ANALYSIS

No chance for incentive-oriented environmental policies in representative democracies? A Public Choice analysis

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Abstract

Using the Public Choice approach, this paper gives an explanation as to why in representative democracies, in which political entrepreneurs attempt to maximize utility, an incentive-oriented environmental policy has hardly any chance of being implemented. We discuss two main aspects: first, the reasons which make it difficult to enforce any kind of environmental policy in the competitive political environment. And second, why such a policy—if it can be implemented at all—is very often enacted with inefficient instruments. In order to give a satisfactory explanation of these 'execution deficits', we differentiate between voters’, politicians’, interest groups’, and bureaucracies’ behavior to show that there are conflicts with other policies, and that individual rationality may be the greatest obstacle in implementing most incentive-oriented environmental policies. In the final section we provide five suggestions for overcoming these difficulties. © 1999 Elsevier Science B.V. All rights reserved.

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1. Introduction

Apart from traditional economic studies of the effects of environmentally-oriented policies, it is important to analyze the implementation of these policies, such as taxes on fossil fuels or harmful (CO₂ ...) emissions, in representative democracies (There are numerous studies for Austria and Germany on this topic which will not be explored here, e.g. Schneider, 1993, 1994a; DIW (Deutsches Institut für Wirtschaftsforschung), 1994; Köppl et al., 1995; Schneider and Stiglauer, 1995). By using the Public Choice approach we will analyze the possibilities of environmentally-oriented policy measures. We discuss two main aspects: first, the reasons which make it difficult to enforce any kind of environmental
policy in the competitive political environment. And second, why such a policy—if it can be implemented at all—is very often enacted with inefficient instruments. We show that there are quite a number of incentives for political decision makers to implement command-and-control approaches instead of market-based environmental policies, even where those are economically and ecologically more efficient. Therefore, we will focus on the interaction among voters, politicians, interest groups, and the bureaucracy, especially concentrating on the individual (self-interested) preferences of the various actors within the framework of environmentally-oriented economic policies.

In our analysis we use the Public Choice approach. This implies that the state is not intended to be a homogenous body with uniform goals (i.e. welfare maximizing). Instead, all types of political decision makers should follow their own goals (methodological individualism). Therefore, we will focus on the interaction among voters, politicians, interest groups, and the bureaucracy, especially concentrating on the individual (self-interested) preferences of the various actors within the framework of environmentally-oriented economic policies. To state that people maximize their utility and follow their own goals does not mean that they must be selfish in the very narrow sense of the word. Altruism can easily be included. However, Public Choice analysis tries to propose institutions and incentive structures which can function without the assumption that all people are necessarily altruistic. From the Public Choice perspective, it is not surprising that, specifically in representative democracies, numerous well-founded suggestions (from a purely traditional economic point of view) for the ecologizing of the tax system have been made; but so far, hardly any incentive-oriented concepts have been enacted. Additionally, most studies do not investigate why decision makers have not adopted important measures that numerous economic studies propose, which widen our social market economy into an ecological social market economy. From the traditional economic perspective, environmental policy is shaped by the omission and inefficient use of instruments.

In order to give a satisfactory explanation of this ‘execution deficit’ within the framework of Public Choice theory, we differentiate between the behavior of voters, politicians (or governments), interest groups, and bureaucracies. (According to the authors’ knowledge, a small number of studies deal with Public Choice aspects of environmental policies, e.g. Holzinger, 1987; Frey, 1992; Horbach, 1992; Frey and Kirchgaessner, 1994; Weck-Hannemann, 1994; Gawel, 1995a; Kurz and Volkert, 1995, 1997.) With the help of the above differentiation, we explain why very little happens currently, or can be accomplished, toward ecologizing the economic system.

In Section 2 some basic interactions of the most important ‘players’, with respect to incentive-oriented ecological policies in representative democracies, are discussed. Section 3 examines voters’ support for environmental economic policy. There are two lines of arguments: first, the conflict between environmental goals and other economic goals, such as full employment; and second, the character of public goods and the possibilities of free rider behavior. Section 4 considers the chances of an environmentally-oriented policy being carried out from the perspective of incumbent candidates. Sections 5 and 6 examine interest groups’ and administrations’ influence on environmental policy. The paper ends with suggestions in Section 7 for overcoming some of the major problems.

2. The interaction of the most important ‘players’ with respect to incentive-oriented ecological policies in representative democracies

Various actors (governments, bureaucracies, voters, interest groups, etc.) are involved in the formulation of environmental economic policies. In Fig. 1 the major interactions among the actors in a representative democracy as well as the sec-
Fig. 1. A politico-economic model of the interaction of incentive-orientated ecological policies.

As a starting point, and an illustrative example for our analysis, we examine a parliamentary system. Some aspects are, therefore, different in other systems of government, as in the US. But this does not mean that all key points would differ from our analysis. Instead we try to mention some of the main differences, even if a detailed comparison lies far beyond the scope of this paper.

The voters are influenced by the exogenous conditions from the global and national environment and economy as well as the actions of interest groups. Most likely, the voters will make their evaluation of government performance on ecological and (short-term) economic conditions, especially if general elections are close. The survival of government is influenced by voters’ decisions at general elections. Consequently, in order to get re-elected, a government will pursue a policy which favors a majority of voters, and will closely interact (and cooperate) with the administration and some interest groups. A close interaction also takes place between the administration and the interest groups because both depend on the national economy/ ecology as well as on the exogenous conditions from the environment and global economy. The interest groups will form coalitions with various types of administrations in

\[^2\text{This applies especially to a parliamentary system of government. Nevertheless, quite a number of aspects apply to other systems of government as well, such as the US: the ‘survival of government’ and its implications could stand for the survival of the president as well as of the elected members of other political institutions.}\]
order to reach their self-interested goals. They have a preference for ‘administrative-ecological rules’ over the use of incentive-oriented instruments, a preference which is also in the interest of the various administrations. In the next sections, a detailed politico-economic analysis of the various actors is undertaken.

3. Voters: plenty of spectators but no advocates of an ecologically-oriented economic policy?

In this section we discuss the influence of voters on the political system and its consequences on the realization of incentive-oriented policies. Moreover, we ask how voters’ dependence on exogenous conditions affects this influence (Fig. 1).

Due to an increased sensitivity to environmental issues by over two-thirds of the citizens, the approval of a majority of Austrian and German voters for the implementation of sustainable economic policies is becoming more and more realistic. This is shown in the results of several surveys made in the 1980s and 1990s in Germany and Austria, from which one can derive that Austrian and German voters consider environmental problems increasingly important. They label these issues extremely high, second only to unemployment (see for example, the survey results of the IMAS Institute (IMAS, 1995, 1996) published at regular intervals in Austria, and see Horbach (1992) regarding the development in Germany). Based on this, one can propose the hypothesis that the likelihood of the enactment of environmental economic policies is rising. However, it should be taken into account that ecological goals ‘compete’ with other interests (e.g. pure economic goals) of the voters.

The question arises: who would bear the costs of environmental policies? If price elasticity is low, the consumers can be assumed to bear most of the costs. This implies that the majority of voters directly pay for such a policy. But what if price elasticity is high and only a small part of the burden can be passed to the consumers? The producers, including owners as well as workers, have to bear the costs. From this it follows that the resistance to environmental programs should be higher in regions with a high share of producer interests, which oppose such a policy, because a higher burden can lead to lower profits, wages, and employment in these regional sectors.

In Germany, empirical evidence for such a trade-off between the reduction of unemployment and ecological goals was found. Horbach (1992) points out that in regions with a high unemployment rate, environmental parties receive fewer votes in elections than in other regions. Furthermore, Horbach (1992) shows in an empirical study of Germany that the more important the chemical and steel industries are in a certain region, the worse the election chances are for environmental parties whose ecological economic policy programs could weaken the position of these industries. Citizens voting out of self-interest are, therefore, an obstacle to the approval of any kind of environmental policy. This implies that too little may be done, especially in those regions where environmental policy is needed the most.

New arguments have emerged in the recent international discussion on the double dividend. The implementation of incentive-oriented environmental tax policies need not be accompanied by an increase, but by a shift in the tax burden. In such a case there is no immediate trade-off between fighting unemployment and enforcing stricter environmental policies (OECD, 1997). It can be shown that an environmental tax generates a large number of winners among different economic sectors and firms with comparatively small gains. This implies that there should be a large group in favor of the tax alternative. On the other hand, there are a few definite losers among the firms whose economic position deteriorates quite substantially (Fiederer, 1998; Schneider, 1998). At first sight, politicians might be expected to enact such a tax alternative in response to the preferences of the majority of voters instead of caring for the minority of losers. But such an expectation would neglect important results of Public Choice

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3 In Sections 4–6 we show that despite these general obstacles, political decision makers tend to favor command-and-control regulation and not market-based policies even if the latter are more efficient.
theory. One of Buchanan’s and Tullocks’ (1996/1997, S. 36) main arguments against the distributive attractiveness of a tax alternative still holds for the actual double dividend discussion:

... a small, concentrated, identifiable, and intensely interested pressure group may exert more influence on political choice making than the much larger majority of persons, each of whom might expect to secure benefits in the second order of smalls...

Even if a double dividend would allow the fighting of unemployment by enforcing stricter environmental policies in the economy as a whole, there would still exist a political trade-off between the fighting of unemployment in small, intensely interested, and highly influential pressure groups of potential losers and an incentive-based environmental policy.

Even if voters’ self-interests are in favor of environmental policies, there are at least two prerequisites before a noticeable pressure toward ecologizing the economy can be reached.

1. Considerable time-lags between changes in voters’ ecological preferences, political actions and ecological improvements must not occur.
2. Citizens have to be well-informed about the consequences of the ecological problems.

Time-lags may cause inefficient results (i.e. when policy reactions against dangerous ecological developments come too late to prevent ecological damage with serious long-term consequences), and ecologically-oriented economic policies are characterized by high complexity, making it difficult to calculate the present and future consequences of such policies. Therefore, individual voters who want to evaluate such a policy need a relatively high level of education, otherwise they cannot calculate the current and future effects of the political parties’ various ecological programs. It is, therefore, not surprising that not only the good economic performance of a country, but also a high educational level among voters, has a positive influence on the election results of strongly ecologically-oriented parties (Schneider and Volkert, 1997). In addition to a well-educated body of voters, significant support for ecologically-oriented economic policy requires sufficient information about the ecological problems and the state of the environment as a whole. In contrast to these rather restrictive prerequisites of successful ecological policies, the effects of being unemployed can be calculated quite easily by most voters.

Let us now suppose that these first obstacles have been overcome. Even in such a situation, only some of the necessary ecological measures will gain substantial support by a majority of the voters. Citizens will vote for ecological measures which provide utility in the form of private (or at least club) goods, such as more restrictive ecological standards for producers in the neighborhood (concerning bad smells or the reduction of noise). However, other important ecological goals, from which a great number of people (scattered over the whole world) or even the future generations will benefit, take the form of public goods. Sustainability in a global context, with all its various worldwide implications, is just such a public good. In such a case, a voter who behaves in a utility-maximizing way has little incentive for casting his/her vote for the approval of such an environmental/economic policy. Instead, most voters’ investment motive favors those political parties which most strongly represent his/her own self interests (i.e. job security). Therefore, a large group of voters may act as free riders, leaving the votes for the approval of the environmental policy up to others. This means that the goal of improving the environment must compete for votes with self-interested economic goals having much less of a public good character. For example, one’s own employment situation will have a much higher priority than ecological economic policy, even though such policy is, by nature, beneficial for the general welfare of all voters.

Consequently voters care more about the economic short-term development (unemployment, disposable income, etc.) than about the ecological situation (Paldam, 1991; Schneider, 1994b). Such a behavior can delay or even prevent the approval of ecologically-oriented policies by the majority of voters. Even when a citizen is to some extent altruistic, well-educated, and informed, it is not
obvious that he/she as a (long-term oriented) ‘rational’ voter will support ecologically-oriented economic policies in general elections. He/she may believe that his/her influence on the electoral outcome is so minimal that he/she cannot change the actual political situation with the help of his/her vote.

It should therefore be taken into consideration that the ‘consumption motive’ is important regarding the participation of voters in general elections. The voting act itself often contributes to voters’ utility, independent of the election outcome. Such is the case when the voter is acting in accordance with ‘civic duties’. It is also possible that voting in general elections expresses the individual’s satisfaction derived simply from participating in the political process (similar to the satisfaction which these voters get by participating in political discussions or by supporting certain politicians (Brennan and Lomasky, 1983). On the basis of the very weak individual influence on the outcome of the election, it must also be taken into account that voters will generally be poorly informed about the issues at general elections and will, therefore, prepare their voting decisions on easily available information. If the voters’ information about environmental issues, such as sustainability, could be improved, then the election mechanism could serve as a suitable instrument for revealing preferences for the environmental policy measures. One reason for this is the independence of the consumption motive from the voting act, as well as the extremely low influence of individually cast votes on the election outcome. Because of this, individual preferences can be revealed without ‘danger’. Kirchgaessner (1996a,b,c) argues that supporting the moral arguments of green parties is relatively ‘cheap’ in an election and can therefore be expected as a special form of ‘ethical voting’ (Mueller, 1989). In this way, it is possible for a voter, in accordance with his/her actual preferences, to vote for radical and costly ecological reform measures because there will be no immediate consequences, such as higher individual tax burdens, from his vote alone.

High-publicity activities, such as those of the Club of Rome regarding the limits of growth or the focus of certain technological environmental policy issues, have been successful steps toward a reduction of the information deficit. On the whole, Horbach (1992) shows empirically that such activities have a positive effect on the sensitivity of voters to environmental problems as well as a significant positive influence on the realization of environmental policy measures in Germany.

To summarize the remarks about voter behavior: in many situations a majority of voters will not vote in favor of an environmental program if they are not well-informed about it. Another obstacle in the realization of ecologically oriented policies is that these or many of these programs provide benefits only in the form of public goods in future times, but have immediate cost (i.e. a higher tax burden).

4. Can politicians win elections with environmental programs?

This section refers to the incentives within the political system (Section 2). We discuss two main questions:

1. Do politicians have incentives to implement a sufficient level of environmental measures?
2. Are the existing incentives leading toward efficient environmental policies?

We begin with the discussion of the first question. If we consider the self-interested behavior of utility-maximizing politicians (e.g. politicians who are, at least at certain time intervals, primarily interested in being re-elected), the chances of ecologically oriented economic policy being implemented are poor. This hypothesis is supported by the fact that most environmental policies come quite easily into conflict with the preferences of politicians seeking re-election. These politicians favor economic policy measures which provide a majority of voters with immediate and noticeable utility gains, such as increased transfer payments. Moreover, the costs of these measures are either not visible for the average voter (e.g. by an increased state debt) or come into effect in future times (Schneider, 1994b; Volkert, 1996). The long-term effective utility gain of an ecological oriented economic policy can hardly be used for winning a

majority in a general election because future generations will receive most of the benefit from such policies. In addition, incentive-oriented environmental policy measures may burden the current generation (voters/taxpayers) with quite extensive cost increases or even rising unemployment in the short term (a fact which reduces the chances for realizing ecological economic policy through the political process even further). It is very likely that potential losers from ecological policies will organize a voting campaign against these policies because they are frustrated with an increased (tax) burden or other economic disadvantages, such as job losses or consumption reduction. The threat of job loss is especially important in this context because it is an issue which can be presented by a coalition between employers and employees in the affected production area. Such powerful coalitions will influence the behavior of politicians, making them either hesitate to implement the necessary environmental measures or even reject them.

One indicator of the low level of interest in environmental and/or sustainable economic issues of incumbent candidates is the fact that one can realize only a few election cycles in environmental policy. These cycles are observable, but also noticeably weaker than in other traditional economic policy fields such as increased government spending (Frey, 1992; Horbach, 1992). In these short-term oriented areas, more votes can be won than can with long-term ecologically oriented economic policy programs.

Since an ecologically oriented economic policy is less attractive to incumbent candidates, they will give low priority to this issue. This tendency is strengthened by the fact that the expansion of state activities is limited because these activities quickly stretch the public budgets to their financial limits. In such a situation, it is natural for utility-maximizing politicians to reduce subsidies or restrict programs in environmental fields because their re-election chances are least affected by such measures.

But even if the level of environmental activities may be too low, the question arises whether the remaining policies in this field are at least carried out in an efficient way. With respect to the use of economic instruments, it can be observed that self-interested politicians strongly prefer ‘vote-maximizing’ instruments, such as tax rate reductions or increasing transfer payments (see Pommerehne and Schneider (1978, 1983) and Schneider (1994b) for a detailed discussion on instruments used for securing re-election by utility-maximizing politicians). The resulting benefits of such policies can be directly associated with the responsible politician(s). With respect to incentive-oriented environmental policies, this direct link is often missing, and hence, we observe the tendency of politicians to choose instruments which are ‘inefficient’ in the traditional economic sense. The reason for this is that the re-election criteria of highly visible and immediately effective measures with postponed costs are more likely to be fulfilled by using regulations (i.e. standards) or, to a lesser extent, subsidies for environmental issues than by using the instrument of environmental taxes or tradeable permits. Incentive-oriented instruments are inefficient for the politicians’ re-election goals because the utility gains from these instruments are postponed until future times and will only be partially attributed to the current government. In contrast, the government will be immediately held responsible for an increased tax burden and the negative economic consequences (e.g. rising unemployment) induced by those instruments.

We can summarize that the level of environmental activities may be too low due to the incentive structure of incumbent candidates (Coates, 1996) discusses the role of campaign contributions in the US.4 While command-and-control instruments lead to immediate results, the effectiveness of economic instruments is based on new or different incentives. Because it takes time until

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4 This argument refers especially to parliamentary democracies. In other systems of government, such as the US, campaign contributions play a much more important role than in parliamentary democracies. Coates (1996) shows that campaign contributions alter the position of the recipients in the US House of Representatives toward wilderness and other environmental issues. However, there are more incentives to support policies which affect private goods and private rent-seeking outcomes than to contribute in favor of a public good like environmental improvements.
a sufficient number of decision makers have adapted their strategies to the new incentives, the ecological effects often come too late for incumbent candidates. The costs of command-and-control instruments as well as those of incentive-oriented instruments can be postponed. However, the costs of command-and-control instruments which can result in general economic inefficiencies are less visible than costs, such as higher taxes or an increased debt burden.

5. Lobbying for and against incentive-oriented environmental policies

In this section we discuss the influence of interest groups on the political system and the consequences for environmental policies (Fig. 1). As in the preceding section, we discuss first if political decision makers, such as members of lobbying groups, have incentives to implement a sufficient level of environmental measures. Second, we ask if the existing incentives lead toward efficient environmental policies.

The great importance of well-organized and well-informed interest groups is derived from the fact that the environmental legislation requires a large volume of specialized information before it is passed. This information is only obtainable with the assistance of interest groups. If the information from the various interest groups is equally reliable, the question as to which group will be able to achieve the strongest effect with their information, and thereby have the strongest influence in the political arena, turns out to be decisive in the behavior of the interest groups. The answer to this question depends on the successful organization of the group members’ individual interests as well as on the specific effectiveness of each interest group in carrying out its lobbying activities.

The members of environmental groups have very heterogeneous interests, making the organizational costs sharply rise with an increasing number of members. Second, future generations, who are the major beneficiaries of ecological or sustainable policies, must be taken into account; however, they are unable to contribute to the actual group activities, such as the financing of the various lobbying activities. This ‘disadvantage’ strongly increases the organizational and lobbying costs for the current members of interest groups favoring environmental policies. Third, at the beginning of their work, environmental interest groups often face the lack of a sufficient infrastructure, which is necessary for successful lobbying in the political arena.

The relatively high costs of ‘green’ interest groups will only be accepted by their members if these costs are clearly lower than the expected ‘rents’ or ‘utility gains’ which the group members try to achieve by their lobbying activities. From an economic perspective, however, there are further difficulties. Those rents can only be considered as ‘relevant’ additional rents from environmental policies when the group members benefit almost exclusively from them. This means that if the environmental interest group succeeds in attaining highly efficient lobbying and, finally, implementation of efficient environmental policies, every citizen will benefit from this policy. The results of environmental policy are often public goods: everybody receives the whole benefits (like less air pollution, better climate, etc.). There is no necessity to divide these benefits because they accrue to anyone. The crucial problem in very large groups of potential beneficiaries is that everybody benefits without any difference between those who have contributed to the results and free-riders who have not. A well-known result of the theory of collective action is the difficulty of achieving an efficient organization of very large interest groups which cannot monitor and sanction such a free-rider behavior (Olson, 1968, 1985; Schneider, 1985; Mueller, 1989).

From the Public Choice perspective, environmental groups must take high organizational and lobbying costs into account when working toward the long-term goal of ecologically oriented economic policies. These activities often do not yield the necessary high profits or utility gains until some time in the future; and moreover for the individual, this achievement has the character of a public good.

If one considers the position of more traditional interest groups (e.g. the producers), not all of
them are necessarily against environmental policies. Environmental protection industries might benefit from environmental policies through additional business. Hence, it is obvious that the success of their lobbying is dependent, among other factors, upon the extent to which changes along the lines of a sustainable development have already taken place. Horbach (1992) shows that the passing of extensive environmental protection legislation becomes possible when environmental protection industries make up a considerable share of economic production and employ a significant number of workers. An accelerated speed of environmental policy activities will be easier to attain when these industries form an interest group, thereby creating a counterbalance to those interest groups which oppose environmental policies.

Aside from the environmental protection industries, most other traditional industries oppose environmental policies. Most of these interest groups have the advantage that their size is smaller than those groups which benefit from environmental policy. Therefore, they face lower organizational and lobbying costs and do not experience free rider behavior to a great extent. If these interest groups succeed in providing information which is used in the political arena to weaken environmental policies, the short-term benefits from such lobbying activities are much higher than the ‘pure consumption utility’ for the individual group member. These benefits can be interpreted as a return on investment in the political arena, whose absolute value can be calculated from the value of the gained monetary advantages.

There are five main reasons why interest groups, which oppose most environmental policies and which combine both employer and employee interests, not only are better organized, but are also better able to achieve their self-interested goals:

1. In contrast to environmental interest groups, the respective industry and business associa-

2. Producers themselves are closest to the origin of environmental problems in the production sector. That is the reason for substantial information asymmetries. Therefore ‘green’ groups often have difficulties in getting information about pollution effects as well as about the feasibility of alternative technologies. This lack of sufficient information in discussions with well-informed industry groups, who can filter the relevant information according to their own intentions, makes the environmental groups’ task even harder.

3. Based on this information asymmetry, industry and business associations often have considerable influence on public opinion through their own publications as well as through their effect on the media.

4. The ‘market power’ of these interest groups is a crucial factor in the achievement of their goals in the political arena. It is not only important in the goods and services market, but in the labor market as well, especially in the form of the threat of transferring production abroad.

5. Quite often these associations gain personal representation in legislative institutions (parliament and committees) which makes it possible for them to postpone or even reject environmental issues.

Above all, individual representatives of industrial and business interest groups are able to influence legislative proposals in their early stages through active lobbying in hearings and other

5 That is, information about subsidies for an environmentally compatible policy, or strategies for the reduction of cost burdens from environmental policies.

6 While this aspect is decisive in parliamentary democracies, the ability to make campaign contributions is another major point, as in the US (Coates, 1996). However, in parliamentary democracies, campaign contributions are less important.

7 The considerable influence on the public opinion is a result of informational advantages, the solid financial background, and the specialized lobby organizations which face very good conditions for successful activities. However, one should note that environmental groups are nowadays sometimes better represented in the media than their opponents because of spectacular actions (for example, Greenpeace vs. Shell in fall 1995).
parliamentary committees. For that purpose, they provide detailed information about environmental measures. This has the effect of linking together lobbyists and members of legislative bodies. As a result of this relationship, arrangements are made between the political administrative system and ‘private’ interest groups of the economy. In Germany, such agreements have become common practice in more than 50 industrial committees and ‘voluntary self-obligations’ (for example, the obligation in the automobile industry to produce cars with a ‘3-l engine’), as well as in several hundred committees for the definition of the ‘best available technology’ (Maier-Rigaud, 1996; Helbig and Volkert, 1999) (the legitimacy of interest groups, not only in this field, would be a promising topic for further research, but this would go far beyond the mainly positive analysis that we present in this context). Due to this successful lobbying, the efficiency of environmental policies is reduced. Consider, for example, the compromises which are made in the form of modifications benefiting influential polluter interests in Germany. These compromises are only argued as being ‘economically tolerable’. However, this catchword is quite often only a political ‘excuse’ instead of an overall well-sounded economic argument (Sandhövel (1994a) mentions the Bund der Deutschen Industrie (BDI) and the Deutsche Industrie- und Handelstag (DIHT) as two especially influential producer interest groups).

From the Public Choice perspective it is obvious that industry groups, who are directly affected by environmental policy measures, prefer the instrument of setting fixed standards to other environmental incentive-oriented instruments. A major reason for the preference of this instrument is that industries only have to make sure they do not to reach the limits of these emission standards. The outcome is that all emissions which remain below the limit are free of charge. Furthermore, defining these standards often provides affected industries considerable leeway for manipulating the environmental policy measures. For example, negotiations can be held regarding specific technical standards which can lead to exemptions (loopholes) for the affected firms. Since the information from affected companies on pollution prevention technologies and costs is more detailed and more precise (but quite often one-sided), such agreements (compromises) are mainly made in the interest of the (private) producers. In comparison to other policy instruments (i.e. ecological taxes) exemptions can also be more easily carried out when standards are employed. Also, in many cases, a further tightening of standards would prove to be difficult and ineffective because administrative controls are unable to monitor and sanction violations of these tightened standards. Therefore, the additional cost to companies of preventing pollution increases to a lesser extent the more difficult the control becomes and the higher current level of environmental protection measures. Furthermore, standards can lead to market entry barriers if potential competitors produce with different technologies, which results in a large rent-seeking potential for old emitters.

The preference of interest groups for administrative environmental regulations has also been found in surveys of the affected companies. According to Horbach (1992) two-thirds of the German companies favor standards, whereas only one-third favor levies or taxes. It is interesting that those companies who argue in favor of standards estimate that environmental standards are easier to fulfill and cause fewer conflicts and costs than environmental taxes. This statement can also be seen as an indicator of the significant leeway that is gained when environmental standards are used. Therefore, the interest groups’ preferences for administrative environmental regulations are not surprising. One reason for this is that in Germany much less leeway results from the use of environmental taxes. The broader acceptance of US industry for market-based mechanisms may, therefore, be caused by the different regulatory structures. The USA tends to be more rigid and transparent, but in Germany, enterprises and industries have many more possibilities to manipulate the outcome of command-and-control instruments. The institutional setting of environmental bureaucracies is, therefore, of great impor-

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8 We thank an anonymous referee for this important remark.
tance in the direction of lobbying activities (Jaedicke et al., 1993) (Section 6). 9

6. Public administrations’ resistance against incentive-oriented environmental policies

The political influence of producer and other interest groups is not only relevant in the legislative arena, but also at the administrative level of the political system. This is most important because the influence of the public administration, such as in Germany, has continuously increased due to the shifting of executive power. This is especially true in the course of the preparation and early implementation of environmental policy programs.

Administrators necessarily play a significant role in setting environmental regulations. In the preceding section we asked how this affects environmental policy in general and whether the efficiency of such a policy is influenced by bureaucratic activities.

Since most public administrations have a superior knowledge due to intense contacts with the affected interest groups and industries, the bureaucracy has acted more and more often as a generator of momentum and as a mediator for organized interest group preferences. The task of the legislature has increasingly been reduced to the mere legitimization of those programs whose contents have already been (pre)structured by the administration. Furthermore, lower levels of environmental administrations have been growing in influence on the concrete structure of complex environmental programs. In Germany, for example, the industrial inspection board (Gewerbeaufsichtsamt) and community environmental agencies (Umwelta¨mter) have become more and more important in the realm of permission, control, sizing, and sanctioning of environmental-politically relevant activities (Horbach, 1992; Gawel, 1995a).

The empirical studies of Holzinger (1987) demonstrate that German environmental administrations are not completely bound to instructions and do not fully act according to the legislation’s decisions in order to fulfill the legislator’s environmental goals. Holzinger’s studies reveal that bureaucrats follow their own interests, whereas goals such as ‘economic efficiency’ and ‘overall economic cost optimization’ are of only minor importance for the employees of German environmental administrations. Environmental authorities are vitally interested in environmental policy measures, which are labor- and resource-intensive. If they succeed in applying such policies, they can grow quickly. As a result, they are able to increase their number of employees, and each year they have a larger budget at their disposal. The result of this is that the environmental administrations will try to implement those environmental policy measures which require high administrative controls.

Using the theories of bureaucracy from Niskanen (1971) and of Migué and Bélanger (1974), one can analyze the consequences of these goals of budget maximization and/or optimal discretionary budgets. According to the study by Holzinger (1987), about 76% of all surveyed employees working in environmental authorities in Germany demand an increase of their budgets in combination with additional responsibility.

If the goal of budget maximization in a given surrounding is difficult to achieve for the environmental administration, then, according to Migué and Bélanger (1974), the administration will pursue the objective of expanding their discretionary budget. According to Gawel (1994, 1995b), 49% of surveyed employees in German environmental administrations wanted political authorities to regulate as little as possible so that the environmental authorities had the greatest possible discretionary budget for their own decisions. Only 36% favored a clear regulation of environmental procedures. Discretionary budgets are also necessary in order to meet the demands of those lobbies for which the different environmental sections of German ministries have become even more important than the parliament.

In spite of these normal day-to-day cooperations, a number of conflicts can arise between the administrations and interest groups. For example,
according to almost 50% of surveyed enterprises in the German iron and steel industry, the intensive cost burden due to planned environmental protection measures caused conflicts with the respective executive administrations. According to Sandhövel (1994b) and Ullmann (1982), the same sector, however, reaches most ‘compromises per firm’ with environmental authorities. These compromises are reached in spite of the generally weak bargaining position of the administrations. As empirical studies for Germany show, there is little incentive from the perspective of the environmental bureaucracies to engage in lengthy, formal, and/or legal confrontations with affected companies and their interest groups because, in doing so, funding is tied up and can no longer be used in pursuing the goal of additional employees. Moreover, environmental bureaucracies quite often have poor labor resources (especially in regions with a large share of ecologically harmful industries), which significantly reduces their chances for successful negotiations with well-organized producer interests (see Horbach (1992) for a survey of the relevant studies).

The asymmetrical distribution of bargaining power between firms and environmental authorities results in compromises in environmental standards and in allowances concerning the best available technology. Further indicators of the rather weak bargaining position of environmental authorities in (potential) confrontations with producer interests are the comparatively low sanctions as well as the relatively mild punishments. In Germany, sanctions are only carried out against approximately 5% of firms which, due to environmental regulations, need business permits. According to the environmental administrations, the reason for this stems in no way from the widespread adherence to existing regulations, but rather the difficulty of gathering proof, the high administrative costs of investigations, the desire to avoid damaging the relationship with the addressee, and the insufficient infrastructure of the penal system. Considering the small number of prosecuted violations, the low amount of the applied official sanctions is even more surprising, and can be explained due to the weak position of the administration. In the German city of Kiel, for example, 714 prosecuted violations of environmental protection regulations resulted in only about $40,000 in fines, approximately $55 per case (see Volkert (1996) regarding the weak position of environmental authorities).

Despite the weak bargaining position of the bureaucracies, some measures can be carried out. The reason for this is that conflicts between potentially affected firms and the administration in Germany mainly occur with respect to the intensity of the environmental policy measures, but less often with respect to the type of instruments to be used. The incentive structure of bureaucracies has many similarities to the incentive structure of business associations with respect to the preferences of certain policy instruments. For example, administrations also prefer the use of environmental standards which can only be supervised with labor- and resource-intensive execution efforts, allowing them to expand their budgets. Moreover, standards have relatively high discretionary regulatory requirements such as for example

- a formulation of an exact definition of the given environmental goal and consideration of the best available technology,
- definition of sanction threats,
- determination of minimum requirements, and
- definition of control and observation rights.

These high-discretionary regulatory requirements increase the influence of bureaucracies. The discretionary budget pursued by the employees of environmental authorities is extended even further by the setting of standards when negotiations are held with the affected industries or interest groups. Furthermore, standards are characterized by a certain amount of rigidity, which is desirable from the bureaucratic point of view because it lowers transaction costs. Lastly, because of the high demand for information often caused by the setting of environmental standards, further budget increases can be justified.

In Germany, on the one hand, the incentive structure of bureaucracies has many similarities to the incentive structure of business associations with respect to the preferences of certain policy instruments; bureaucracies in Germany have extensive leeway when implementing command-and-control instruments. Industry groups in Germany,
therefore, also favor these kinds of instruments because any producer can achieve special treatment and exemptions which are out of reach if market-based economic instruments are implemented. On the other hand, in countries where the administration is bound to stricter regulation and has much less leeway, like the US, industry groups may favor market-based instruments which impose lower transaction costs. Moreover, the potential rents which can be gained by each enterprise are not sufficient to lead to a preference for command-and-control instruments. Therefore, an institutional setting like the US can lead to a conflict between business associations who prefer more efficient market-based instruments and administrators with a preference for command-and-control instruments. But in an institutional setting like in Germany, there is a clear preference of most business associations and administrations for command-and-control instruments. The only conflict is whether an environmental policy should be implemented at all.

In addition to standards, subsidies are another instrument preferred by environmental administrations. They are attractive for the employees of administrations and for the politicians as well because they can often be used in vote-maximizing strategies. The granting of subsidies, which are often (co-)determined by the environmental authorities, can reduce environmental damage through benefits instead of burdens, and costly confrontations with the affected industries can be avoided. One must, however, take into consideration that the use of environmental subsidies can only be ecologically successful if enough financial means are shifted away from budgets of other administrations or if additional revenues are available. But because ecologically oriented policies are relatively unattractive for incumbent candidates these instruments will not take a dominant position in comparison to the instrument of environmental standards.

The evaluation of ecological taxes from the perspective of environmental administrations is completely different. While standards can only exist with high labor costs and other expenditures, the use of taxes requires much less expenditure and less staff. Hence, a budget increase or rise in the importance of environmental authorities is less likely to occur than with the use of standards. Furthermore, the change from the current system of environmental standards to a system of taxes would require a high degree of flexibility in the environmental agencies. One should also note that establishing an ecological tax system requires large amounts of information on producers’ pollution prevention costs, which may not be easily available to the administrations. In contrast to the use of taxes, the information requirement which an environmental authority would face with the use of tradeable permits is notably smaller because almost no information on companies’ marginal pollution costs is required. Detailed information is only necessary for the tolerable total burden, for the ‘correct’ total emission amount derived from it, and for the estimation of the economic effects of such tradeable permits.

Using tradeable permits would increase the economic efficiency of the executing administrations, but for the administrations this is no advantage. First, the obviously lower information requirements make it rather difficult to justify a large official budget. And second, the gained discretionary budget is very small compared to the use of standards. It is also questionable if the additional revenues from tradeable permits could be spent by the environmental administration. Furthermore, it should be noted that the instrument of tradeable permits is the least well-known and least established instrument in German speaking countries. This can explain the strong resistance of state administrations to the use of tradeable permits, which are often, from an economic point of view, highly efficient environmental policy instruments. These considerations are supported by surveys in which German bureaucrats gave the poorest evaluation of all environmental policy instruments to tradeable permits (Holzinger, 1987; Horbach, 1992).

7. Concluding remarks

Public Choice theory assumes that political entrepreneurs are self-interested utility maximizers. Consequently, an environmentally incentive-ori-
Entitled policy has hardly any chance of being implemented. It is, therefore, not surprising that a significant ‘execution’ deficit can be observed. In this paper various difficulties which could hinder the establishment of ecologically oriented policies have been discussed. These include the public goods character of environmental measures, the fact that the costs of environmental measures show up immediately and the benefits much later, and widespread preferences for the use of standards. Perhaps some of them can be overcome with the help of the following suggestions, which are only rough ideas and need further elaboration.

7.1. Decentralized environmental policy according to the principle of subsidiarity

The principle of subsidiarity should be used more extensively in environmental policy. According to the principle of subsidiarity, each environmental task shall be fulfilled by the smallest or most decentralized unit. Following this principle, the costs/utilities of many environmental measures could be more effectively ‘localized and accredited’ to the affected parties if they were divided into small distinct units. This is necessary because the environmental situation, the attitude of the affected parties toward the environment, and the economic policy measures differ strongly over the regions. Another aspect is that the subsidiarity principle is necessary in order to be able to design an environmental policy according to voters’ preferences. Moreover, information costs for voters are lower if environmental policies are decentralized. As we have seen in Section 3, only sufficiently informed citizens will vote in favor of environmental policy. Making information cheaper in a decentralized policy according to the principle of subsidiarity is, therefore, very important (especially for environmental policies). Moreover ‘green’ groups face fewer problems to become organized and sufficiently informed if their lobbying activities can be restricted to a certain region with a smaller number of producers as well as a much smaller number of people who are potential beneficiaries of environmental policies.

7.2. Referenda—an institutional progress

Even in a decentralized environmental policy, the individual voter/taxpayer in representative democracies has few possibilities to directly influence ecologically-oriented policy measures. This difficulty can be overcome by introducing direct voting (i.e. the use of a referendum). In the case that the environmental measure is accepted by the voters in a referendum, politicians have a much better legitimization for the implementation of measures than without voters’ approval. The importance of referenda for environmental policies is a result of various factors. In a direct democracy, people can act as agenda-setters and make decisions about alternatives which are not attractive for incumbent candidates because, for one reason, they are opposed by highly influential pressure groups. This implies that an environmental policy, in general, as well as market-based instruments, which are hard to enforce in political competition, have better chances in referenda than in the normal process of a parliamentary democracy. Moreover, referenda can initiate a discussion process among the voters which supplies them with more information, makes them evaluate the possible alternatives in more detail, and possibly changes their attitude. And, as the experience in Switzerland shows, politicians are also more tightly bound to voters’ preferences if they know that one-sided measures in favor of influential interest groups can be abolished by direct democracy (Frey, 1994). (As noted by Kirchgassner, 1996a,b, strong resistance by interest groups to environmental taxes has been observed in Switzerland.) Decision makers will, therefore, pay more attention to topics like environmental policies, which are less attractive as (re-)election goals but important for the majority of the citizens. In the case that an environmental measure is accepted by the voters in a referendum, politicians have a more legitimate reason for the implementation of such measures than without voters’ approval.
7.3. Compensation by general tax reductions

The chances for an incentive-oriented environmental policy can, under certain conditions, be improved by compensating the additional burden of ecological taxes and tradeable permits through general tax reductions. In this way, voters’ resistance against ecological activities, which tend to increase the citizens’ burden immediately without raising utilities in the near future, could be reduced. Politicians’ view that an economically efficient environmental policy, which increases voters’ burden immediately for the sake of long-term improvements, is not attractive at all could be solved by financing the programs with debt. 10

7.4. Tying ecological tax revenues to environment-related instruments

Another political suggestion is the strengthening of the position of ecologically sensitive producers. One could give up the non-affectation principle in the area of (future) environmental levies and taxes. As a result, these additional revenues can directly be used to finance environmental policy projects. Examples for this, according to Cansier and Krumm (1997), are the SO₂-, NOₓ-, and CO₂-taxes, which are levied in France, the Netherlands, and in Scandinavia. The revenue from these taxes can be used in environmental projects or to subsidize companies which apply advanced pollution prevention technologies. If ecological tax revenues are tied closely to environment-related expenditures it would be difficult for rent seekers to gain these revenues. The result would be a more solid financial background for environmental policy with steadier flows of disposable revenues.

It should be noted that these suggestions might help to overcome the above-mentioned difficulties in implementing incentive-oriented policies in representative democracies, however, a detailed analysis of how these suggestions can be realized is missing, and is left for further research.

References