
ENFORCEMENT OF ECONOMIC INSTRUMENTS

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GOALS

The discussion covered the three topics of most interest to the participants.

- Why is there such interest in the potential application of economic (or market-based) instruments to help solve environmental problems?
- What are particular examples of economic instruments being used in economically developed and developing countries, and are these approaches effective and efficient?
- What lessons have been learned about these instruments, in particular designing them to ensure compliance and enforceability?

1 INTRODUCTION

More than 50 participants from more than 15 countries met in four separate sessions. Representatives of countries in all stages of economic development were involved in the discussions.

2 PAPERS

Two papers were prepared for the workshops. The one by Peters and Alblas was dealing with the enforcement of environmental charges in The Netherlands. It is often claimed that charges are easier to enforce than direct regulations. Unfortunately, no regulatory charges are being used in Dutch environmental policy, so it is not possible to compare the enforcement-burden of these two instruments on practice. Experience, however, has been gained with financing charges. The examples presented in this paper illustrate that there is a trade-off between the regulatory effectiveness and the enforceability of these charges. For reasons of feasibility and enforceability, concessions are made on the correspondence between the charge-base and the environmental problem, thus limiting the regulatory potential of the charge. The decisions made on the specifications of the charge-base indicate that enforcement problems would rise if a charge is aimed at the regulation of behavior of a specific firm or household. From the point of view of enforcement, the relative advantages of charges compared to direct regulation seem therefore to be limited. Charges can, however, improve the enforceability of other instruments by correcting prices that cause environmentally unfriendly behavior.

The paper presented by John B. Rasnic was dealing with the enforcement of economic instruments in the United States. The United States is moving aggressively toward more market based or economic incentive programs (EIP) for limiting pollution. Many believe that in the long term, market based programs have a better chance at success in pollution prevention and encouraging clean technologies than the more traditional approach of command and control. The economic approach tends to tap the resourcefulness of the entire community by bringing out their desire to obtain a product or service at the least overall costs. To accomplish their goal of internalizing all costs, economic programs must include those costs associated with environmental protection required in delivering a product or service in order to be the most successful. For most of these economic instruments to work effectively, they must be backed by clear regulations, enforceable permits to establish emission rights for trading, an effective compliance promotion effort and an aggressive

enforcement program. This paper describes several types of economic instruments, their enforcement challenges and the current activities at the USEPA to implement them.

3 DISCUSSION

3.1 The interest in the potential application of economic instruments

The participants agreed that there was a great deal of interest in all of their countries concerning the potential application of these instruments. Not only were governments promoting the idea; in some countries, the regulated communities (industries in particular) were pushing their environmental regulators to consider economic instruments rather than command-and-control regulations. In other countries, industries were fighting these instruments because industry preferred the predictable future of a command-and-control regulation.

There were different opinions, however, about whether the interest was justified. Would economic instruments turn out to be just another “flavor of the month” in environmental protection, or were there benefits worth considering closely?

The interest in economic instruments is coming from the potential benefits that these approaches appear to offer. The participants agreed that the benefits still seemed to be potential, rather than having been proved in practice. Yet the potential benefits warrant the high level of interest.

Potential benefits of economic instruments are as follows. Note that many of these benefits overlap.

- Economic instruments offer the potential to achieve environmental protection goals at reduced cost over the alternative of command-and-control regulations. Frequently, regulations can go against market forces and increase the costs of environmental protection.
- In theory, using an “autonomous economic impetus” is likely to be more efficient and effective in achieving environmental goals.
- The approach supports important principles such as: “polluter pays” and the internalization of all environmental costs by industry.
- These instruments can lead to more support and cooperation from the target group, i.e. the group being regulated. People are likely to be more cooperative when they see that they have some freedom to choose how they will comply with an environmental requirement.
- These instruments increase the flexibility that the state has to deal with environmental issues.
- The burden gets shifted to companies to work out their most appropriate compliance strategies, rather than with the government.
- The use of economic instruments can promote the introduction of new technologies better than command-and-control regulations.
- Governments around the world are running short of resources to support the traditional command-and-control approach. Economic instruments might reduce costs of program design, monitoring and enforcement.
- There are economies in the world that are in the midst of major transitions. Governments and industry have to find the most efficient ways to achieve their goals.
- Economic instruments might be more suitable than command-and-control for promoting an ecosystem-wide perspective to environmental protection.

- These approaches can promote continuous reduction in environmental problems. But properly written command-and-control regulations could have the same benefit.
- These approaches can be used to raise funds for other environmental purposes and programs.

3.2 Examples of economic instruments

Several important points were agreed to as part of the listing of individual economic instruments.

- It was sometimes difficult in practice to draw a sharp line between economic instruments and the traditional command-and-control approach. The two approaches frequently blended into each other in particular cases. For example: are fines and penalties an economic instrument? All economic instruments have a regulation underlying them, and most have fines or penalties as part of their regulations.
- It is hard to define economic instruments rigorously. One suggestion made was that a difference between economic instruments and command-and-control regulations is that economic instruments have the explicit purpose of letting people choose, legally, whether they will follow a proposed environmental action. Command-and-control regulations prohibit any such choice.

3.2.1 Deposit-refund systems

Most countries have systems like this, for drink containers, packaging, etc. To be effective, the country must have systems for collecting, recycling, reuse, etc. of the materials being returned. Otherwise, there can be perverse results with the returned material just piling up or being exported elsewhere and distorting other countries' environmental measures. There were several examples of this happening.

Some countries are experimenting with deposit-refund systems for larger items such as cars, refrigerators, computers etc. Norway has such a system for cars. The Netherlands is proposing this approach, preferably based on a voluntary agreement with industry.

3.2.2 Marketable (tradeable) permits

There is a lot of interest in this approach, but limited experience with it outside of Europe and North America.

To work properly, the state should have markets within which the tradeable permit scheme can fit. For developing countries and those undergoing radical structural change, this can be a problem.

This approach might not be consistent with the legal environmental system in countries that require polluters to use the "best available technology". That is, the permit specifies the maximum allowable pollution but the polluter is legally required to reduce pollution if it is feasible to do so. In such a case, a reduction in pollution has no economic value and therefore could not be sold.

There is a great deal of interest in this instrument, especially for dealing with air pollution problems.

3.2.3 User charges for environmental goods (water, waste disposal, effluents, etc.)

Many countries have these kinds of instruments.

3.2.4 Taxes, including a "greening" of the tax system

Examples include taxes on energy, waste, groundwater use and pesticides.

3.2.5 Subsidies, including accelerated capital write-offs for pollution abatement and control equipment

Governments will probably be less interested in these incentives, because they tend to reduce government revenues.

Examples of such subsidies are in the fields of energy savings, energy efficient appliances and the promotion of new environmental technologies.

3.2.6 Eco-labeling

These labels support product differentiation in the market, and so exert an economic effect on the manufacturers.

3.2.7 Environmental logos for "clean" companies

This kind of certification can lead to cheaper bank lines of credit, lower insurance costs and more informed consumer choices. An example is the voluntary audit system within the European Union.

3.2.8 Strict liability and compensation schemes

Making environmental polluters strictly liable for their damages can force an economic incentive on them.

This is a particularly interesting instrument in that it can work even in the absence of effective environmental monitoring and enforcement. But it does require an active citizenry and an effective court system.

3.2.9 Environmental performance bonds and financial guarantees

3.2.10 Full-cost pricing of environmental goods, including demand management by pricing

3.2.11 Fines and penalties

There were different opinions as to whether these are economic instruments or not. Regulators point out that fines and penalties can change behavior by affecting profitability.

In practice, states rely on combinations of traditional regulations and economic instruments, both of which use fines and penalties to ensure compliance.

3.2.12 Soft loans for environmental protection objectives, from multi-lateral institutions and others

3.2.13 Environmental compensation policies

Could require compensation either in financial units or real environmental units, such as replacing destroyed wetlands with new wetlands.

4 CONCLUSIONS

The discussions in the groups focused on what lessons could be learned about these instruments, in particular designing them to ensure compliance and enforceability.

- Environmental agencies should not think in “either-or” terms. Economic instruments should be viewed as another tool to achieve environmental goals. They will be appropriate to some circumstances, and not in others.

The original goal of having these instruments replace command-and-control regulations was highly unrealistic. It turned out that the costs that would have to be imposed were far too high. For example: the increases in energy prices that would have to be imposed to bring about the desired behavioral changes would have led to serious social unrest, especially in developing countries.

- Economic instruments frequently go hand-in-hand with command-and-control regulations. For example: most countries with deposit and refund systems also ban littering.
- The economic instruments must be designed to ensure equity across income groups.
- There is little experience yet to show whether the claims for increased efficiency of these approaches can be achieved.
- Need to ensure compatibility across jurisdictional boundaries, or the economic instruments can lead to searching for the best deals. Dumping, for example of recyclables, can occur.
- Be sure to apply the economic instrument at the most appropriate place in the production-consumption-disposal chain.
- Transaction costs can be high. Economic instruments typically require a great deal of information, some of which will be new.
- Experience has been too limited to determine the compliance and enforcement costs or approaches. However, it is likely that technical enforcement resources will continue to be required for economic instruments. Might also need new types of monitoring and enforcement, such as financial and trading audits.
- Some economic instruments are designed to work even though the government does not have good compliance monitoring and enforcement. For example: strict liability does not require environmental monitoring. But it does require an active citizenry and effective civil courts.
- Environmental problems that pose immediate threats to human health or the environment will probably continue to require command-and-control regulations.
- The introduction of economic instruments such as tradeable permits requires a good system of data collection and monitoring. These systems can be expensive.
- Enforcement costs for economic instruments are not necessarily lower than for command-and-control regulations.