The Experiences with Green Budget Reform in the EU and especially in Germany

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Abstract

Firstly, the paper describes and compares the evolution – in theory – and the application in practice of various market-based approaches and instruments, with a focus on the Ecological Tax Reform (ETR). Secondly, it provides insights in the history and the more than 20 years of debate on a potential ETR in Germany. Thirdly, the design and the phase of implementation of the ETR in Germany from 1999 on are described and analysed. Fourthly, the manifold and ambivalent experiences with the ETR and the first steps towards extending the ETR to a Green Budget Reform are presented. Finally, conclusions for political considerations, design, implementation and marketing aspects are drawn.

The history and the experiences with the implementation of an ETR demonstrated that there were different waves of public debate and also of policy approaches and instrument choices. Industry successfully delayed effective government actions as soon as its initially own demand for more market-based instruments came too close to implementation. They did a policy approach hopping from one instrument to another mostly just before implementation became serious. The policy sequence started from command-and-control with ordinances and regulations, going on – though often overlapping – with environmental taxes, environmental agreements and finally emissions trading. However, when industry did eventually not accept its own target under the environmental agreement when it came to nailing down a target for the emissions trading caused enormous damage to the credibility of environmental agreements. Given this experience, it remains to be seen to what extent governments are still willing to accept such agreements.

Policy advise on ETR was particularly critical in the phase of gaining political support before its implementation, but also after its implementation when further improvements had to be made. However, given the brain drain after the change of government, and the many studies beforehand made government less dependant on policy advise in the implementation phase in this special case. It is not easy to generalize the process and explore the lessons learned in order to help other countries which are also working on the implementation of economic policy instruments. Every country has a very special set of actors including the influence of certain people as it is explained for the German case in this paper. It is, however, important to really bring together different actors from the political parties, the bureaucracies, scientific institutions, industries to environmental NGOs with their counterparts in other countries to allow for creating a good network and for ensuring the same “language” spoken between the stakeholders.

Such a transfer has e.g. been successfully agreed and implemented between the Czech Ministry for the Environment and the German Ministry for the Environment back in 2002. This promising approach has in principle been enlarged to Poland, further countries are about to follow.

1 Introduction

This article presents several experiences with the ETR in Germany, partly taking into account other country's experiences, highlighting interesting examples in the context of political advice and political economy. Firstly, the paper describes and compares the evolution – in theory – and the application in practice of various market-based approaches and instruments, i.a. the ETR. Secondly, it provides insights in the history and the more than 20 years of debate on a potential ETR in Germany. Thirdly, the design and the phase of implementation of the ETR in Germany from 1999 on are described and analysed. Fourthly, the manifold and ambivalent experiences with the ETR are presented. Finally, conclusions for political considerations, design, implementation and marketing aspects are drawn.

2 Comparison of Policy Approaches and Instruments

In current climate policy at least four seemingly competing policy approaches and instruments[2] are often discussed and implemented, although at partly different stages and times: ordinances/regulations as an element of a traditionally dominating command-and-control-policy, environmental agreements, emissions trading and ETR. All are often part of overarching policy programs, such as the climate protection program. Several countries have introduced different approaches and implemented different instruments to various degrees. The evolution, in theory and practice, of these approaches and instruments is yet very different and it is of practical and theoretical interest to compare these different paths of development. In the following I will therefore first of all explore the use of policy approaches in Germany regarding climate change taking into account sequences and mixes of different policies. More concrete data and examples are provided in the next chapter on the historical aspects.

Traditionally, since the launch of active environmental policies in the late 1960ies, environmental policies were dominated by more or less strong regulations and can therefore be characterized as command-and-control policies. Environmental agreements have been introduced at a later stage. They have been basically invented from the bureaucracy and the political decision-makers, more or less jointly with industry. First in the 1970ies for some particular, relatively clear cut problems, from the late 1980ies, early 1990ies on, they were also made to combat global problems such as the depletion of the ozone layer and climate change. The following remarks refer basically to agreements on climate change. Before they were implemented there was hardly any theoretical economic literature on it providing rationale for its application. Policy advice was hardly existing, not at least given there was no real theory about such different policy approaches. So why did bureaucracy invent and apply such an in theory unknown or at least neglected instrument?

One may argue the instrument reflects some features of Coase' Theorem[3] given the element of seemingly voluntary negotiations. This may be true to a certain extent, but here it is government itself as one of the stakeholders and not two other subjects of society. And would bureaucracy really care about Coase and theories? The thesis presented here is that bureaucracy invented this instrument, because the phase of pure command-and-control-policy was gone while an increasingly stronger demand for so-called market based instruments had emerged. In fact, it

[2] The terms policy approach and instrument are partly used synonymously.

[3] Coase, R.H.: The Problem of Social Cost, in: Journal of Law and Economics. Vol. 3 (1960).

was industry itself which claimed that there should be less command-and-control environmental policies, but more market-based instruments in order to achieve targets cost-efficiently according to market mechanisms. This claim has been made for more than a decade in the 1980ies and early 1990ies without substantial changes in the real instrumental mix.

However, there was one important exception which is the waste water charge. The idea for this instrument first came up in Germany in 1971, launched by the Environmental Advisory Council[4], following examples of then Czechoslovakia, the then German Democratic Republic, France, the Netherlands, Poland and Hungary[5]. They had adopted this instrument, still some only on paper. In 1974, the German government drafted a law, which was adopted in 1976, entered into force in 1978. Still, the first payment of the charge was due only in 1981, progressively increasing to its initially agreed full amount until 1985 – quite a long way from the first draft law to its interim final full rate. Later on further increases were made.

Apart from this exception, it took quite some time until finally in the mid 1990ies industry's demands were taken more seriously and market-based instruments such as the ETR were intensively discussed, designed and gradually became more likely to be implemented. And just as a market-based approach became more concrete and at the edge of implementation, industry changed its positions and asked for more flexible approaches and instruments. This appears a bit surprising, although not really if the real interests are considered. As with such instruments emerging on the political horizon, practically most of the negotiation power of industry would have gone which industry had during the mostly comfortable times of command-and-control; or at least of command and the attempt to control. Some could even question who is commanding and who is controlling –depending on the counterfactual. Since this kind of policy requires capacities and information for monitoring, controlling, enforcing and eventually applying sanctions, if existing at all. And it is exactly the partial lack of such capacities and information which offers large negotiation power to industry.

At the same time, in the late 1980ies and early 1990ie, international negotiations developed and conventions and protocols on global problems such as the Montreal Protocol on the depletion of the ozone layer and the United Nations Framework Convention on Climate Change (UNFCCC) were adopted. Given learning processes within companies and increasing international pressure, different industries per se became more interested in shaping policy instruments regarding the environment also in order to establish comparative advantages. . Likely organizations like the World Business Council on Sustainable Development (WBCSD) facilitated, if not accelerated such a learning process. Environmental catastrophes and mismanagement and/or insufficient communication related to such disasters contributed to this process. On national

[4] Bundesministerium des Innern (ed.): Umweltgutachten 1974 des Rates von Sachverständigen für Umweltfragen, Bundestags-Drucksache 7/2802, Bonn 1974, p. XI f.

[5] Lühr, Hans-Peter: Die Abwasserabgabe – Grundlagen und Auswirkungen (The waste water charge – basics and impacts), in: WSI-Mitteilungen, 8/1989, p. 432-438, here p. 432.

level, organizations of progressive companies were founded – BAUM, future and Unternehmensgrün were the most important in Germany.

Coming back again to he national agenda, it appears endangering industry's power if now allowing for the application of market-based instruments since it would be the market forces pushing industry towards a certain behaviour and investment. And - as entrepreneurs know very well - you cannot run counter market forces for a longer time. These forces are too strong. Industry's negotiation power would have gone. In Germany, there was not only the demand for market-based instruments, but at the same time a proposal for implementing a waste heat ordinance was put forward in the early 1990ies, an element of a strengthened command-and-control policy, though intending to ask for implementing only profitable energy saving measures. This aimed at unveiling all energy saving potentials in industry by gathering and making available a bulk of information, so far only in industry's hands.

Furthermore the international public was looking more closely at Germany as the first Conference of the Parties (COP 1) of the United Nations Framework Convention on Climate Change (UNFCCC) was to take place in Berlin 1995. Apart from the German government setting ambitious national targets (-25% CO2-reduction by 2005 against 1990-levels) expectations were high that German industry should contribute to greenhouse gas emissions reductions. Against this multiple challenge industry moved a step out of the pressure of expectations and potential instruments by launching a self-commitment in March 1995[6] which was updated in 1996 though without substantial improvements[7]. It was prepared in a joint effort from industry and bureaucracy (Ministry for Environment and Ministry for Economic Affairs) - basically to avoid the other instruments discussed.

Here it gets evident that these environmental agreements were not at all voluntary, but only a somewhat forced reaction on the pressure emerging through the discussion of alternative instruments[8]. Hence, the term voluntary is not used here - besides in line with the official terminology of the European Commission[9] and the European Environment Agency[10].

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[6] BDI: Declaration by German Industry and Trade on Global Warming Prevention, Cologne, March 1995.

[7] BDI: Updated and Extended Declaration by German Industry and Trade on Global Warming Prevention, Cologne, 27 March 1996.

[8] Fischedick, Manfred u.a.: „Erklärung der deutschen Wirtschaft zur Klimavorsorge": Königsweg oder Mogelpackung? *(Voluntary agreement of the German Industry – Ideal solution or cheat package?)* Wuppertal Papers No 39, Wuppertal July 1995 and Centre for European Economics Research (ZEW, Klaus Rennings): Negotiated agreements in environmental protection: no free-market instrument, Mannheim 1996.

[9] European Commission: Communication on the Use of Environmental Agreements as an Instrument for the Implementation of Environmental Policy in the Community, COM(96) 561 final, Brussels 1996.

[10] European Environment Agency: Environmental Agreements, Copenhagen 1997.

After the change of the German government in 1998 - besides the first time ever in Germany that the population voted directly for a change, before the government changed during a legislative period -, the ETR was implemented in Germany from April 1999 on and industry had apparently lost the battle against this market-based instrument as such. Still, industry had tremendous impact on the design of the ETR as described below in more detail.

Finally, an even more market-based instrument was emerging on the EU horizon: emissions trading. Emissions trading is a theoretical environmental concept developed decades ago, though basically applied in the USA. EU-Member States hardly have experience with that. Ironically, it was the USA insisting on emissions trading during the negotiation of the Kyoto Protocol which it does now refuse to ratify itself. German industry in particular succeeded in delaying and fighting against emissions trading for general reasons and a lot of misperceptions. It almost succeeded, strangely enough at least, to isolate Germany, the country often perceived as frontrunner, in the EU. Thanks also to the support of some big global players like BP and Shell who had experienced the enormous economic and environmental advantages of emissions trading due to the implementation of this instruments within their own company, the German position became eventually positive, though never enthusiastic.[11]

However, in the end the EU emissions trading directive was adopted (on EU-level) and the national implementation plans were due by the 31st of March 2004[12]. In fact, Germany, as one of the very few Member States of the EU, succeeded to deliver its National Allocation Plan (NAP) just in time on that day. But the price was a high one from an environmental point of view. Whereas the Environment Minister proposed to take the above mentioned environmental agreement on climate change (together with a subsequent agreement on the increase of cogeneration) and the therein mentioned overall target respectively commitment of emission reductions as base line for the emissions trading allocation, industry opposed strongly. Industry fought heavily against this objectively fair approach. Although no requirement to ask for more than industry itself had promised to reduce voluntarily anyway. In the end, industry succeeded in almost escaping any reduction commitment in the first budget period (2005-2007). The thesis of many economists that these environmental agreements would not comprise any additional measure compared with the business as usual was more than confirmed.

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[11] Joint Press Release of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and the Federal Ministry of Economics and Labour: Federal Government reaches breakthrough in emissions trading, No. 291/02, Berlin 04.12.2002, http://www.bmu.de/en/800/js/news/pressrelease021204/

[12] Press Release of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety: German cabinet agrees on basis for the start of emissions trading, No. 087/04, Berlin, 31.03.2004, see: http://www.bmu.de/en/800/js/news/pressrelease040331/, accessed 30.08.2004, and Federal Ministry for the Environment, Nature Conservation and Nuclear Safety: National Allocation Plan for the Federal Republic of Germany 2005-2007, Berlin, 31 March 2004

In fact, apparently they even had less substance given the fact that their target was not accepted as basis for emissions trading[13].

The initial claim for an increased use of market-based instruments by industry apparently was just a means to delay or avoid additional regulation (in the meaning of policy) - independent of what kind of instrument. Strangely enough, the bargaining for the allocation of emission credits and the final targets set for industry demonstrated impressively that even within such an instrument there can be strong negotiation power. In fact, in such a way, even market-based instruments can get very close to command-and-control-policy, including an inefficient allocation. However, this is the case for the first allocation/target setting, but less likely for the operational phase of emissions trading.

But what role did policy advice play? The thesis here is that for the implementation of an ETR most aspects had been well examined beforehand – minor exceptions are presented in the chapter on the design and implementation of an ETR in Germany. Thus particular policy advice was hardly needed, not at least given some brain drain from think tanks to the governing parties and the government. For the emissions trading such advise was not available. Given a very tough time schedule, it was necessary to get policy advise in every day's processes. To that end, several researchers were asked to work as closely with the Ministry as possible, partly even in house, to allow for immediate comments on any emerging aspects.

Concluding on these policy approaches and instrumental developments and the varying claims for instruments, industry's position could be considered as "instrument hopping" or it is like "zapping from one instrument to another" – always ahead of implementation. It became fairly clear that from an industry point of view, voluntary agreements are the preferred way to go. The attempts of combining a cap and trade approach with environmental agreements, has been widely seen as unnecessary state intervention, although the idea clearly is to reduce emissions economically efficient and to provide a secure framework for potential investments. Claims for market-based instruments appear to serve the purpose of delaying and avoiding any action. And by not accepting the initial targets for emissions trading on the basis of the environmental agreement industry succeeded in ruining the credibility of the instrument of environmental agreements – ironically the one once favoured so much by itself.

[13] BUND: BUND-Analyse des nationalen Zuteilungsplans für den europäischen Emissionshandel (Kabinettsbeschluss vom 31. März 2004), Berlin 2004.

3 History of Ecological Tax Reform

The conclusions of the previous chapter also apply to the ETR. For more than 20 years protagonists discussed ETR, publications were made much more than on any other instrument (except for command-and-control). Actually, it was back in 1983 that the Swiss economist Hans-Christoph Binswanger[14], together with Hans Nutzinger and Frisch, had invented the ETR. This idea was picked up by others, such as the leader of the Institute for European Environmental Policy (IEEP), Ernst von Weizsäcker. Environmental organisations like the German section of Friends of the Earth, BUND, worked on it more in depth during the 1980ies and 1990ies. Parties started to getting interested. However, the first larger round of public debate was triggered in 1988 by an unconventional proposal laid down in a study by the Heidelberg based Environment and Prognosis Institute[15]: All conventional taxes should be replaced by different kinds of environmental taxes. Given the increasing debate, the German Federal Association of Industry (Bundesverband der Deutschen Industrie - BDI) had also commissioned a study to explore the value of an ETR. Very likely against its expectations, the study by the Institute for Fiscal Research Studies at the University of Cologne found that it made indeed sense. At least BDI was fair enough to allow for the publication of the study[16]. Though the issue was picked up partly by Environmental Parties and Social Democrats the unification of the two German states made environmental issues drop down the political agenda – including the issue of ETR. This study reminded one of the study that BDI had asked for from the economist Werner Meißner at Frankfurt University back in 1978[17]. He should examine the overall job impacts from advanced environmental policies. Industry was likely considering environmental protections as a job killer, searching for arguments to underline its thesis. But in fact he found that the balance is positive. This demonstrates the importance of independent policy advice, not at least since other stakeholders were of course very interested in these results.

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[14] Binswanger, Hans Christoph/Nutzinger, Hans G./Frisch, Heinz et al.: Arbeit ohne Umweltzerstörung, Frankfurt/Main 1983.

[15] Umwelt- und Prognose Institut (UPI): Ökosteuern als marktwirtschaftliches Instrument – Vorschläge für eine ökologische Steuerreform (Ecotaxes as market-based instrument – Proposals for an ecological tax reform), UPI-Report No. 9, Heidelberg 1988.

[16] BDI: Beurteilung ökologischer Steuerreformvorschläge vor dem Hintergrund des bestehenden Steuersystems, Berlin 1995.

[17] Meißner, Werner/Hödl, Erich: Auswirkungen der Umweltpolitik auf den Arbeitsmarkt, Bonn 1978.

A second round of public debate was initiated by a study of the German Institute for Economic Research[18] (Deutsches Institut für Wirtschaftsforschung – DIW, Berlin), commissioned by Greenpeace and then published in 1994. For the very first time it simulated an ETR in Germany and its overall impacts on growth, employment and energy consumption. Its findings confirmed the so-called double dividend thesis as up to 800,000 additional jobs were predicted until 2005, while CO_2 emissions would drop by -14 percent . Now, politicians started to get very excited about ETR. Practically all parties were somewhat in favour of it[19]. In fact, a memorandum was published by several young Members of Parliament including all parties, related to the forthcoming COP1 in Berlin, which stated that an ETR should be introduced.[20] In February 1995, the Leader of the conservative group in the Parliament, Wolfgang Schäuble, asked his deputy, Hans-Peter Repnik, to develop a concept for an ETR, even if Germany had to go this path alone. All at a sudden, the Greens felt, "their" issue and idea would be occupied by the conservatives and a competing race between the parties started following the line "who is first to present a concept for an ETR which could be implemented in Germany". Finally, it was the Greens and the Social Democrats winning this race. But the internal and thus confidential paper of the conservatives from May 1995[21] was watered down within the party, mainly by the agricultural lobby and Bavaria. The outcoming official paper of the conservatives in November 1995 comprised no longer ambitious energy tax proposals as yet in the internal paper (to which one could have subscribed). But it contained lots of subsidies for environmentally-friendly behaviour and investments. Where from the money should stem to finance that remained unsolved. By the end of 1995, it was found out later[22], a meeting between Chancellor Helmut Kohl, the Chief Executive Officer of BASF, the large chemical company (in which Helmut Kohl once made his training as student), Hans-Josef Strube, and the President of the Federal Association of German Industry, Hans-Olaf Henkel, had taken place in which Helmut Kohl promised that as long as he was Chancellor no ecotax would be introduced. With that turning point, the protagonist of an ETR, Wolfgang Schäuble had to withdraw from his idea which he in fact did publicly at the end of 1995. As a consequence the debate was bogged down in the policy arena afterwards again.

This discussion and development was certainly also negatively influenced by the fact that the DIW study from 1994 had not calculated any exemptions for

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[18] Deutsches Institut für Wirtschaftsforschung (DIW): Ökosteuer – Königsweg oder Sackgasse, Berlin 1994.

[19] Schlegelmilch, Kai: Parteien im Wettstreit. Welche Partei hat die beste Ökologische Steuerreform (ÖSR)?, *(Parties in competition: Which party has got the best concept of an ETR)* in: ÖkologiePolitik, No 70, 1995, p 9f.

[20] Memorandum junger Abgeordneter des Deutschen Bundestages zur Klimakonferenz in Berlin, Juni 1995.

[21] CDU-/CSU-Fraktion: “Konzept 2000”, Entwurf, 03. Mai 1995.

[22] Krebs, Carsten/Reiche, Danyel: Wie die Ökologische Steuerreform beerdigt wurde, in: Blätter für deutsche und internationale Politik 7/97, Bonn (documented in: Frankfurter Rundschau on 27.08.1997)

business. Hence a few energy-intensive sectors would have been hit quite strongly. This was likely the moment when industry started to fight ETR more offensively and changed its more or less neutral or vaguely positive attitude. Somewhat hard to understand given that the majority of industry would have been winning.

On the evening of the 8th of November 1994, Green Budget Germany (GBG – Förderverein Ökologische Steuerreform – FÖS) was founded by ETR-protagonists. The intention was to bridge the way for industry to agree to an ETR by a more modest approach than DIW[23] since the DIW study had apparently impacted the opposite. Thus FÖS launched its first study[24]. Ever since it is a small, but partly influential association with good political contacts and the scientific capacity to analyse features appropriately. GBG, however, did not succeed in getting industry agree to ETR, but at least clarified that it all depends on a good design and that is not a question per se as to whether to condemn an ETR or as to whether to praise an ETR.

Another study by the Rhine-Westphalian Institute for Economics Research (Rheinisch-Westfälisches Institut für Wirtschaftsforschung – RWI) in 1996[25] created confusion. In an unusual way it had presented preliminary findings in a press conference. It should demonstrate that overall there would be substantial job losses in the energy-intensive industry, particularly in North-Rhine-Westphalia. Numbers were mentioned which seemed to show that. But the reaction from the then present Prime Minister (now Federal Minister of Economic Affairs) Wolfgang Clement was such that a government would never design an ETR in such a way that there would be such substantial job losses. Apparently, the design was considered crucial, while the idea as such was still attractive[26]. When looking closer at the short version of the RWI study published quite some time afterwards, one was struck by the results. In a table one could find the negative job balance (-400.000) - and in the text one could find statements like: "There are also positive job impacts in other sectors" and “the overall impact is not necessarily positive”. However, the positive impacts have not been quantified and put in the same table as the losses. Tricky idea one could argue. The impression that remains in the public is that the overall impact is negative. But serious science and helpful policy

[23] Deutsches Institut für Wirtschaftsforschung (DIW): Ökoseteuer – Sackgasse oder Königsweg? Im Auftrag von Greenpeace, Berlin 1994.

[24] Görres, Anselm/Ehringhaus, Henner/Weizsäcker, Ernst Ulrich v.: Der Weg zur ökologischen Steuerreform - Weniger Umweltbelastung und mehr Beschäftigung. Das Memorandum des Fördervereins Ökologische Steuerreform – FÖS (*The way towards an Ecological Tax Reform – Less pollution and more employment. The memorandum of Green Budget Germany - GBG)*, Munich 1994.

[25] Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI): Regionalwirtschaftliche Wirkung von Steuern und Abgaben auf den Verbrauch von Energie – Das Beispiel NRW, Essen 1996.

[26] Luhmann, Jochen: RWI präsentiert Gegenstudie zur DIW/Greenpeace-Studie (RWI presents contradicting study to DIW/Greenpeace), in: Wuppertal Bulletin zur Ökologischen Steuerreform, No. 3/1996, p. 12f.

advice looks different. Furthermore, the announced comprehensive study has never been published – at least not until mid 2004. The suspicion is that this was an attempt to bring down enthusiasm for an ETR - and it succeeded, at least for some time.

In the run up to the elections in 1998, the German Association of Natural Protection (Deutscher Naturschutzring – DNR, www.dnr.org) started a campaign, funded by the Heinrich-Böll-Foundation, www.hbs.org, closely linked to the Green Party, in which it promoted an ETR and gathered support from 80 scientists, 200 companies, trade unions and many more.[27] A general book was also published for this campaign[28]. Generally, one could look back at a broad coalition of stakeholders in favour of ETR. This is important to remember when considering the further development and acceptance. In March 1998, the Green Party had (again - as several times before) adopted its position to increase transport fuel taxes up to 5 DM, about 2.56 €, per liter until 2010. This claim has been put forward initially by the Council on Environmental Advisers several years before. However, this scientifically sound and justified demand was considered as a big threat by the public since the time span until 2010 was more or less neglected, potentials for structural changes and a large fleet of low-consuming cars were not taken into account. The public debate almost made the Greens stumble.

Another threat emerged from the Federal Association of German Industry (Bundesverband der Deutschen Industrie – BDI) in summer 1998. One of its committees planned to launch a brochure on the job losses if an ETR was to be implemented. Likely BDI intended to publish this in a large number of issues in many companies and disseminate it to their employees. Somewhat by chance, this campaign fortunately never took off ground. In a drafting stage, protagonists of an ETR received an informal hint. The draft leaflet was full of unproven statements and potential horror scenarios – all based only on the thesis that an ETR would in any case imply tremendous reallocations and thus job losses. However, several countries had already introduced an ETR[29] successfully whilst improving their employment situation. The only way to prevent a similar debate as in spring 1998, but now just before the elections was to make BDI's supposed intention public and to show that these statements were superfluous and based on wrong assumptions. As otherwise one could well imagine that the debate would have been timed just before the elections triggering an irrational debate influencing the

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[27] See: http://www.foes-ev.de/4fakten/index.html, here 2. Deutschland and „Klare Befürworter der Ökologischen Steuerreform, Aufruf von BUND und DNR von 1998", accessed 30.08.2004.

[28] Krebs, Carsten/Reiche, Danyel T./Rocholl, Martin: Die Ökologische Steuerreform. Was sie ist, wie sie funktioniert, was sie uns bringt (*The Ecological Tax Reform. What does it mean, how does it work, what impacts will it have)*, edited by Deutschen Naturschutzring (DNR), Naturschutzbund (NABU) and Bund für Umwelt und Naturschutz Deutschland (BUND), Berlin, Basel, Boston 1998.

[29] Schlegelmilch, Kai (ed.): Green Budget Reform in Europe. Countries at the Forefront. Springer: Heidelberg 1999.

public opinion in a way that facts could hardly have time to reach people's attention. Hence, the author decided to go ahead and unveil this plan in an article in the weekly Die ZEIT[30] – still risking to be on the black list of BDI ever since.

However, they did not only survive this difficult period, but the Greens and Social Democrats then even formed the first red-green government in Germany. In fact, in terms of numbers another constellation would have been feasible, too. The Social Democrats could have chosen - as before in the 70ies until 1982 - the Liberal Democrats as partners. Besides, the Liberals in Germany are – unlike their partners in the United Kingdom – much less environmentally progressive. But may be because Oskar Lafontaine as party leader had substantial influence at that time, the Greens, his preference, were chosen. In addition, there were similar constellations in the important state of North-Rhine-Westphalia. Equivalent structures on federal level would make politics easier. This was likely the crucial decision which helped the ETR to come on the agenda for implementation.

[30] Schlegelmilch, Kai: Auf zum letzten Gefecht. Wie der BDI mit einer unsachlichen Kampagne gegen Ökosteuern in den Wahlkampf eingreifen will (*Up to the front. How the Federal Industrial Association in Germany wants to influence the election campaign in an unobjective way)*, in: Die ZEIT, 02. July 1998, p. 25.

4 Design and Implementation of the Ecological Tax Reform in Germany

Major parts of the design, the implementation and the environmental impacts are well described and laid down in detail in a paper from the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.[31] Hence, it is generally referred to that and only very briefly summarized here. In a nutshell, energy taxes were introduced or increased in overall five small steps, announced ahead. The revenue was used to lower social security contributions to the pensions fund, a minor part of more than ten percent were used to favour environmental fuels, techniques and behaviour. Overall about two percent of total taxes and levies were shifted from labour towards energy/resource use in an almost revenue neutral way.

In the following, aspects of policy advise are at the core of debate, and in the next chapter, environmental impacts and experiences with public reactions. When the government and others reflected on how to best implement the ETR, it turned out that basically three issues had not yet been solved from the policy advisor side:

- how to exempt electricity from renewables from the electricity tax?
- How to treat and possibly differentiate business?
- How to take social aspects better into account?

Here, although Germany has had a debate of about 15 years and several dozens of studies, at least one dozen being of some practical use, good advice that could now be implemented as the window of opportunity had come, was missing. Since the implementation in 1999, at least better ideas have been developed on how to answer those questions, though only partly been implemented. Even though, researchers and policy advisors were closely involved in the design phase of the ETR no real valuable idea for answering these questions was put forward that could have been implemented. Overall three hearings took place in the Finance Committee of the German Bundestag to receive advise from all kind of stakeholders. In several parts, also a kind of brain drain was visible were protagonists of an ETR now came into positions in the government or parliament which allowed for directly influencing the process and decision making.

[31] BMU: The ecological tax reform: introduction, continuation and development into an ecological fiscal reform, September 2004, http://www.bmu.de/files/oekost_en.pdf, accessed 30.08.2004.

5 Experiences with the Ecological Tax Reform in Germany

As mentioned in the last chapter, experiences are described and laid down in detail in a paper from the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.[32] In the following, some particular aspects are selected and discussed, clearly more informal than it could be done in an official paper. The experiences were very ambivalent. The idea of an ETR was not well understood, particularly the fact that revenues were put into the pensions fund and were not used for environmental purposes. Many did not even realise that their social security contributions to this pensions fund had been reduced. Furthermore, the acceptance was only moderate since people did not like paying higher energy taxes while the world oil price increase was pushing gasoline prices up at the same time. Some even argued that spending more money on the pensions fund would delay any serious reforms in Germany's pension system. In fact, it turned out later this had been a major motivation for some influential political leaders.

There were always two schools of how to use the revenues: One argued one should not increase total influence of the state and thus reduce other more distorting taxes and levies. This was dominant in the 90ies and also adopted by the broad majority of protagonists, and clearly also from environmental NGOs where this position would not seem self-evident. Others argued that one should use the money for financing structural changes in transport, energy, agriculture and other sectors. This would imply an increase of the state quota, but ensure an acceleration of the structural change and hence the target would likely be reached earlier. The former school eventually succeeded, but for acceptance reasons, the extent to which the latter school gained influence increased over time. The latter found its way to implementation by an increased spending for modernizing the buildings stock from 2003 on.

In fact, it turned out that the political agreement to spend major parts for reducing labour costs was absolutely essential for the ETR to survive the major public debate in 2000. Had there been no planning and announcement to use the revenues for lowering the pensions fund contribution and had the lowering of the high unemployment in Germany not been the absolute top priority, the ETR would have been stopped very likely by Chancellor Schröder in autumn 2000. He would not have continued the ETR making his government unpopular if the revenues

[32] BMU: The ecological tax reform: introduction, continuation and development into an ecological fiscal reform, September 2004, http://www.bmu.de/files/oekost_en.pdf, accessed 30.08.2004.

were basically spent for some prestigious environmental projects. Only a strong fiscal driver can ensure the political survival of an ETR in critical situations.

In fact, in autumn 2000, when the world oil prices had quadrupled within the last 18 months, some tabloids blamed the increase of about 60 pfennigs (or around 0.30 €) on the ecotax. Although only one quarter, 12 pfennigs (0.06 €) could seriously be attributed to the ecotax. The other part was due to the increasing world oil price and exchange rate of the US-dollar. Even worse, major parts of the opposition, and even protagonists of an ETR from the conservatives in the mid-1990ies, including the former Environment Minister and now party leader of the conservative party, Angela Merkel, used the political situation to blame high fuel prices on the government as well. This situation did not make it easier for the government to communicate the facts and apparently given this debate the public is still influenced and there is no broad acceptance, but this varies around 30-50 percent. Somewhat encouraging is the general acceptance for lowering taxes for those who burden the environment less as polls show.

It was a bit schizophrenic that on the one hand the government offered a market-based instrument where the decision where, when, how and if to save energy was left up to every individual's decision to allow for maximum flexibility and freedom and thus a very cost-efficient approach – as often claimed. But on the other hand, people always and still do claim that the "good" government would certainly know best how to spend the money for the environment and thus it should also do so, but not use it for something else like the pensions fund, implying a higher state influence, opposed in general. People expected environmental impacts to stem from the use of the revenues, whereas the government expected environmental impacts to stem from the tax incentive itself. Reality finally confirmed government's point of view. The environmental impacts became clearly visible - although hardly any money was used for environmental purposes. According to figures from the Federal Statistical Office, fuel consumption in road traffic (in each case, figures are based on amounts of mineral oil taxed in Germany) has been decreasing continually, with decreases of 2.8 percent in 2000, 1.0 percent in 2001, 2.3 percent in 2002, 3.5 percent in 2003, 2.3 percent in 2004 and 4.9 percent in 2005. The biggest contribution to this development was petrol sales, which fell by 4.5 percent in 2000, by 3.0 percent in 2001, by 3.3 percent in 2002, by 4.3 percent in 2003, by 5.1 percent in 2004 and by another additional 6.2 percent in 2005. In 2000, 2002 and 2003, sales of diesel fuel decreased by 0.7, 1.2 and 1.6 percent, respectively. A slight increase was registered for diesel fuel in 2001, although this increase, at 1.4 percent, was much smaller than that seen in 1999 (+4.7 percent). The reasons given for this decrease include efficient, more reserved driving habits and overall mileage reductions, due to the higher petrol prices, and the lower specific mileage fuel consumption of new vehicles.

Goods transports on roads have also decreased in the past few years. The Federal Statistical Office reports that tonnage in road transport of goods decreased by 2.9 percent in 2001, 4.3 percent in 2002 and 1.5 percent in 2003. Decreases in railway goods-transport levels, at 1.6 percent in 2001 and 1.1 percent in 2002, were smaller than in the road-transports sector. In 2003, railway goods transports

actually increased by four percent. Transport companies are responding to the increased adaptation pressures by using their vehicles more and more efficiently. Pursuant to the Federal Office for Goods Transports, total no-load mileage of German trucks, as a percentage of total mileage, has continued to decrease, while the percentage share of with-load kilometres has increased further – in 2000, somewhat more strongly than in the years before: with-load kilometres as a percentage share of total kilometres increased from 71.4% in 1995 to 73.4% in 1998, to 74.1% in 1999 and to 75.3% in 2000.

In addition, in recent years the numbers of passengers travelling by public transport have begun increasing again. Following a downward trend in the numbers of passengers using local public transport up to 1998, these numbers again registered constant increases over five consecutive years. According to the Federal Statistical Office, the numbers of people using local public transportation have grown continuously since 1999: +0.4 percent in 1999; +0.8 percent in 2000; +0.8 percent in 2001; +0.5 percent in 2002, +1.5 in 2003 and +0.9 percent in 2004.

According to CarSharing, a nation-wide umbrella association of car-sharing providers, the numbers of people who are members of car-sharing agencies and who use their services increased by 26% in 2000, by 22 percent in 2001, by 8 percent in 2002, by 15 percent in 2003 and by 10 percent in 2004 (in each case, the increases are with regard to the previous year).

The climate, the environment, the job market and innovative enterprises all benefit from the ecological tax reform, as the reform makes it possible to reduce automobile traffic, with its high external costs; replaces automobile transports with more environmentally sound modes of transport; and reduces energy consumption and related environmental pollution by promoting use of alternative fuels. These positive trends need to be reinforced via a reliable framework; a reliable planning framework is one of the keys to energy-saving investments, which can take a number of years to pay off. A current research project points out single technologies and entrepreneurs benefiting from the ETR through increased energy cost savings, increased turnover due to new energy-saving technologies and more job opportunities through reduced labour costs.

Strictly scientifically, not all of those phenomena can be attributed fully to the ETR, and some is certainly also due to the high oil price. However, given people's perception that most of the fuel price increases is due to ETR (though e.g. in 2000 only a quarter was attributable to that), it could be justified to argue that the environmental dividend as just described could also be claimed by the ETR protagonists. And perceptions are facts and can have strong influences which justifies such a bit cheeky approach. Nevertheless the message is very clear: Prices matter – and this has to be enlarged to "Prices and perception/awareness matter". This is all that market-based approaches have to prove, either triggered by higher prices as seen in 2004 or by ecotaxes as implemented in Germany and other countries.

The positive impacts of the ETR in Germany were also confirmed by a study in 2001 by four institutes, led by DIW[33]. For the transport sector it said that CO_2-emissions in the transport sector would be reduced by 3.84 percent until 2010 against 1998. Here policy advise helped to get more rationality in the public debate, though this was basically a study for interested stakeholders. However, the government used the findings to underline the appropriateness of the ETR. An update of that study[34], now also including an ex-post evaluation of the ETR, partly empirically based on interviews, showed that about half of the population took additional measures due to the incentives of the ETR.

[33] Bach, Stefan et al.: The effects of environmental fiscal reform in Germany: a simulation study, in: Energy Policy 30 (2002) 803–811.

[34] See: http://www.bmu.de/files/oekologische_finanzreform/downloads/application/pdf/zeitschrift_umwelt_oekosteuer.pdf, studies: http://www.umweltbundesamt.de/uba-info-medien/oekosteuer.htm, media reactions: http://www.ecologic.de/modules.php?name=News&file=article&sid=1252

6 Conclusions

The major conclusions that can be drawn are:

1. Different waves of public debate on ETR led to an ever increasing chance for implementation. The perception and recognition of joint interests between environmental and fiscal accelerated the process.
2. However, industry successfully delayed implementation of an ETR, but also other effective market-based instruments by instrument hopping and by changing policy approaches just as appropriate to that end.
3. The likely rationale behind is that once such market-based instruments such as ETR are implemented in a more or less text book format, industry would be dependant almost completely on market forces. Though often claimed to be good, this should of course best never apply to one's own company as one knows the radical effectiveness of the market and thus the impacts of market-based instruments. Hence, negotiations on the design of an ETR and emissions trading – as the almost only remaining phase for lobbyism – became very important.
4. A fiscal driver appears to be crucial for the survival of an ETR in crisis situations, environmental arguments alone will not be sufficient. Still, fiscal and environmental stakeholders should become more aware of their joint interests and thus their "natural" alliance to exploit their full potential for the sake of the environment and the budget.
5. The usefulness of policy advise depends heavily on the phase of the political process, the stakeholders and the way it is provided.
6. It is not easy to generalize the process and explore the lessons learned in order to help other countries which are also working on the implementation of economic policy instruments. Every country has a very special set of national agendas, priorities and actors including the influence of certain people as it is explained for the German case in this paper. It is, however, important to really bring together different actors from the political parties, the bureaucracies, scientific institutions, industries to environmental NGOs with their counterparts in other countries to allow for creating a good network and for ensuring the same "language" spoken between the stakeholders. Such a transfer has e.g. been agreed between the Czech Ministry for the Environment and the German Ministry for the Environment back in 2002. This successful approach is about to be extended to other countries, the first is Poland.

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