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Abstract
The political economy idea developed by Ackerman and Hassler (1981) is the starting point of this paper. It suggested that a coalition of environmentalists and industrialists successfully lobbied the US Congress. More strict technology-based standards for new sources than existing sources was the resulting policy outcome serving the common interest of the coalition because it both offered a barrier to entry for new firms and improved environmental quality. We focus both on cases from air and water pollution in the US confirming which seem to confirm this suggestion and the case of international climate negotiations and the promotion of wind-based energy. In the line of the Ackerman and Hassler approach we suggest that the reason for EU eagerness to push forward ambitious reduction target levels (and thereby promote new green industries) is a similar coalition between industrialists and environmentalists. Such a strategy can be seen in the context of the Bootleggers and Baptist theory developed by Yandle (1983), where the Baptists (in our case the environmentalists) demand changes in behaviour on moral reasons. In contrast, the Bootleggers (the producers of renewable energy), who profit from the very regulation, keep a low profile. The actual heavy subsidisation of renewable energy sources, such as wind energy, can be viewed as a successful policy outcome for the coalition of industrialists and environmentalists offering both market protection and improved environmental quality. Solving the current dead-lock in international climate negotiations across the Atlantic may well imply fighting the strong coalition of industrialists and environmentalists. Such a political battle may turn out to be just as tough as fighting windmills if not clearly investigated in future research.

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1. Introduction

Sometimes interest groups, that are traditionally opponents, join forces. In the case of environmental regulation, this may happen when an increase in both market protection and environmental quality can be combined. As suggested by political economy theory, industrialists will actively lobby for more market protection in the political arena to increase their profits, e.g. by achieving subsidies or by establishing different types of barriers to entry, see e.g. Tullock (1967). Environmentalists, on the other hand, pursue higher environmental quality in order to maximize membership numbers in their groups (Svendsen, 1998).

The contribution here is to suggest that the main reason for two puzzling policy outcomes within environmental regulation may be explained due to a rare coalition of industrialists and environmentalists. We set out to analyse a new puzzle, namely the case of international climate negotiations and the promotion of wind-based energy. To our knowledge, this issue has not been discussed in the literature yet. In order to do so, we draw on ideas and experience from another puzzle, which is the remarkable result from Ackerman and Hassler (1981) demonstrating how the US Congress permitted special interests, i.e. a bizarre coalition of environmentalists and industrialists, to lobby and succeed in achieving environmental regulation in favour of existing producers. Most prominently, we will focus on the fact that a market barrier is established in the US environmental regulation because new sources face stricter technology-standards than existing sources.

Yandle (1998) claimed that there were some signs of an emerging bootlegger-and-Baptist coalition in the global warming issue beginning to emerge in the US. The Bootlegger-and-Baptist theory's name draws on colourful tales of states' efforts to regulate alcoholic beverages by banning Sunday sales at legal outlets. Baptists eagerly approved such actions on moral grounds. Bootleggers accept the actions happily because their effect was to limit competition. For example, environmentalists provide the cover story on which media attention is focused, while companies, industries, or countries work silently in the background to gain profits. Yandle (1998) states that e.g. bootleggers in the US are alternative energy firms: Subsidies for solar and wind power and for ethanol and methanol might be easier to get if the US commits itself to cutting carbon emission.

In the same way we put forward a hypothesis that the global warming strategy of the EU, which has been based mainly on moral grounds (Brandt and Svendsen, 2002), in remarkable ways resembles the Bootlegger-and-Baptist theory of hidden alliances.

During the negotiations in The Hague, 2001, the US dropped out whereas the EU stayed as the driving force. According to Brandt and Svendsen (2002), the Kyoto agreement imposed unnecessarily high costs of implementing the targets. In particular, the hot air issue and free trade restrictions, together with the strong incentives to free ride on agreements to alleviate the climate change problems, add significantly to the explanation why the United States dropped out of the Kyoto agreement. Why did the EU not drop out too? One explanation could be that the EU feels morally obliged to act on the basis of their responsibility for the present stock of anthropogenic greenhouse gasses in the atmosphere (see e.g. Woerdman, 2001). However, we offer an alternative explanation, which gives a more down to earth economic rationale for the EU to push forward ambitious greenhouse gas (GHG) reductions. The reason, it will be argued, is that just like the coalition between industrialists and environmentalists in the US, a similar coalition in the EU has fostered market protection, i.e. heavy subsidisation of wind energy production. This economic incentive may explain why the EU and its smaller member states pursue a cooperative strategy in what otherwise resembles a prisoners' dilemma like problem. Recently, for example, the EU proposed in Johannesburg, South Africa, a 15% target level for renewable energy out of total to come from sources such as windmills, solar panels and waves by 2015 (UN, 2002).

By contributing to the understanding of the current policy outcome within international climate negotiations, this paper adds also to the debate about the feasibility of unilateral actions. Hoel (1991) mentions that if 'setting a good example' is the main reason for unilateral actions, then such actions will at best reduce the overall emission level (but by less than the unilateral reduction itself), but at worst, actually increase total emissions. Hoel (1991, p.69) concludes that: "it might not be particularly sensible for an environmental group in a country to try to force its government to unilaterally reduce the countries emissions". Our paper now presents two cases where unilateral action most likely stems from mutual interests and the rare coalition of industrialists and environmentalists. After reviewing the EU case concerning global warming and the promotion of wind energy (Section 2), we turn to the US case, focusing on the Clean Air Act and the Emission Trading Program (Section 3).

2. Global Warming and the Promotion of Wind Energy

In this section we present an example of how EU's environmental policy on global warming, which has been justified on a moral obligation to act (see e.g. Woerdman, 2001), has the potential to support export of its windmill industry and fits nicely into the Bootlegger-and-Baptist theory's of hidden alliances.

2.1 Prisoner's Dilemma and the Kyoto Agreement

Several papers recognize that the basic incentive structure in the climate change issue resembles a multiplayer prisoner's dilemma game (Barrett, 1998, Sandler, 1997). In a prisoners dilemma game each player has a dominant strategy not to contribute with abatement efforts. In a two-player version, the normal form of the game looks as depicted in Table 1 below.

Table 1: *Basic incentive structure: prisoners' dilemma.*

Country 1	Country 2	
	Cooperate	Do not cooperate
Cooperate	(10,10)	(0,20)
Do not cooperate	(20,0)	(**4,4**)

Note: (*,*) means pay-off (country 1, country 2).

Table 1 shows the non-cooperative equilibrium outcome in bold (4,4), which is clearly non-optimal compared to the cooperative outcome (10,10). This implies that reaching an effective agreement to address the climate change issue is complicated. Even worse, the necessary carrot-stick approach to change the prevailing incentive structure is not easily identified (Barrett, 1998, Mabey et al., 1997). Barrett (1997) notes that credible compliance mechanisms and effective monitoring systems are crucial in situations with strong free-riding incentives. Under such circumstances it is necessary to find the right 'carrot-stick' approach, since progress will only result by finding the right mix of threats (against non signers) and incentives to promote participation.

Barrett (1997) argues that credible threats containing multilateral sanctions were presumably the main reasons why full participation in the Montreal Protocol could be sustained. On the contrary, Mabey et al. (1997) state that such initiatives are useless in the climate change problem. One reason being that the main oil producing and oil consuming countries are different. If sanctioning is a non-feasible strategy the only remaining possible way to change incentives is to make participation in the agreement more beneficial (compared to non-participation). It has, however, not yet been possible to identify ways of doing this, other than trying to minimize the costs of participating, by, e.g., using a cost efficient approach such as a tradable permit market.

A very concerned country might initiate unilateral actions if such actions act as ‘setting a good example’. Unilateral actions appear in many areas of the international society, e.g., unilateral reductions in armaments, unilateral aid to developing countries, unilateral reductions in trade sanctions or increases of trade concessions, and in the field of transboundary pollution problems, unilateral cut backs in emissions. Unilateral actions to alleviate international environmental problems have been analysed in e.g. Gupta and Ringius (2001), Hoel (1991) and Barrett (1990). The general result is rather pessimistic suggesting that leadership of this kind is seldom rewarded.

In the light of this, it has been surprising to observe the EU eagerly arguing in favour of implementing the Kyoto-agreement, in spite of the fact that the USA rejected the agreement.1 Furthermore, Denmark has chosen a high 21% reduction in 2008-2012 compared to 1990 emission levels. By holding on to such high levels of reductions Denmark’s actions resemble unilateral actions, since the total reduction of the Annex 1 countries is about 5.2% and, with the USA not ratifying the Kyoto-agreement, even less. The excessive reduction’s by Denmark compared to the average reductions by the annex 1 countries, is undertaken in spite of the fact, that Denmark’s reductions only have a non-significant effect on the global stock of GHG-gasses in the atmosphere.

2.2 Why the EU has been more energy restrictive than the US?

The main reason for developing more energy efficient technologies in the EU can be traced back to the first oil crisis in 1973, where the oil price increased four-fold. Back then the EU had huge imports of oil in the 1960s and 1970s whereas the United States was self-supplying. Such EU dependency on oil imports meant that the, had a severe impact on the economies of EU member states thus forcing them to develop new and more energy efficient technologies, see Darmstadter et al., 1971 concerning the EU oil dependency.

This oil price shock caused, for example, the Danish development of the wind turbine industry due to generous subsidization of wind energy after 1973. The most important subsidy has been a price guarantee per produced kWh (kilowatt-hour): ‘Without these subsidies, windmills as suppliers of electricity would not have been competitive compared to traditional power plants and hence the

[1] Bush announced in March 2001 that he opposed the agreement because it largely exempts developing countries and would harm the economy. Washington Post, June 2, 2001.

producers of windmills would not have got a foothold in the Danish industry. The effect of these subsidisation schemes is highlighted by the development in demand where a large part of the wind turbines produced in the pioneering years in the 1980s were sold domestically whereas exports made up a substantial part of sales in the 1990s.' (Hansen et al., 2002, p. 1). In Denmark, 15 per cent of all electricity in the year 2000 was from wind energy (BTM Consult, 2001). Technological progress can also be a by-product when a country engages in a unilateral move to cut emissions, since such a move provides incentives for investments in R&D to find less polluting technologies. More broadly, technological progress includes development of new technologies, invention of new goods, or simply new (or better) insights gained in managing the pollution substances.

These observations indicate, as suggested by Porter (1990), that, in this case, it may indeed pay a country to subsidise its infant industries initially and then hope for future exports. Still, the ability of the state to pick the future winners in the market can be questioned. First, it could simply be a lucky punch as no one knew back in the 1970s that the greenhouse effect would be taken seriously a couple of decades later. Furthermore, a new report by the Danish Economic Council (2002) has questioned the profitability of the Danish wind turbine sector so far. It argues in detail that the investments undertaken by the Danish state have not paid off yet.

Two other factors, that may contribute to the relatively more tight energy policy in the EU compared to the US, is the level of energy taxation and geographical distances between home and work. Evidently, energy taxation is significantly higher in the EU than in the United States (OECD, 2002). Therefore, energy savings give a better return in the EU due to a higher level of tax savings.

Finally, geographical travelling distances between home and work, etc., are generally higher in the United States than in the EU. Therefore, Americans are more dependent on cars and cannot tax them as highly as the Europeans can for political reasons. The petrol price of one litre in the EU typically matches the price of a gallon (3.8 litres) in the United States. It is a common everyday observation in the United States that politicians do not dare to increase the petrol prices because their voters will be aggressively aware of any such step.

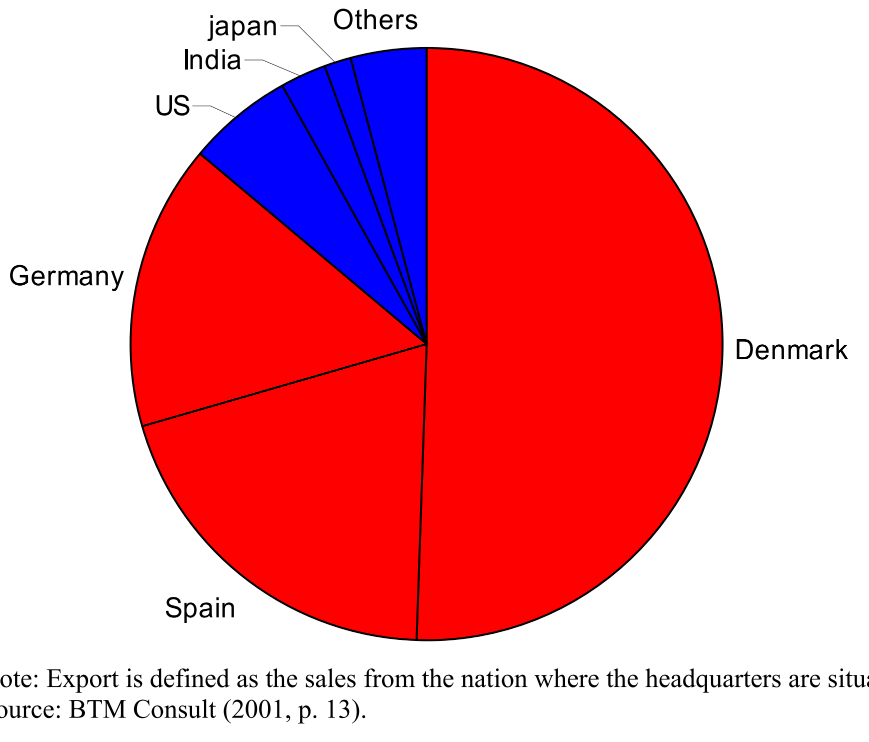
For these reasons, we find most 'green industries' in EU member states. For example, German car producers have developed the so-called '3-Litre-cars' enabling a car to run 100 km on three litres of diesel (Svendsen, 2003). In this way, numerous energy-efficiency and recycling technologies are prevalent in the EU. The rise of new green industries in the EU means that industrialists can cooperate with environmentalists simply because these new technologies improve environmental quality. Strikingly, this result could explain why the EU has been eager to make the costs of meeting the targets implied by the Kyoto agreement unnecessarily high by arguing for serious restrictions on free trade in CO_2 permits (Svendsen, 2003). Free permit trade could, under the best circumstances, reduce marginal reduction costs significantly and keep conventional energy production more competitive than renewable energy sources.

2.3 The Promotion of Wind Energy

The wind power share of world electricity generation was 0.08 per cent in 1996. In the year 2000 it had tripled to 0.25 per cent and in 2010 the share is projected to be 1.78 per cent, which is more than seven times higher than the 2000 level (BTM Consult, 2001, p. 37).

Concerning the top ten turbine manufacturers world wide, the Danish company, Vestas, was the biggest wind turbine producer in 2000 with roughly 18 per cent of the total. The Spanish company, Gamesa, is number two closely followed by other German and Danish producers. Each nation's share of the market in 2000 amounts to 51 per cent for Denmark, 18 per cent for Spain, 16 per cent for Germany and 15 per cent for the rest. Thus, the market is clearly dominated by EU wind turbine producers who have more than 85 per cent of the market share, as many producers in the 'Others' group are also located in the EU. This is summarized in figure 1

Figure 1: *Countries' market shares of windmills producers in 2000*

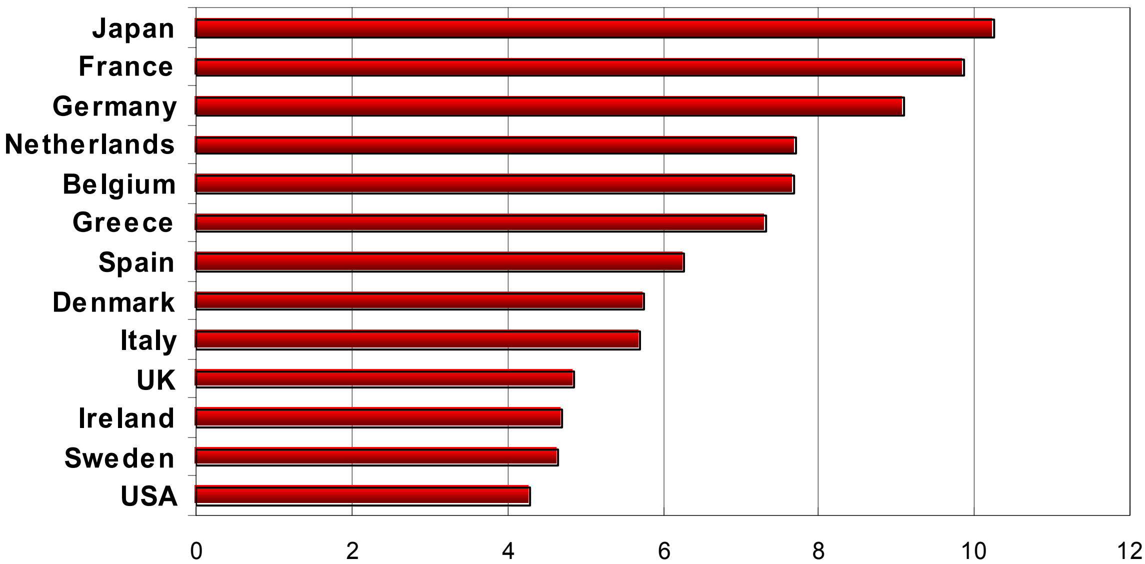


Note: Export is defined as the sales from the nation where the headquarters are situated.
Source: BTM Consult (2001, p. 13).

More specifically, the first 13 wind turbine manufacturers supply more than 95 per cent of the world market. The majority of the turbine producers are Danish companies (DK), which operate worldwide, typically exporting 70- 90 per cent of their total production. For example, the biggest firm, Danish Vestas, had an average export share of 83.4 per cent for 1998–2000 (BTM consult, 2001, p. 15).

The reason for the rapid and profitable market development within the wind turbine industry is the fact that most Western European countries by now subsidise renewable energy sources. This to boost market introduction of wind turbines to reduce CO2 emissions and other harmful externalities following the use of fossil fuels. Figure 2 shows the subsidy rate per kWh in 2000.

Figure 2: *Subsidy rates for wind electricity in selected countries. Subsidies in eurocent per kWh, 2000.*



Source: BTM Consult (2001, p. 38).

Subsidy rates are highest in Japan, France and Germany and lowest in the United States. As noted by BTM Consult (2001, p. 38), one has to be cautious as the subsidy rates listed in figure 2 must be: '…looked upon in connection with other regulations and laws, among those tax laws, depreciation rules, property taxation etc. within the different countries' and '…there are several other incentives in the listed countries which might apply to the investment in wind energy.'

The International Energy Agency states that the key to the commercial success of wind energy lies in the fact that, through research and development, generation costs have been lowered significantly to an average about 5 $cent/kWh in good wind regimes. The future target of the wind turbine industry is to reduce average generation costs to about 2 $cent/kWh by 2020. In comparison, conventional sources of fossil fuelled energy vary in average costs from 3–5 $cent/kWh (IEA, 2002b). Another estimate suggests that the generating costs of wind turbines will match the costs of fossil fuels by 2005 (EWEA, 2002b). BTM Consult (2001, pp. 37–38) describes the impressive cost savings in wind energy production starting with the average cost of 16.9 $cents/kWh in 1981. The lowest subsidies in Table 2 therefore roughly correspond to the current kWh production prices for both fossil fuels and wind energy, and therefore the present level of subsidies must be considered most attractive to investors.

3. Technology-based standards in the US

The examples presented in this section show how environmental regulation can serve as a strategic instrument for groups (with high lobbying power) to gain competitive advantages over groups without such lobby power. In this case established (incumbent) firms over potentially entrants (i.e. innovative firms trying to enter markets) will be met with more demanding technological requirements hidden as environmental necessities.

3.1. Technology-based standards

Concerning air pollution, the US Environmental Protection Agency (EPA) has, in the Clean Air Act of 1970, defined two sets of air pollution standards, namely the National Ambient Air Quality Standards (NAAQS) and technology-based standards.

The NAAQS target levels were, in many areas, more stringent than actual air quality. Still, they were supposed to have been met for all the specified pollutants in 1975.2 The Clean Air Act divided the US into 247 geographical areas for the purpose of controlling air quality. Many areas, especially the urban ones, did not meet the NAAQS on schedule.

An attainment area is one of these areas that meets the NAAQS for a specific pollutant, whereas a non-attainment area is one that does not meet a particular NAAQS. The 1977 Amendments to the Clean Air Act required individual states that were in violation of one or more of the standards to

[2] In contrast to this national air pollution approach, the Clean Water Act of 1972 delegates the setting of water quality standards to the individual states because the effects from water pollution in general are more localized.

develop State Implementation Plans (SIP) and thereby demonstrate which measures they would take to reach the target levels.[3]

The second set of standards consists of three technology-based ones. They define control-technology for each of the seven air pollutants and represent the traditional CAC approach to regulating emission levels, in which no trade is allowed to circumvent the standards. The three technology-based standards are the Lowest Achievable Emission Reduction (LAER) standard, the Best Available Control Technology (BACT) standard and the Reasonable Available Control Technology (RACT) standard. LAER is the most stringent standard, BACT is the next most stringent, and RACT is the least.

The 1970 Clean Air Act Amendments distinguish between existing, new and modified sources. Existing sources are those that existed when the trade systems started in the mid-seventies. All sources built since then are new. Modified sources are alterations of existing ones that have led to significant increases in emissions. When determining which technological standard to apply, the regulator first must determine whether the maximum ambient standard, the NAAQS, for a given pollutant is exceeded. If so, the area is designated a non-attainment area. If not, the area is designated an attainment area. This distinction has implications for which technology-based standard is applied. In a non-attainment area, a new source faces the most stringent technology-based standard, LAER. In an attainment area, a new source faces the less stringent BACT. The same is the case for a modified source.

Existing sources are better off. In a non-attainment area, an existing source faces the least stringent RACT. In an attainment area, the existing source faces no standard. However, states are obliged to maintain existing air quality. This is normally done in both attainment and non-attainment areas by using permit markets. Even though the resulting state standards can vary a lot, they are typically no more stringent than RACT and may be less (Hahn and Hester, 1989). In general, new and modified sources must meet more stringent technology-based standards than existing sources do. This stricter limit on emissions from new sources is an effort to reduce overall emissions.

[3] Until the Clean Air Act of 1990, states chose their own way of demonstrating continuous efforts for reaching the NAAQS. Most states chose to use the trade rules for permit markets recommended by the EPA. The new Clean Air Act of 1990 now makes it obligatory, in some cases, for states to use permit markets in dealing with their hot spot areas (see Elman et al. 1992).

3.2 Emissions Trading Program

The US Emissions Trading Program (ETP) serves as an illustrative example. Here, the target levels are defined in terms of the ambient and the technology-based standards. Thus, the target groups consist of any major stationary source that otherwise would have been controlled under CAC regulation because of emissions of one of the criteria pollutants. Only sources within the target group may take part in the permit market.

Whenever a source reduces its actual emission below the emission limit, the source can apply to the control authority for certification of the ‘emission surplus’ as an Emission Reduction Credit (ERC). The trade rules of the ETP govern how the ERCs can be spent. To receive certification, the emission reduction must be surplus, enforceable, permanent and quantifiable (Tietenberg, 1985). This distribution rule corresponds to grandfathering, because historical emission rights are handed over for free; no financial transfers to or from the government are involved. For attainment areas, grandfathering is based on the lower of the actual or allowable emissions. In non-attainment-areas, grandfathering is based on the emissions from the SIP. Therefore, the existing CAC infrastructure is the basis on which permits are historically grandfathered in the market. The only difference is that it is possible to trade and exchange permits.

The ETP consists of four trade rules, or ways in which sources are allowed to trade their ERCs: netting, offset, bubble and banking. Trades must be for the same pollutant, and interstate trading is allowed only as long as the requirements of the more stringent state are met.

Netting was introduced in 1974. Netting is optional and available only to modified sources. It allows these sources to avoid the more stringent technological standards applied to new sources, that is, LAER in non-attainment areas and BACT in attainment areas. Netting means that new emissions from plant modification are met with an equal decrease in emissions from another source within the same plant. The trade is, by definition, internal, and the trade-ratio, when defined as the amount of reduced emissions divided by the increase in new emissions, is one.4

In contrast, the offset rule applies to new sources. It was introduced in 1976. Offsetting is mandatory for new sources both in non-attainment areas (when meeting LAER) and in attainment

[4] If modified sources choose not to use netting, then offsets are mandatory in non-attainment areas and the LAER cannot be avoided by trade (Hahn and Hester 1989a:370).

areas (when meeting BACT). The offset rule allows plants to locate new sources only if they can offset their new emissions by reducing emissions from existing sources by even larger amounts.

The bubble rule applies to existing plants with several emission sources. Introduced in 1979, it is optional for existing plants when trying to meet RACT (in non-attainment areas) and state standards (to prevent any significant deterioration) in attainment areas. Its purpose was to give existing sources the same trade options as were available to new sources under the offset rule. An imaginary bubble is placed over the multi-source plant so that emission levels for the various smokestacks may be adjusted in a cost-effective manner such that the aggregate limit is not exceeded. According to these rules, when modifying a source, existing plants only have to meet the standards for existing sources (RACT in non-attainment and state standard in attainment areas), not the standards applied for modified or new sources.5 But the bubble concept differs from netting in three important respects. First, it does not require that technology-based standards on individual smokestacks are met; only the total emissions from the plant count. Second, the bubble can be used for external trade. Third, the trade ratio will typically be higher for bubbles than for netting so that more must be reduced than newly emitted.

At present, bubble rules, formulated by the EPA in 1986, mandate that the trade ratio should be set at 1:1.2 at least, so that emissions be cut back by at least 20%. Most important is that an ambient test, that is a test to show that the trade has no significant negative impact on air quality, may also be required. In general, an ambient test applies when the pollutants are particulates, SO_2, CO or lead. For VOC and NO_x, no such test is required. The test requires air quality modelling unless the emissions increases are below certain minimum levels, or unless sources are located within 250 metres distance and certain other conditions are met (Klaassen, 1996). In the cases where an ambient test is applied, the ETP resembles the Modified Pollution Offset (MPO) because no increase in concentration contributions is allowed after trade. This attempt to fix the existing air quality level at its pre-trade level means again, as in the NO case, that administrative approval must be obtained for each trade.

The final trade rule, banking, is not really a 'trade' rule, but rather a 'store' rule. It allows existing plants to save or 'bank' an ERC for subsequent use (in the bubble, offset, or netting programs). It was introduced together with the bubble policy in 1979, and the EPA has established guidelines for

[5] Whether it is allowable to use bubbles and external trade for significantly modified existing sources in non-attainment areas and attainment areas, and thereby avoid new source standards, depends solely on state practice.

banking programs. However, states must set up their own rules and administer the rules governing banking themselves.

Only offsets are mandatory, and they are applied only to new sources. Under the offset rule, new sources cannot avoid LAER by trading in non-attainment areas or BACT by trading in attainment areas. Netting and bubbles are optional so that modified sources may use netting, and existing sources may use bubbles, thus avoiding the most stringent technology-based standards by trade. The four trade rules and their linkage to the technology-based standards are summarized in table 2.

Table 2: *Technology-based standards and trade rules in ETP*

Area*	Source	Technology Standard	Trade Rule	Mandatory?	Replace Standard by Trade?**
N-A	New	LAER	Offset	Yes	No
A	Modified	LAER	Netting	No	Yes
N-A	Existing	RACT	Banking	No	Yes
A	New	BACT	Offset	No	No
N-A	Modified	BACT	Netting	No	Yes
A	Existing	(State)	Banking	No	Yes

Notes: * N-A = Non-Attainment, A = Attainment. ** Including use of banked permits.
Source: Based on Hahn and Hester (1989a:368–71; 1989b:114–36); Tietenberg (1985:2–9 and 117).

Thus, besides the fact that new sources must ensure that existing plants reduce emissions by more than emissions are increased, they also are forced to invest in the newest technology. This extra barrier to entry is created because a more stringent standard is in effect for new sources. As a result, a new source cannot be established by the purchase of permits alone. This limits the demand for permits; the amount of permits bought and sold would rise if LAER (BACT) controls were not required for new sources in non-attainment (attainment) areas.

Furthermore, bubbles are only allowed for existing facilities, not new ones. Only an existing facility can avoid the LAER standard by trading emissions internally or in the area covered by the bubble. This is in line with the more stringent standards for new sources. New plant construction is consequently reduced and so is the demand for permits.

Another example is the so-called Acid Rain Program, which calls for major reductions of sulphur dioxide (SO_2). The Acid Rain Program is a consequence of the 1990 Clean Air Act legislation, Title IV, and may be viewed as an extension of the ETP. As with the ETP, technology-based emission standards are applied such that more stringent standards (LAER and BACT) are imposed on modified and new sources. New sources cannot circumvent these standards by trade, and modified sources can do so only when state practice allows it (Ellerman et al., 2000).

Within water pollution, similar examples are found. Here, ambient water quality standards are established by the individual states and must be approved by the EPA. Overall, these standards and their use correspond to those required by the Clean Air Act again working as a barrier to entry for new firms (see Svendsen, 1998, for further details).

In trying to explain why environmental regulation is designed this way, we can again apply the theory of Bootleggers and Baptists. In our example, federal environmental regulations replaced common law with command-and-control enforcement of technology or specification standards, rather than call for performance standards or use emissions taxes and other economic incentives to reduce environmental harm.

As seen above, the distinct feature of specification standards is that they generally set stricter limits for new and expanding plants than for existing ones, giving a competitive advantage to existing producers. Bootleggers who already use a particular technology are not likely to support performance standards, which does not yield an advantage over new, probably innovative, and competitive firms.

4. Conclusion

We stated the hypothesis that some environmental regulation in the US is passed because it favours existing firms, but the advantages of these firms are covered by pointing to the environmental necessity of the regulation. This hypothesis is based on the political economy idea developed by Ackerman and Hassler and the Bootleggers and Baptist theory developed by Yandle. They suggested that a coalition of environmentalists and industrialists successfully lobbied the US Congress, on the expense of new sources and the dynamic effects of the potential of entry.

More strict technology-based standards for new sources than existing sources was the resulting policy outcome serving the common interest of the coalition because it both offered a barrier to entry for new firms and improved environmental quality. The problem from the society's perspective was that market protection in this way is detrimental to overall economic growth.

Potential new firms could not influence the decision-making to get equal technology-based standards for both existing and new firms not being present in the political arena yet. This idea was generally confirmed when focusing on cases from air and water pollution in the US.

We also analysed the case of international climate negotiations and the promotion of wind-based energy. Here, we wondered why the EU has been the driving force in promoting global greenhouse gas reductions in contrast to the US which dropped out in The Hague, 2001. In the line of Ackerman and Hassler and Yandle, we suggested that the reason for EU eagerness to push ambitious reduction target levels, (and thereby promote new green industries) was a similar coalition between industrialists and environmentalists.

These incentives can cast a different light on the strategy of the EU in the climate change issue than being driven solely by real concerns for environmental protection. The incentives can be seen in the context of the Bootleggers and Baptist theory. Here, the Baptists (in our case the environmentalists) push forward changes in behaviour on moral reasons whereas the Bootleggers (the producers of renewable energy), who profit from the very regulation, stand in the background and earn their profits.

As demonstrated, the EU countries started subsidising wind energy production at an early stage after the first oil crisis. We argued that the current level of these subsidies generally was at a very high level compared to the production costs of electricity. Such heavy subsidisation of renewable energy sources could again be viewed as a successful policy outcome for the coalition of industrialists and environmentalists offering both market protection and improved environmental quality. Future research could make further attempts to establish whether this suggestion indeed explains why the EU and its smaller member states, such as Denmark, pursue a cooperative strategy contradicting the prisoners' dilemma problem. If so, political decision-makers, academics and the public must be made aware of the true motivation for the tough EU bargaining position that caused the current dead-lock in international climate negotiations across the Atlantic. Fighting the potentially strong coalition of industrialists and environmentalists to improve environmental policy might be just as hard as fighting windmills.

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