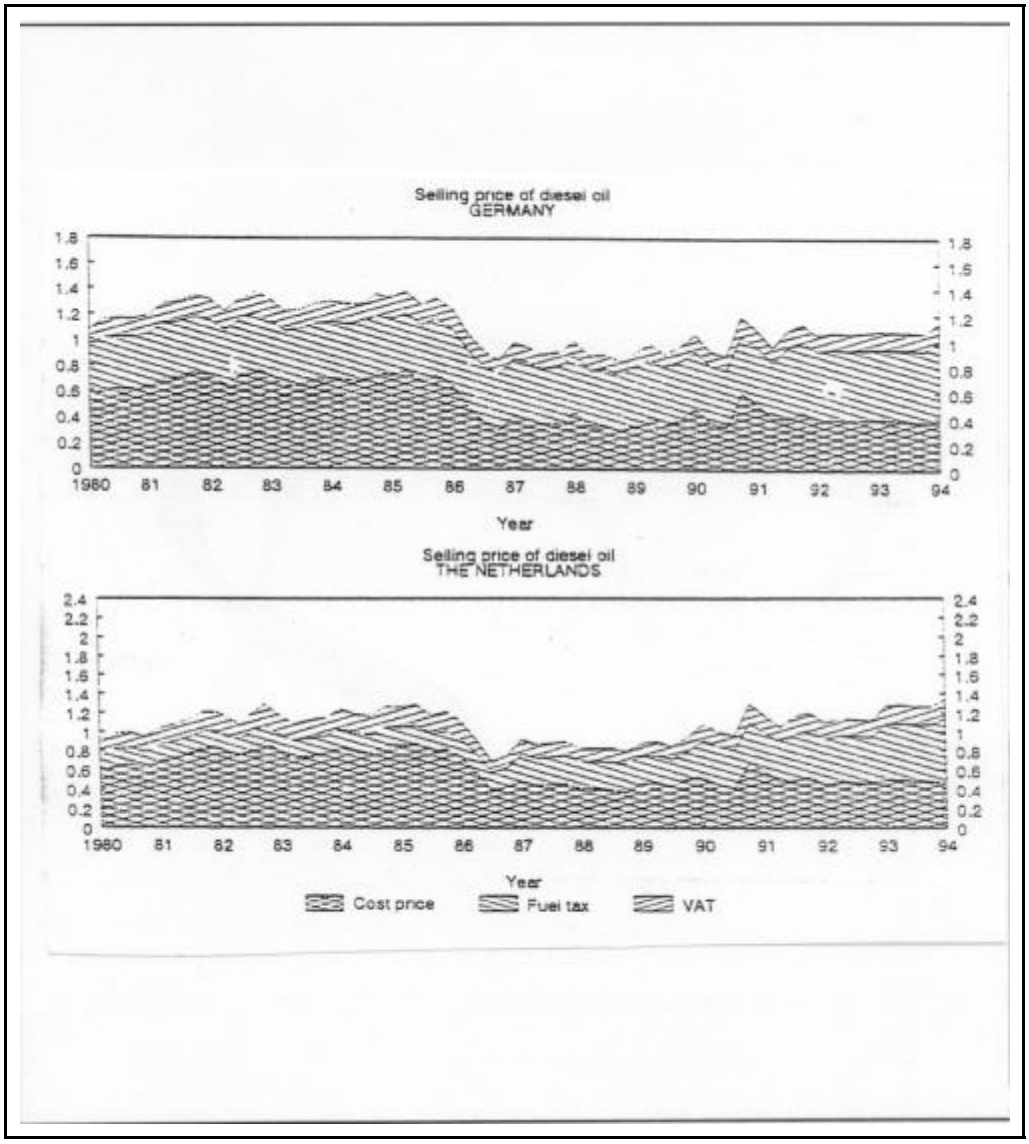

Abbildung 2 Nominal Diesel Prices in Germany and the Netherlands 1980-1994 in national currency (T&E 1994b)

In this sense, higher diesel prices are not an indicator for the incorporation of the environmental dimension. They are result of a fiscal rationality, which has a positive environmental side-effect: that transport costs would not decline more than they would without tax increases.

4. The issue-linkages to other policies and the strong pressures to find an agreement should not be underestimated: a solution of the tax issue was a precondition for the liberalization of freight transport in the EU. This was an

accepted policy objective by all partners. Therefore the pressure, to make compromises was strong.

Denmark, which formally was a strong allied of the Netherlands, changed its role from an antagonist to an intermediator between the two counterparts. It invested considerable diplomatic resources to find a compromise. Having the presidency of the EU during the first half of 1993, any diplomatic success would create political benefits at home.

Finally the agressive foreign policy approach of Germany, was not without impact. On the one side, its threat with a “national solution” was credible. On the other side its issue linkage with cabotage furthermore strengthened its negotiation power. A compromise with the Eurovignette therefore was the “smaller evil” to the antagonists, than the threatened “exit option”.

But in the long-run the agressive position also weakened Germany: It had to suffer a defeat at the European Court of Justice and it had overused its vetopower game (see: Héritier 1995). In the long run this would have threatened its role as a leader for European integration. Yet-although it had to make considerable concessions-the balance sheet for Germany was positive at the end.

In total the strong informal pressures to find a consensus for the sake of the internal market where sufficiently strong for member states to make certain concessions, which were-as was argued above-within strict limits.

In this sense, the compromise was a complicated package-deal which safeguarded the fundamental interests of every participant. It has some characteristics of a “pareto-optimal solution”. In this sense, the result is in line with game-theoretical assumptions on the impact of unanimity voting rules.

However, a closer analysis shows that the solution had a victim. “External Costs” had been used as a tactical element in the negotiation process several times, but they were never taken as a serious issue by decision-makers. Clearly, the issue did not belong to the core interests of the closed decision-makers network who were involved in the negotiations. Both the European Parliament and the Economic and Social Committee supported the concept, but they were not players in the difficult negotiations. Therefore, the “environmental dimension” was excluded from the decision-making process. This is fully in line with the expectations from the analysis of the opportunity structure for incorporation (Hey 1996): Selective policy networks also produce selective policies. Even if there are strong informal and formal pressures to find an agreement (see. Héritier 1995:18; Pellegrom 1995: 7; Peters 1992: 84; Wessel 1991: 146f), such-in principle positive institutional cha-

racteristics of the EU - may not be positive for the environment. This is the case, if environmental interests are exluded from the decision-making process.

It is especially interesting how the solution networks, working on cost internalization, dealt with this generally negative opportunity structure. But moreover they had to “digest” the failure of an other experiment to promote environmental taxes in the EU: the energy/CO_2-tax proposal.

The compromise of the Council created a political and judicial aftermath. It did not consult the EP on its second reading. Therefore, the EP raised a complaint and accused the Council because the EP was not consulted.[27] In 1995, the European Court of Justice confirmed the EP´s accusations and decided that the directive had to be renegotiated. This opened the door to future negotiations.

[27] "European Parliament Could Continue to Block Road Tax Plan", Transport Europe Aug./Sept. 1993

4 The Energy/CO_2-Tax Proposal

The model of temporal sorting assumes that important events may serve as catalysts to bring problems, solutions, and decision-makers together. On the other side, other events may prevent them from doing so. In the case of environmental taxation in the EU, one can observe such an "event". Negotiations for the energy/CO_2-tax were a pilot project for the whole idea on resource-oriented taxation in the EU. During the negotiation process, proposals for a compromise were made that restricted the field of application to existing mineral oil taxation. Thus, the energy/CO_2-tax gradually became a tax for diesel and mineral oils - affecting, above all, transport and private households. Two years of negotiations on this tax ended in 1994, with what some call a failure. Others argue that it is a mandate to the Commission to elaborate a frame for national taxation schemes.

Most protagonists of environmental taxation within the Commission learned from this experience that they had to choose a more cautious approach. The defensive political climate for environmental policies and the counter-offensive of the strong economic interest groups contributed to the decision of the Commission to postpone proposals and communications for the internalization of a transport-related tax. The case for an environmental taxation reform remains on the agenda, but it is redelegated to the solution and estimation networks.

4.1 A short history of the Energy/CO_2-tax proposal

This is not the place to develop an extensive policy-analysis of the energy/CO_2-tax in the EU. This has been done already in several other analyses (Héritier u.a. 1994; Jachtenfuchs 1994; Huber 1995; Wynne 1993; Hey 1992). It will only be reviewed in those aspects that are relevant to this case study.

As the above mentioned analysts showed, the proposal of the Commission can only be understood at the background of the UNCED conference in Rio in 1992. The Commission had a strong interest in a global Community leadership in climate protection policies. To underline the credibility of its position, it had to present a

strong policy initiative. In this sense, it was a highly prestigious project, which should prove the credibility of the commitment of the EC to stabilize CO_2-emissions by the year 2000.

As shown previously, there was an overall positive public climate on policies that promoted sustainable development and the introduction of fiscal measures in the years before 1992.

The protagonists of the tax inside the Commission, therefore, perceived a unique "policy window", where such a far-reaching and ambitious reform proposal might have a chance.

The proposal for an energy/CO_2-tax has been developed within the Commission services since 1989. It was the first proposal on an environmental tax in the EU. It was the result of a selection process between a number of options to apply fiscal instruments for the protection of the environment. This pilot project was well-prepared within the Commission services. Despite their different original preferences, a success-oriented proposal was developed that could find support within the Commission.

The proposal was very well prepared. About 24 studies have been commissioned on appropriate CO_2 reduction strategies, the effectiveness of different types of taxes, the socio-economic impacts, etc. Such studies, have been partially done at the request of the Council, who supported the Commission's initiatives in principle, but were reluctant to be more specific (Interview 15). Actually, only four countries, Germany, the Netherlands, Belgium, and Denmark, actively supported the initiative, whereas other member states were more indifferent or even opposed the proposal.

To find support by member states, the proposal made a number of concessions, such as exceptions for large-scale industries, the gradual increase of the tax and finally the OECD clause which linked the measure to equivalent policies in other OECD countries (Hey 1994c).

Technically, it was a mixed tax on final energy consumption and on the CO_2-content of fossil energy sources. In this respect, it had a slight impact on fuel prices. According to the calculations of the Commission, the proposal would lead to an increase of fuel prices by 7.7% at the end of the introduction period in 2000 (Koopman u.a. 1992: 91).

Negotiations on the Commission's proposal proved to be extremely difficult. Some countries used their veto power to block any progress. During the negotiation process, a number of proposals were made to find a solution on this conflict. The expected "policy window" for this tax was closed sooner than expected. Sharpe-

ned economic crisis in the EU, increasing unemployment, and serious social problems made it difficult to find public support for the Maastricht Treaty, and contributed to the reversal of a favourable political cycle.

One of the last proposals for a compromise, which had the highest chance for success, was prepared by the German presidency in 1994. In July 1994, the ECOFIN Council discussed this tax proposal, which they thought should only be a supplement to existing excise duties. This was also a part of a proposal made by the German presidency to the Environmental Council in October 1994.[28] If accepted, this proposal would restrict the fields of application. The tax would have become a tax on mineral oil products, and been targeted to private households, the transport sector, and some industries.

This proposal was not accepted during the Essen Summit in December 1994. The Commission was asked to prepare a new proposal, which should not introduce a European tax, but only define a framework in which member states may introduce a tax if they wished to do so. The Commission presented such a proposal in May 1995.

4.2 Lessons from the Energy/CO_2-tax Proposal

The proposal for an energy/CO_2-tax was a failure in the sense that a European ecological tax was not acceptable to member states, even if it was weakened by a number of concessions to private and national interests. Due to the unanimity voting requirement, the reform proposal could easily be blocked.

Beyond this, the tax proposal was the failure of a pilot project for a European approach towards an ecological tax-reform. As many recent documents show, the issue is still on the agenda. But one of the fundamental lessons that the protagonists of environmental taxes within the Commission had to learn was that their approach was too ambitious.

They learned that they should have chosen a more gradual, cautious, and incrementalist approach, which takes the subsidiarity principle more into account and relies less on harmonization. They had to learn the lesson, that taxation is still a core domain of national competence (see: Wynne 1993; Mette 1994) and that their integrationist hopes were too optimist (Liefferink 1995).

[28] "Gemeinschaftsstrategie zur Verminderung der CO_2-Emissionen und zur Verbesserung der Energieeffizienz, internal paper from 26.8.1994

Although environmental taxation might be the best choice for economists, their institutional chances are limited due to the unanimity requirement and the weak powers of the European Parliament.

5 The Solution Network

As could be shown above the general conditions for cost-internalization strategies were unfavourable until 1993: the attention of the decision-makers was attracted by the need to complete the internal market of transport markets and no government has seriously brought the argument on the agenda, that this should be essentially linked to full cost internalization including environmental costs.

Furthermore the opportunity structure for the internalization of the environmental costs was - and continues to be unfavourable.

Nevertheless one can observe a continuity from the early problem-oriented networks to the development of internalization strategies. As seen from the previous chapter, many of the environmental problems were reinterpreted as a consequence of inaccurate price signals. Environmental taxes in the transport sector became attractive to those expert groups because they offered a liberal solution which were compatible with the regulatory project of the internal market.

But - as can be shown - the solution is older than the problem - and it requires a short historical review to explain, why the solution - the use of economic instruments - found stronger support by politicians only end of the eighties. Before it was rather a topic for academics.

The activities of the Commission itself can be separated into two phases:

- the phase of symbolic policies and commitments from 1989-1994
- the preparatory phase for technically elaborated proposals 1994-1996

During the early phase some persons from DG II and DG XI were especially active to keep the issue alive, whereas DG VII played a more cautious role. Furthermore an international network of economists emerged since the end of the eighties, who actively discussed methodological issues of environmental taxes in the transport sector. This discussion took place in a number of publications and by working groups both at the ECMT and EU level.

Since 1993 the political and scientific controversy on evaluation methodologies and the right internalization strategy intensified - partly on the basis of a different studies financed by antagonist interest groups.

The Green Paper of the Commission from 1995 on “Fair and Efficient Pricing” can be understood as a political synthesis of this dispute.

5.1 The early debate on environmental taxes

Indeed, the concept of "external costs" and of "environmental taxes" is old. It has been discussed by economists for decades, but - beyond some exceptions - it only reached the political agenda in Europe during the second half of the eighties. This chapter tries to explain, why economists were only successful after nearly two decades of promoting their solution.

The concept of external costs stems from welfare economics as early as 1920 (Pigou 1952). PIGOU argued that a welfare optimum cannot be achieved unless the social product (including external effects) does not coincide with the private product. Negative externalities will lead to overproduction since costs are shifted to third parties. PIGOU suggested that a tax would correct such distortions. As early as 1947, W. KAPP edited his empirical studies on the social costs of the market economy (Kapp u.a. 1987; Kapp 1988).

Since the early 1970s, two lines of economic thinking emerged - neoliberal environmental economics and a school of thought known as “ecological economics” (see: Beckenbach 1991; Gawel 1994: 50).

Neoliberal environmental economics (i.e., Baumol/Oates 1979; Siebert 1978) already proposed the application of environmental charges or taxes as a market-oriented and cost-efficient solution to emerging environmental problems since the early seventies. When contemporary environmental legislation was introduced in the early seventies, the first choice of administrators, however, was not to apply such instruments. Rather, they wanted to direct regulatory control instruments - despite economists’ criticism that such instruments would be inefficient and create disincentives to technological innovation. This choice may be explained by the “bounded rationality” (Simon 1972) of policy makers, preferring established regulatory practice to innovative approaches. But some economists (Ewringmann 1992: 84f; Gawel 1994: 42; Gawel 1995; Oates 1996; started the search for explanations even within the own discipline. Their argument may be brought to the point, that the failure of environmental economics to shape the choice of instruments may be a consequence of their own neoliberal fundamentalism. Environmental economists had a unrealistically high level of theoretical ambitions: the market-based

correction of the price-system was perceived as an alternative to regulatory approaches.

Traditional environmental economists constructed their models on the emission of certain pollutants. They tried to find the "optimal level of pollution" where the marginal cost of emissions control is equal to the marginal external cost of pollution.[29] The external costs should be estimated on the basis of the “willingness to pay” of individuals for a cleaner environment. By this approach, politics will be substituted by “shadow pricing”. The norm-setting power of politics was doubted. This “dogma of substitution” prevented economists to make operational proposals (Gawel 1994: 42). Furthermore, they were caught in a dogmatic discussion on the optimal market-oriented instrument. Environmental charges and tradable emission permits were alternatives of the discussion. The dogmatic dispute was, if prices or quantitative restrictions defined by the government, would be a stronger distortion of the market mechanism. Furthermore their attempts to define the “optimal level of pollution” and the level of externalities by methods based upon “willingness to pay-methods” created more theoretical and practical problems than expected (see below). Finally, environmental economics during the 1970s did not sufficiently reflect the characteristics of the political administrative system.

The dogmatic positions of economists have “softened up” (Kingdon 1984) since the early eighties (Gawel 1994: 42; Ewringmann 1992: 87). Environmental economists became more pragmatic, leaving the search for pure theoretical consistency of their approaches. Instead of looking for the optimal instrument, a mixture of market-oriented and traditional command-and-control instruments was accepted. The "standard price approach” or “avoidance cost approach” (Baumol/Oates 1979) to calculate the level of external effects was more widely acknowledged. This implied that economists accepted the norm-setting competence of politics. Their objective was less a substitution of politics by economics, but rather the support to find cost-effective solutions for politically-set targets. Later the emergence of target-led environmental policies (first in the framework of the Dutch environmental plans, than in in the framework of the negotiations on the protection of the climate) contributed to the wider acceptance of the “standard price approach”.

On the basis of more pragmatic approaches, several experiences with the use of economic instruments could be gathered during the late seventies and eighties (an overview give: OECD 1989a; Kageson 1993b). Many of the first instruments, however, relied less on the effects of the price-mechanism, but rather served as revenue gathering instruments.

[29] Maier-Rigaud (1988) has developed a fundamental critique of this approach, arguing that the search for the “optimal level” of pollution based on methodolgocial individualism would lead to the “pareto-optimal ecological catastrophe, based on the accidental coincidence of production functions, technological opportunites and the average ignorance of the population.

So one can argue, that the stronger policy orientation of economists since the beginning of the eigthies contributed to a stronger attractiveness of their solutions.

Another economic school had less problems with political affiliation, but certainly their concepts also were too fundamental to find a wider political auditorium. On the basis of ideas derived from “ecological economics,” concepts for a environmental tax reform were developed during the 1970s (i.e., Binswanger u.a. 1978). The underlying philosophy was deeper than the traditional concepts based upon externalities. It was resource-oriented (based on the theoretical concepts of the entropy law (Georgescu-Roegen 1971), rather than emission-oriented as neoliberal environmental economics (see: Beckenbach 1991). The idea of an ecological tax reform was to create incentives for a new type of technological innovation that emphasized the improved efficiency of energy and resource use instead of the traditional labour-saving type of technical progress. An ecological tax reform would shift the tax burden from labour to energy and resources. During the 1970s and early-1980s, this idea found some support among scientists and environmentalists, but not among the general public and decison-makers. The concept was too far-reaching for the state and philosophy of environmental policies at this time.

End-of the eighties the idea got wider support, because concepts of “sustainable development” were more widely accepted and highlighted the need to move beyond end-of-pipe technologies (see: Hey 1996; Jachtenfuchs/Huber 1993; Jachtenfuchs 1996). It promised a double dividend - reducing labour cost and creating incentives for energy efficiency. The idea was effectively popularized by non-economists (i.e. von Weizsäcker 1989; UPI 1989) and received with scepticism by economists (see for instance: Ewringmann 1989; Gawel 1995). Nevertheless is was strongly supported by social-democrat and green parties and even found official acknowledgment by the Delors White Paper on Growth, Competivity and Employment (EG-Kommission 1993m).

Since the mid-1980s, another bottleneck to the application of economic instruments was close to being resolved. A number of studies calculated the level of "external costs" of air pollution for the first time (an overview is given by: Kageson 1993; Ecoplan 1992; Bärnighausen 1991; Quinet 1994; Bleijenberg 1994). The first monetary values of air pollution in Europe were published in 1985. Initial studies were made in Germany, the Netherlands, and Sweden.

Only a few years later, a number of specific proposals for comprehensive environmental tax reforms were published, which calculated the level of taxes on the basis

by estimating external effects.[30] Political parties and environmental organizations[31] also presented their concepts in a number of member states (especially Germany, the Netherlands, and Denmark). Such activities popularized the "idea" of environmental taxes from mere expert discussion. One precondition for this popularization was that figures for the level of "external effects" and the level of taxes could be presented, which made the idea easier to understand than abstract theoretical reflections.[32] The other was the promise of the “double dividend” for employment and the environment. Moreover, the abstract economists’ concept got a symbol (in the form of figures) which could be popularized.[33] The mere existence of authorized figures attracted policy makers, who became interested in specific policy proposals.

By the late-1980s, it could be said that the solution for environmental taxation had become “ripe” to be accepted as a viable policy option. But even more so -- it was attractive because it fit better into the neoliberal political wave, which contributed to the creation of the internal market (see: Sprenger 1991: 200; and much more explicitly: EG-Kommission 1994c). The delegitimation of government regulation also contributed to the attractiveness of its market oriented alternatives. Finally a new quality of environmental problems (for instance climate change; or the limits of a regulatory approach to control emissions from diffuse sources) contributed to the new attractiveness of market oriented instruments.

At this time, environmental taxation was ready to come on the agenda. It offered an answer to a number of problems. There was a certain demand for this type of solution.

30 i.e., UPI 1989; Springmann 1988: Müller-Witt 1988, von Weizsäcker 1989; Bleijenberg 1989

31 see: the EEB-seminar on the harmonization of VAT and excise duties in 1989; Nutzinger/Zahrnt 1990a and b; Nentjees/Vries 1990; a documentation of the tax proposals of different parties: in Jüttner 1990; Hans-Meyer/Schneider 1990; Bongaerts u.a. 1989; Endres 1991: 8; van Suntum 1989: 557f

32 This is perhaps no contradiction to GAWELs (1995: 42) argument, that such figures contribute to the transparency of the costs and hence mobilize more political resistance by the loosers of the tax, than regulation, which may be modified in the framework relatively confidential negotiations. The highly visible character of an ecotax may be both: an opportunity in the agenda-setting phases and a problem for the decision-making phase. It may mobilize supporters and looser -groups and hence become a highly political issue.

33 on the importance of "symbols" for environmental policies: Prittwitz u.a. 1992

5.2 The Reflections of the Commission 1989-1994

The use of environmental taxes for the transport sector was on the internal agenda of the Commission since 1989. Between 1989 and 1994 the protagonists of environmental taxes only were successful, to achieve general commitments of the Commission and the Council on the principle of cost internalization. But effective, technical work to prepare an initiative was kept at a low level. A few attempts to bring the issue on the agenda of the Council have been made, but with little support from the Council. So the first period can be characterized as a period of symbolic policies.

Even though a methodology did not exist which calculated “external costs” and developed appropriate internalization strategies, some Commission services, especially the promotors of environmental taxes within DG XI and DG II, have successfully established the principle of “internalization” into a number of official documents and declarations.

The first document that mentioned the need to take “external effects” into account was the Commission’s proposal on the allocation of infrastructure costs on heavy vehicles (Kom (87) 716 fin. In: OJ C 79/9 from 26.3. 1988). This principle was restated in the second proposal of the Commission in 1990 (Com (90) 540).[34]

The environmental dimension was also used as an argument in 1989, when the Commission and the Council changed their approach for diesel taxation from total harmonization to minimum harmonization. Even the idea of medium-term target rates, including external costs, was floated by DG XXI and DG XI (see: Delbeke 1991: 13; Constans 1989: 8; and Dechamps 1989: 6 in EEB 1989).

A Commitment on principles at the Council level was reached in the Dublin Declaration of the European Council in June 1990, and the Environmental Council in October 1990 (see Delbeke 1991). Further commitments by the Commission and the Council were formulated in the White Paper on the Common Transport Policy and the Fifth Environmental Action Programme in 1992.

The commitments of the Commission were restated in the Delors White Paper from 1993 and in a Communication in 1994.

[34] This was mentioned as part of the Commission’s strategy in a Commission Working Paper on Dec. 20, 1990: Policy Options in View of the Community´s CO_2 Emission Stabilization Target.

But those commitments were not based upon a sound concept of “external costs” or a clear “internalization strategy”. They were principle statements without an operational policy behind.

Since the beginning of the 1990s, DG II and DG XI promoted the discussion on the use of fiscal instruments. Staff from DG II started some theoretical reflections on the right choice of instruments for internalization and impact modelling for market oriented instruments (Koopman 1993; Koopman 1995a and b). DG XI commissioned the scenarios above described. Both were sucessful in establishing commitments in principle - but their work was met with cautious reservation from DG VII (Interviews 15 and 36).

DG VII ordered one study in 1983 on this issue, and another in 1990 (Prognos 1990). Together with DG XI, it co-financed a study of the European Federation Transport and Environment (Kageson 1993). Yet little resources were invested during the period from 1990 and 1994 to build-up an own knowledge base. This low level of activitiy is in sharp contrast to the high profile of commitments on environmental taxation during this period. It confirms, that at the beginning the issue basically was treated as a “symbolic policy” (in the first sense). Obviously it met considerable reservations within DG VII (see below, Interviews 9 and 36).

There are several factors that explain this low level of activities between 1990 and 1994 (as con-firmed by some interviews):

- The Commission did not want to overload the ongoing decision-making process on the allocation of infrastructure costs by including additional complicated activities.
- The ongoing decision-making process on vehicle taxation was so conflict intensive, that the Commission did not perceive chances for success for the elaboration of a strong concept on environmental taxes;
- The difficulties to find support for the energy/ CO_2 tax proposal from may 1992 contributed to the reluctance to initiate a second proposal for an economic environmental policy instrument.
- Therefore, there was little hope that an initiative for environmental taxes in the transport sector would find support in the Council.
- From the reactions on the Green Paper on Transport and the Environment, the Commission knew that environmental taxes would find considerable resistance from the road lobbyists.
- The first studies from 1983 and 1990 were rather cautious on the possibilities to calculate external costs exactly. While the first study was very pessi-

mistic, the second study reported on the progress that was made, but highlighted the need for further investigations and research.

- the personnel capacities and resources within DG VII were too limited to prepare a concept that would stand up against scientific interest groups and national criticism. This was a result of the political commitment of the Commissioner who set other priorities (such as the completion of the internal market or the promotion of the Trans-European Networks) ahead of environmental taxation.
- The resources of other DG's, such as DG II and DG XI, to elaborate a concept were also rather limited. A high-profiled action of those two DG's would have interfered with the competencies DG VII.

So in total the Commission services perceived little chances for a successful initiative until 1994. So the negative opportunity structure for environmental taxes was incorporated by the Commission services (especially DG VII) in a way that little else was done, than to look for support on the principle.

Nevertheless - partly as a response to the statements on the principles - an intensive methodological discussion within economists networks and interest groups (partially with participation from Commission services) has begun since 1993.

5.3 Interest Group Activities

Between 1991 and 1994 pluralistic network of interest groups has emerged on the topic of environmental taxes in the transport sector. Environmental organizations, railways, shipping organizations, and combined transport representatives lobbied in favour of environmental taxes. In contrast, industrial federations and road lobbyists were against environmental taxes. Producers of telematics played an intermediate role, which offered a technological solution that might imply road and congestion pricing.

Interest groups became especially active since 1993, which was the year after the Commission's White Paper formulated some commitments in favour of environmental taxation. Earlier this year, the Federation T&E presented its study on "Getting the prices right", which was one of the first attempts to provide harmonized and comparable data at the level of external costs for most European countries.

The studies programme calculated the non-internalized costs of passenger and freight transport in 11 European countries, according to a uniform methodology. The calculations of these comparative pioneer studies are based on the "avoidance cost-approach", which calculates the cost to achieve certain environmental targets. Furthermore, it calculates the net-cost of accidents and the cost of infrastructure. According to this study existing taxation is 25-50% of the taxation required for full cost coverage. The study proposes a gradual strategy to achieve full cost-coverage over a period of ten years. Its estimations are rather conservative. The effect of the proposed interalization strategy on overall freight transport costs is rather limited (15-21%) (Kageson 1993: 179). Nevertheless, the authors expect a reduction of CO_2-growth in 10 years of about nine percentage points compared to a relatively low-reference scenario.

The impact of the proposed internalization strategy on growth, employment, and equity is also rather limited, according to the author. The study's programme, as well, contains a theoretically-based study on the "external benefits of road transport". The report argues that "most examples often quoted are just normal market effects and do not require a tax or a subsidy or any intervention". According to economic theory, it is marginal cost and not marginal benefit that determines the correct price. "The benefits are just a normal consumer surplus, as occurs with every market transaction" (Walter 1993: 13). External benefits probably arise more from infrastructure systems than from a specific mode. The study's programme, which was partially financed by DG VII, became an important reference in public documents and had a strong impact on policy thinking in the Commission (see: OECD 1994; several internal documents). This study was well-received by Commission services and accepted as an official reference (Interview 7; different internal documents). Furthermore, it was a catalyst to start the more technical reflections on how to internalize external costs.

Other studies have been presented by the Community of European Railways (CER) in 1992 and 1994 (Hansson/Markham 1992; Infras/IWW 1994). The first study did not directly calculate the level of environmental taxes (which is the task of an ongoing study for the European railways), but it argues in favour for activities in this field. The railways strongly criticized the taxation compromise on vehicle taxation in 1993 (CER Press Release from July 1, 1993): "The agreed upper "Eurovignette" price limit is so low that for the next couple of years lorries will continue not to cover their full infrastructure costs and will not even start to cover their external costs". In 1995, a further study for the Union Internationale des Chemin de Fer (UIC) was published, calculating the level of external costs at even higher levels than the T&E report (IWW/INFRAS 1994).

The counter-offensive was launched in late-1993 by hauliers organizations and industry groups. They presented the study by ABERLE u.a. (1993) on the external benefits of road transport (see below).

Furthermore, stakeholders and industry federations published a number of press releases, which attacked those elements of the Commission White Paper that referred to the need to internalize the external costs. The lobbyists used the then ongoing economic stagnation to highlight the economic risk of any strategy that would increase their costs. There was unified resistance against the increase of costs among hauliers federations (ACEA, in: Forum Europe 1994: 4; ACEA 1993). ACEA argued that "cheap transport is one of the best means to take away social imbalances between regions of the EC" (ibid.). IRU argued that due to a decline of infrastructure investments in the 1980s, full cost coverage already was achieved (Turvey 1993: 6).

As can be shown by this short survey, interest groups tried to mobilize scientific evidence for their case. This applies to environmental groups as well as to the railways and the road hauliers lobby. The discussion between the different stakeholders uses and popularizes the scientific discussion. Environmentalists and railway organizations were optimistic both on methodology to define the minimum level of a tax and on their beneficial impact. Hauliers and industry federations emphasized that a tax would increase costs without having a substantial positive impact on the environment. So from the beginning, the discussion on cost-internalization was an academic one. As can be shown below in more detail, the scientific community disagrees upon a number of technical questions. So one can argue, that the scientific controversy was politized from the beginning. On the other side, the dominance of scientific work confirms the argument, that “technical expertise” is a critical resource to exert influence on the agenda-setting level of the EU (Wallace 1996:146; Peters 1992: 76; Arp 1995).

5.4 The Scientific Controversies

The interest group controversy could rely on a methodological controversy of economists, being active in different European networks. Some of the methodological questions, which were discussed will be shortly presented here - to understand better the choices of the Commission. The analysis tries to make the link between the scientific and the political dimension of the discussion. Basically five questions raised controversial answers:

- What type of “externality” shall be taken into account?
- Do “external benefits” of transport exist?
- What is the level of “external costs,” and what is the most accurate methodological mix to calculate them?
- What is the right “internalization” strategy?
- What is the socio-economic impact of the strategy?

This “methodological controversy” certainly had an impact on the dynamics of the discussion within the services of the Commission. Environmental economists could not form an “epistemic community” (Adler/Haas 1992; Haas 1990), which captured a common view to overcome a crisis. They could not successfully infiltrate the different political levels with their ideas and gradually convince politicians on the more technical details. This gave unwilling politicians, government officials, and the Commission services a welcome pretext to postpone measures, as long as a system cannot “enjoy widespread acknowledgement and consensus” (Kinnock, in an interview with T&E Bulletin, April 1995). The relevance of a consensus on methodology is, according to one interview partner, to legitimize ex post the tax-level rather than to determine it in advance (Interview 15).

Some elements of this discussion will be reviewed briefly and their political implications will be highlighted.

Types of Externalities and the Role of Congestion

It is a consensus among scientists that local and global pollution, such as air pollution, noise pollution, and impacts on climate change, should be taken into account as external effects. Furthermore, the non-covered costs of accidents are widely accepted. However, there are some reservations to consider congestion as an externality. Environmental groups (see especially: Kageson 1993) are reluctant to accept congestion as an externality. In contrast, other reports (Prognos 1990, Quinet 1994; Button 1994) tend to treat congestion as an externality. INFRAS/IWW (1994) argue, that although congestion creates externalities, the issue should be treated seperately from other categories.

This discussion has a scientific and a political dimension. Its scientific element is to define “external costs”. From the point of view of the marginal vehicle, entering into a road system already operating at full capacity, congestion may be seen as an externality. The marginal vehicle may cause considerable external costs to other road users, by reducing their average speed. Others (i.e. Kageson 1993; IWW/INFRAS 1995) contend that, congestion is an internal problem of the trans-

port sector. The external environmental effects of congestion (such as higher specific emissions) to other sectors than the transport sector are rather limited. The external costs of congestion are assumed to be a club commodity, which can be solved by arrangements within the transport sector. So in principle the revenue of road pricing on scarce road space should be used for the road sector - whereas environmental taxes may be also used outside the road sector (to compensate the victims or to finance mitigation strategies or to use them in the framework of an ecological tax reform).

Existing cost estimations for congestion are rather high (Quinet 1994: 53; EU-Kommission 1995n). The cost of congestion to reach 2% of GDP in Europe. If congestion is identified as the major externality, then the choice of instruments may focus on measures to improve traffic flows, to increase capacities, to reduce traffic peaks, etc.(INFRAS/IWW 1994: 27). Such instruments may induce more traffic congestion in the long-run, since bottlenecks are abolished and traffic flows eased (Perl/Han 199:119). Purely congestion-oriented measures, therefore, may have an negative environmental impact. Therefore, scientists closely connected to environmental organizations argue that it is important to separate the discussion on “congestion” systematically from the discussion on “environmental impacts” (Kageson 1993: 17f). For others, the treatment of “congestion” as an externality will provide additional arguments towards a “capacity-oriented strategy”, which may adapt infrastructure capacities to growing transport demand. This perspective seems to find consensus among mainstream economists (see: Button 1994; Quinet 1994).

External Costs and external benefits

Much more controversial is the concept of “external benefits” of road transport. This idea has been elaborated in a study for the International Road Union (IRU) in 1993 (Aberle 1993). This study argues that the “positive effect of road transport to society”, such as employment, the quality of road transport, its contribution to growth, taxes, and productivity will be higher. The authors developed a “costs-savings approach” to calculate the external benefits of road transport. They argue that any alternative would cost much more to provide the same level and quality of services than road transport. The social benefits of road transport result from its superiority in terms of flexibility, speed, friendliness to consumers, and its superior efficiency compared to other transport modes. Furthermore, road transport plays a major role for employment, economic growth, and regional development (Aberle 1993). The fundamental argument of the ABERLE study is that the achievement of similar qualities by other modes would result in considerable additional cost to society, compared to a business-as-usual scenario. A strategy to change the

existing modal split, therefore, would create considerable welfare losses -- even if one takes existing estimations on external costs into account.

The theoretical foundation of the argument was questioned in a number of reports (see: Walter u.a. 1993; Button 1994; Kageson 1993; Rothengatter 1993). Critics argue that external effects are only impacts that “do not work through the market mechanism” (Rothengatter 1993: 83). They argue, that most of the socalled external benefits are already included in normal market transactions. A “consumer surplus” is a normal element of the market mechanism. A consumer surplus is the difference between the “willingness to pay” and the actual market price. Even if road transport reduces transport costs or offers higher service qualities, such benefits are already included in the calculations (i.e., the willingness to pay) of consumers. Thus, there is no need to correct the market mechanism, whereas external costs are not yet internalized. Most socalled “external benefits” identified by ABERLE et. al. are such “pecuniar effects” already transmitted by the market mechanism.

There are only a few non-internalized impacts of transport, like the pleasure to observe vehicles passing by or the attractiveness of new transport infrastructure construction projects to tourists. Such benefits are not relevant from an economic perspective. Furthermore, many of the “external benefits” do not derive from traffic, but come from well-developed infrastructures. They are normally taken into account using multicriteria evaluation methods or in cost-benefit analysis. It is normally distinguished between the “pecuniary” benefits of transport (like reduced transport costs, better access), which are part of the normal market transactions: i.e., the consumer pays more for a better service; and “technological benefits” (i.e., the high esthetic value plans starting or landing) which are not part of market transactions, but which are normally negligible.

The discussion on external benefits, which has been especially promoted by the road lobbyists and the scientific community close to them, does not have the political objective to negate “negative external costs,” but rather to argue that they are offset by the “external benefits”. According to this argument, there is no need to introduce new fiscal measures to correct distortions of the price system.

The argument of the “external benefits” does not find support by mainstream economists and even less by economists close to environmental organizations (Walter 1992; Kageson 1993; Button 1994; Rothengatter 1993; Hopf u.a. 1994).

The Cost Coverage of Infrastructures

Another correlated discussion, which was elaborated by the same protagonists, is the present cost coverage of infrastructure costs. If taxes paid are higher than infrastructure costs, then the “external costs” are already paid. Several research intitutes (DIW) (Hopf 1994; also: INFRAS/IWW 1994; see also: FGU 1995) assume a low cost coverage, while other studies (Aberle et. al. 1993; and even on pragmatical reasons the T&E Study from Kageson 1993), assume a high cost coverage. Their results depend on the way infrastructure costs are calculated and what type of taxes are taken into account. A calculation on the basis of annual expenditures achieves relatively high cost coverages, whereas a calculation based upon the methodology of cost-benefit analysis (i.e., taking capital cost and long depreciation periods into account) reaches low cost coverage. Especially the inclusion of capital costs increases the calculated annual cost considerably.

The level of external costs and the choice of monetarization methodology

All reviews on external costs (see for example: Prognos 1990; u.a. Rothengatter 1991; Bärnighausen u.a. 1991; Ecoplan 1992; Bleijenberg u.a. 1994; Quinet 1994) observe a considerable range of cost estimations. Estimations differ by a factor of 15 between the lowest and the highest estimations. Those differences depend upon a number of assumptions and on the choice of methodology, and partially on actual social, economic, and political differences between countries as well. Differences are especially high where damages are not yet known, such as in the case of CO_2.

Cost calculations may be done on the basis of hedonistic pricing, contingent evaluations, or prevention costs. Each method has its short-comings, biases, and strengths (Rothengatter 1991; Quinet 1994; Hanley/Spash 1993). For instance, hedonistic pricing, such as changed market values of houses due to noise, only observes market transactions. Therefore, the estimate is rather selective and can only be applied for a few types of externalities. Secondly, contingent evaluation methodologies, such as willingness to pay or willingness to accept methods, may lead to overestimations or underestimations because of strategic answers of respondents. Different settings of the questionnaire (i.e., willingness to pay versus willingness to accept) may lead to inconsistent results. They only work for well known environmental impacts, where individual preferences already have been established (INFRAS/IWW 1944: 33). Finally the “avoidance cost approach” calculates the level of tax on the basis of a politically-set target. Although this approach might be attractive (i.e., it is chosen by Kageson 1993), it is not fully consistent with economic theory, which tries to find a measure for the optimal level of pollution and assumes priority of the economic rationale over political rationale, to define this level (more exactly in: Prognos 1992: 337f). The “avoidance cost

approach" actually does not calculate "external costs" but only the costs to achieve a specific environmental target. It is therefore generally only accepted as a "back-up" methodology, where others do not work (INFRAS/IWW 1994: 36) - such as the monetary evaluation of CO_2-emissions.

Therefore, neoliberal economists often prefer contingent evaluation methods as the appropriate simulation of market choices, whereas many pragmatists prefer the "avoidance cost approach,"because it defines the level of the tax according to politically-set targets (see: Kageson 1993; partly as well: INFRAS/IWW 1994).

Differences in the level of "external costs," furthermore, depend on whether they are based on "average" or "long term marginal costs". Most estimations are based on "average external costs". To find an optimal solution, however, the marginal external cost would be more appropriate since it takes the dynamic characteristics of the transport sector and the non-linear characteristic of many damages into account. The neglect of this method might lead to strong underestimations of many existing calculations.

The Commission asked a Swiss expert in October 1994 to prepare an overview on such methodological problems. This expert also was involved into the INFRAS/IWW - study for the European Railways. Several other studies are in progress in order to try to find a synthesis and an acceptable methodology, as well as to define the level of taxes.

The correct internalization strategy

A further methodological issue is the choice of appropriate internalization strategy, which is about to emerge if a consensus on the level of taxes might be found. Some instruments are rather non-specific, like fuel taxes or weight-distance based concepts, but they are technically rather simple to be introduced. Other instruments might be more specific, taking into account the different causes of externalities (i.e., accidents, congestion, noise or air pollution) and the time and location-dependent characteristics of many other external effects. For example, fuel taxes would be ineffectual to fight congestion. There were some discussions among experts on this issue during an internal workshop of DG VII in February 1994, and currently an OECD working group is involved in such discussions. Different DG´s, especially DG II and DG XI, have not yet found an agreement on the correct internalization approach. The T&E-Study still recommended a gradual increase of fuel prices as the most appropriate internalization instrument. As simulation studies from Commission services (Koopman 1995; EU-Kommission 1995n) showed, this would be appropriate to mitigate CO_2-emissions, but not sufficiently targeted to internalize other external costs. The INFRAS/IWW study recommended a differen-

tiated and gradualistic strategy including the increase of insurance premiums for accident costs, a fuel price increase on CO_2 emissions, and differentiated registration and vehicle taxes for other environmental impacts.

Furthermore, there is a debate whether “internalization strategies” should be specific to certain sectors (i.e., the transport sector), or rather specific for certain environmental problems (i.e., CO_2). Many economists prefer the second approach because of efficiency reasons. Pricing certain pollutants across all sectors would create initiatives to reduce emissions in those sectors, where it is most cost-effective (van Suntum 1993). The transport sector would then be one of the least affected. Therefore, environmentalists argue in favour of specific and targeted instruments to be applied towards the transport sector (see FGU 1995).

Does internalization work?

Finally, some experts disagree on the impact of internalization strategies for the transport sector. Optimists (i.e., Kageson 1993; Kageson 1994; Interview 20; Bleijenberg 1994) argue that higher fuel prices would create incentives for a number of changes. There is a wide spectrum of alternative options, ranging from more efficient engines, over organizational changes, to modal shift and transport avoiding relocation. Therefore, long-term elasticities are estimated to be rather high (see: Kageson 1994; European Federation for Transport and Environment, 1994b; Strese 1994) - especially exploiting the first two options. Mainstream transport economists, however, are relatively pessimistic on the price-elasticities (von Suntum 1993; Baum u.a. 1994; Koopman 1992; a more differentiated approach: Wittenbrink 1991). They normally refer to the modal split and the transport demand effects. According to Wittenbrink (1991), price elasticities are different, as well as asymmetrical, in different market segments. Railways are price sensitive if relative prices deteriorate, but they are not very sensitive if they improve. Substitution might be easier for low-value mass products than for high-quality products.

The Commission has produced three major studies, however, at a rather aggregated levels of analysis to inquire into the impact of environmental taxes in the freight transport sector (Tanja 1992; Samaras 1994; DRI 1994). As shown above, the first two studies were rather optimistic on the potential contribution of higher taxes to reduce CO_2-emissions. However, the studies discovered that taxes would be more effective for passenger transport than for freight transport. The latest DRI Report (1994) assumed a tax increase for diesel (by 25 to 70% depending on the level of uncovered costs in the different countries) and a road charge of 0.06 - 0.13 ECU/tkm. Those tax levels were derived from the study for the environmental

organization known as Transport and Environment (Kageson 1993). If the proposals of this environmental federation become an official policy, then a reduction of the energy consumption would be possible by 10% compared to the reference case until 2010. The reference case assumes a tkm growth of 69% and a growth of energy consumption by 45%. This figure highlights the potential and the limits of an internalization strategy. It has some impact, but it does not reverse the trend.[35]

Despite controversial discussion among experts, the Commission has developed its own information tools, concluding that an internalization strategy would be effective in reducing at least part of the predicted growth rates of emissions in freight transport.

5.5 The Green Paper on Fair and Efficient Pricing

In December 1995 the Commission finally adopted a Green Paper on “Fair and Efficient Pricing in Transport”. This paper has made a number of clear choices as to the above described scientific controversies. The Commission did not join the arguments of the road-lobby, neither fully those of the environmentalists. It develops an own approach, which on one side rather joins main-stream economists and on the other side is in line with the “efficiency-oriented” overall policy strategy. “Efficiency” - that means potential plus-sum games for all participants are strongly emphasized - whereas potential conflicts between transport growth and the environment - especially the CO_2-problem are rather neglected. This general trend can be shown on the basis of the strategic choices of the “Green Paper”.

The analysis of the Green Paper contains a clear hierarchy of “externalities”. Congestion on the roads receives strongest attention (EU-Kommission 1995n:12f). External costs of congestion are estimated at 120 Billion ECU or 2% of GDP - thus being the most important single type of externality. Congestion pricing is the perceived as the only alternative to traffic bans or the present inefficient allocation of road space to those who are less in need for fast and just-in-time transport. “Curbing congestion will reduce the time losses incurred by business and consumers” (ibid: 42) and hence has a positive impact on economic growth and competivity. It is even partly legitimized as an alternative to additional road infrastructure,

[35] A similar result was found in the studies program for the German Enquete Commission on Climate changes: Kohlhaas/Ewers 1994.

which in the long run would trigger new demand and hence congestion. As a second priority the Commission mentions the cost of accidents, which should be improved by a reform of the “insurance” system (ibid.:25). Air pollution only receives third priority and a relatively low level of estimation, because “this estimate excludes cost estmates for greenhouse gases for transport” (ibid.: 27). As the Commission concedes that this choice may “**underestimate(s) the costs of air pollution by several orders of magnitude**” (ibid.). As will be shown below, this hierarchy of problems also has an impact on the choice of internalization strategy.

Also on the “existence of external benefits” and the calculation methodology for infrastructure costs the Commission makes clear choices. It follows mainstream economists´ arguments, that claimed external benefits “ seem to refer uniquely to private benefits” (ibid.: 7). The road lobby´s argument is therefore not accepted by the Commission. Furthermore it assumes a capital-cost calculation for infrastructures.: “there is no reason to make users pay annually for the investment costs that were incurred in a particular year” (ibid.). This choice will lead to lower infrastructure cost coverage than the annual payment method, which has been propagated by road lobbyists. Due to limited data however the Commission does not offer a systematic overview on existing cost coverage for infrastructures on the capital cost basis, but only one the annual payment basis. On this basis it assumes, that freight transport on the road does not cover its infrastructure costs and that it is cross-subsidized by passenger cars (ibid.:17). Furthermore it sets clear priorities on road taxation - since this is the transport mode where problems are most urgent.

The Green Paper is not very explicit on the methodological choice, to calculate the level of “externalities”. This does not seem necessary in the present stage of policy development, since the Commission does also not make specific proposals on the level of required tax changes. Different methodologies only are explained in an annex, whereas the Commission is citing the results of an internal study, which is based on an intrapolation of the results of a literature review (33,2 ECU/1000tkm - without congestion)(ibid.: 36).

As to the internalization strategy the Commission opted for a differentiated and decentralized approach. Congestion pricing for instance “ must be differentiated in time and space” to reduce temporal peaks on specific corridors (ibid: 14). This means that the Commission proposes a decentralization of the competencies to define the appropriate tax level, within a Community framework, that avoids discrimination or distortion. The Commission proposes a gradual strategy towards congestion pricing. It will start with improvements of the existing tax system - such as achieving full infrastructure cost coverage and better cost differentiation according to geographical differences. This is perceived as an intermediate step, before

road-pricing by telematics may become operational within a decade or more (ibid.: 19). Furthermore the Commission wants to investigate a “electronic kilometre charge for heavy vehicles” , which also may be differentiated according to regional or environmental criteria. On the side of the “use” of the tax revenues, the Commission prefers to earmark tax-income to the road sector (EU-Kommission 1995n: 15). This “would also bolster the efficient provision of infrastructure” - since it would improve the benefit-cost ratio of new infrastructures. As was shown above the internalization approach on air pollution is rather focussed on the traditional pollutants. Therefore a general fuel price increase is not suggested, because “increased fuel prices do not trigger a number of highly effective response options”. This argument is based on a simulation study for NOx-reduction, which suggests, that an annual circulation tax based upon emission factors would be considerably more effective than fuel tax increases.[36] Fuel taxes may reduce driving, but they are not sufficiently earmarked to exploit other options - especially the use and purchase of cleaner vehicles. Therefore economic instruments should rather “complement the existing regulatory approach” to protect the environment than to influence transport demand or modal choice. The environmental policy choice of the Green Paper therefore has a low depth of intervention. Tax differentiation to influence fuel and vehicle choice receives highest priority (ibid.: 31) and it should be “non-discriminatory across modes” (ibid.: 39).

With its Green Paper the Commission has made a clear choice for “efficient” pricing. This choice makes an offer to different groups: Private transport users may win, since they are willing to pay a “fair price”, to avoid expensive time losses or even traffic bans on sensitive corridors. Infrastructure planners may receive an improved calculation basis for an “efficient infrastructure planning”.[37] The decentralized and differentiated approach may offer the regions and national governments an opportunity to maintain or introduce taxes in accordance with their preferences. Governments, industry and especially health insurance may achieve reduced costs or at least improved cost coverage on uncovered accident costs.

[36] The accuracy of this argument cannot be checked systematically in this study, but there are a number of reasons to assume, that it is biased and represents industries interests. First an annual circulation tax is a relatively small cost factor, which occasionally may not be sufficiently taken into account, when a car is purchased. Therefore a purchase tax is considered to be more effective. Second the argument is developed for a substance which can easily be controlled by a traditional regulatory approach. Thirdly the argument is overgeneralized, since it does not apply to CO_2-emissions. Forth the argument is based on a static comparison. In a dynamic perspective a fuel tax would have an impact both on modal choice and road transport growth - and might have a much higher effectiveness, than in the static perspective presented by the Commission. Such arguments can be found for instance in: Minutes from OECD/IEA/ECMT/CEC Workshop from April 13.-15. 1992:13; Koopman 1995: 62 on the relative inefficiency of an annual ownership tax for CO_2 reduction.

[37] ECIS already has understood the new opportunities for private financing, which the paper offers (“Kinnock releases pricing paper”, ECIS newsletter Jan. 1996).

Finally even environmentalists supported the “Green Paper”[38], because it confirmed many of their arguments and because the suggested road-pricing technology would also offer opportunities for a stronger respect of the environmental dimension in the long-run.

The Green paper proves that the Commission has developed an independent view from the road lobby[39] - which might by more heavily taxed and therefore be opposed to the approach. But even the road lobby may be convinced of the approach, because revenues shall be kept within the road sector and transport flows may be improved and hence costs reduced.[40] The environmental profile of the paper is not as strong, as it seems in a first instance. One major benefit is indirect, since better infrastructure use may be environmentally better than the construction of new ones. But the strategic choice is to improve vehicle technology but not to manage transport growth or to create incentives for modal choices. Many problems of the transport sector may be managed by this approach - but not the greenhouse problem.

5.6 A critical interpretation of the Green Paper

As the previous analysis showed any proposal for an environmental tax meets a high level of barriers, especially the unanimity requirement and the lack of powerful institutional support from the European Parliament. Politically taxation is within the domain of national competences. Fiscal considerations, that means above all the income generation function of the respective tax for the national budget, play an overwhelming role. Furthermore the redistributive impacts of any tax reform are strongly perceived by finance ministries as well as by stakeholders (see: Gawel 1995:42). Any tax, which has a regulatory transport policy or environmental purpose (which is the nature of environmental instruments), has to find acceptance also from the fiscal point of view.

Before publishing the Green Paper, the Commission could gather experiences with the quality of those hurdles: The harmonization of diesel and vehicle taxes could

38 T&E welcomes Kinnock´s Green Papers on Frair Transport Prices and Citizen´sNetworks”, in: T&E Bulletin, February 1996

39 Therefore it already has received strong criticism: see Aberle, Gerd: Faire und effiziente Preise im Verkehr, IV (49) 3/96

40 INFRAS/IWW 1994: 27 argue, that the main beneficiary of “congestion pricing” is road freight transport, which may become more competitive by higher average speeds.

only be achieved, because the pressures from the requirements of the internal market were sufficiently strong and because an external helper reduced the distributional side of the conflicts. Both factors may not be helpful in the future. The failure to find sufficient support for the energy/ CO_2-tax, which was supposed to become a symbol for the global leadership of the EU in the activities to save the global climate, was an other lesson for the Commission.

The Green Paper must be seen at this background of such experiences. One can argue, that the Commission has dared a profiled action despite of such an unfavourable institutional and political environment, which nevertheless offers an opportunity to become politically successful.

Its proposal is in general minimizing potential opposition, since most participants may win. The Commission argues with a pareto-improvement compared to a scenario characterized by congestion, traffic bans and political conflict in environmentally sensitive corridors.

The potential opposition from national finance ministries is anticipated by the application of the subsidiarity principle. The Green Paper deleguates the competences to define the appropriate tax levels the national (and if wanted even to the regional) political levels. The subsidiarity principle is furthermore strengthened by the choice of issues for priority action: local environmental problems and congestion require regionally differentiated action. The problem, which would legitimize strong Community intervention, global climate change, is relatively neglected.

Community action is therefore less required to define the level of taxes, but only to safeguard the compatibility with the requirements of the internal market and the compatibility between the national tax regimes.

Finally the differentiation of proposed instruments may not only be economically more efficient, but it offers multiple starting points and multiple opportunities for the unpackaging and packaging of the different tax elements. Some proposals (insurance premiums) don´t even require the participation of national finance ministries and will be negotiated in completly new networks and institutional regimes.

The environmental dimension of the Green Paper remains within an end-of-pipe oriented and technical paradigma, which is widely accepted. The paper remains within the road sector not only in the sense of the paper itself - but also concerning the scope of the proposed taxes. Taxation is not considered as a tool to strengthen railways or to promote the efficient use of transport as such - it is only targeted to efficiency improvements within the road sector. This can be interpreted as a further element of an opposition minimizing strategy - even if the ecological effectivity may be limited.

6 The Future

The use of fiscal instruments for the environment is still on the agenda despite a series of lost battles over the past eight years on this issue. This raises the question whether a “future policy window” is foreseeable.

The next “event” that might raise the attention of decision-makers is the revision-process of vehicle taxes. This may come soon, since the European Court asked for a formal repetition of the decision-making procedure to allow the participation of the European Parliament. In February 1996 the Commission announced a new proposal, which should double the level of the Eurovignette and offer additional taxes on sensitive corridors.[41] The revision of the diesel tax harmonization was already due in 1994, but until now (December 1995) the Commission has not made a proposal yet.

There are some developments which have improved the chances for a new proposal:

- Despite a diesel taxation compromise on a low common denominator an uncoordinated process of continued diesel tax increases took place in many member countries. Meanwhile, harmonized diesel taxes in the EU are below the average of national governments, thus opening up some scope for future tax increases without creating major conflicts.
- The constellation of national interests has changed over recent years: the Dutch and Danish counterparts of Germany have become more open to the use of environmental taxes even in the transport sector. There is a gradual convergence of the preferences of the former atagonists on this issue. The U.K., one of the traditional adversaries of environmental taxation in the EU, has introduced regular fuel price increases as part of its CO_2-containment strategy. The U.K. would now find it difficult to argue against similar instruments in the EU. Germany has already started initiatives towards a higher taxation level.[42]

41 “Brüssel will Lkw-Gebühren erhöhen”, HB 21.2.1996

42 Bonn soll Mißverständnisse ausräumen, HB 6.6. 1995; “Kein Ausgleich für deutsche Lastwagen” HB from 24.5. 1994

- The new member states of the EU, especially Austria, are rather favourable to the idea of environmental taxes in the transport sector, and partially (especially Sweden) have introduced measures in this direction.
- Furthermore, the rapid development of telematics may open new technical opportunities to reconcile a differentiated approach with the requirements of a non-distorting internal market for transport services. Telematics may be another case for a "technological solution" looking for its problem (Kühn 1995). This may create new alliances for the "internalization of external costs".
- The negative impacts of the low costs of road transportation on combined transport, congestion, and logistical innovation will strengthen the pressures from the side of the concerned parties.
- The negotiations on Alpine transit continue to have a strong fiscal implication.
- Finally, the commitment of the Commission to make further proposals on those issues are high.

Such factors are sufficiently strong to bring the issue back onto the agenda of decision-makers; to predict more would be speculation.

7 Conclusions

The case of environmental taxation in European freight transport spans eight years of reflections with little political impact. This can be generally explained by the nearly opposite opportunities for incorporation in the agenda-setting and the decision-making arenas.

Agenda-setting of environmental taxation took place in open, scientifically oriented policy networks including economists from different Directorates General, environmental groups and universities. Interest groups (environmental organisations, railways, road hauliers) applied scientific evidence and counterevidence, to convince the Commission services of their positions and arguments. The case of taxation is a positive example of a pluralistic agenda-setting arena with open access to all, who have the capacities to present scientifically underlined arguments. An informal network within the Commission sympathized with arguments presented by environmental economists within and outside the environmentalists´ community.

Nevertheless - the positions finally adopted by the Commission were independent from any lobby. Beyond the scientific discussion, the Commission anticipated the strong political and economic hurdles of a tax initiative. The choices of the Green Paper are not “opportunistic” but nevertheless “successoriented” - that means concentrating on issues, where everybody can win. “Efficiency” is the guiding value of the Commission´s discussion paper on green taxation in the transport sector.

The problem-orientation of the Commission is selective - the CO_2-issue, does not fit into a “success-oriented” proposal: CO_2 is one of the environmental problems, where the conflict between road transport growth and environmental goals cannot be managed by technical measures alone. But beyond rethorics a targeted strategy in favour of environmentally friendly systems or even demand-side managment finds still little support in the member states - partly due to limited economic capacities. Furthermore the CO_2-issue would legitimize a strong position for the EU, which seems not to be acceptable to national governments. In other words: CO_2 has been excluded as a policy issue for environmental taxation, because this would create a conflict-intensity which is hardly managable for the Commission.

This argument offers an insight into the limited capacities of the EU for “active incorporation” in the transport sector (and beyond).

Strong scientific and hence personal resources are critical for policy initiatives from the Commission. DG XI and other DG´s could sucessfully bring the issue on the internal agenda of the Commission on the basis of a number of reports. The strength of the horizontal coordination within the Commission services and the resources of DG XI and DG II were helpful capacities, to bring the issue on the agenda. On the other side, the low profile of DG VII until 1994 corresponded with little investments into policy related knowledge. Research, personal and policy commitment are strongly correlated.

Finally the case of taxation confirms the high quality of strategic policy capacities of the Commission - both in terms of timing and content of proposals. The Commission choose a very low profile on environmental taxes during a phase with an unfavourable political climate and waited for a better constellation with a profiled action. A potential policy window only could open, after the measures to complete the internal market for road freight transport were decided and after the experiences from the proposed energy/CO_2-tax could be reevaluated. Also the Commission´s Green Paper is characterized by a high degree of political and strategic sophistication.

On the other side the opportunity - structure in the decision-making arena is very unfavourable. Environmental interests are no more represented. The EP is no relevant player. The unanimity hurdle favours conservative decisions and national finance ministries consider taxation policies as core policies of national souvereignity. Furthermore taxation affects fiscal interests and any tax reform has a redistributive impact. The last point may explain the high conflict-intensity of the negotiation process on tax-harmonization.

Germany applied aggressive foreign policy instruments to safeguard its national interests: such as vetos, issue linkages, tactical alliances and exit. It threatened with policies, which were worse for the counterparts, than concessions to Germany. Nevertheless it was only winning a few concessions (the Eurovignette) at a high price. Due to the strong formal and informal pressures to find an agreement and after the defeat at the European Court of Justice, Germany itself had to make concessions. So - compared to the power of consensus-oriented mechanisms in the EU, the weapons of the veto and the policy-exit were relatively weak. It could be shown, that an agreement on taxation between the divergent national preferences only could be found with external help (falling oil prices) and external pressure (internal market). As could be shown, the strong consensus-oriented incentives of the European political system are not beneficial for the environment, if environ-

mental interests are not represented in the negotiations. The solutions rather tend to produce new externalities.

Concerning environmental taxation the EU is still in the “joint decision-making trap” (Scharpf 1985). On the one side national action is restricted, but not fully impeded, by the disciplining constraints of the internal market and the taxation compromise from 1993. On the other side the required Community action meets a high level of political and institutional hurdles. The Green Paper of the Commission offers perspectives for a few problems (for instance congestion, eventually land-use), but not for other negative consequences of high road transport growth rates (especially CO_2).

It is a proof for creative policy management within an unfavourable political and institutional environment - but the effectiveness of the proposed approach to redirect unsustainable transport trends will be limited. Creativity cannot overcome limited capacities but only find interesting paths within the given limits.

Methodologically the “temporal sorting or garbage can model” offered a strong tool to understand the non-sequentiality of the processes. It could be shown, that problems, solutions, decisions and events are parallel streams, which each follow their own logic. Furthermore the linkages between the streams could be shown. This offered an other perspective on certain phenomena, than a purely structuralist or a sequential perspective. The principle of environmental taxation is a case in point. This principle has been widely accepted in countless Commission documents since 1992 - but just the opposite was decided in the Council. This contradiction might be misinterpreted as “symbolic policies”, as a typical case of non-action and deceit (Edelman 1976; also in the case of environmental taxation: Gawel 1995). In the interpretation of the “temporal sorting model” it is obvious, that the commitments on the principle have been a first success of the problem and solution-oriented networks, to get their idea on the agenda. The “symbolic use” of the new approach is just one important step to get an issue acknowledged in the agenda-setting process. From the observation of a “symbolic policy” alone, one cannot derive a conclusion, that it is a maneuvre of political deceit - perhaps it is just one important step in the agenda-setting phase, whereas the protagonists wait for new opportunities before they start more specific initiatives. This was the case for the Green Paper on “fair and efficient pricing” - which is only an other step during the agenda-setting phase.

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