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Gwartney - Stroup
Sobel - Macpherson

Difficult Environmental Cases and the Role of Government


Full Length Text — Part: 6 Chapter: 13
Micro Only Text — Part: 4 Chapter: 10

To Accompany “Economics: Private and Public Choice 12th ed.”
James Gwartney, Richard Stroup, Russell Sobel, & David Macpherson
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Government Regulation and the Environment

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Why the Market May Fail to Protect the Environment

- Well defined property rights and enforcement by courts can help owners protect their property against invasions by others, including polluters.
- However, when there are a large number of emitters, a large number of persons harmed by the emissions, or both, it will be difficult—if not impossible—to define, establish, and fully protect property rights.
- In these large-number cases, high transaction costs undermine the effectiveness of the property rights–market exchange approach.

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Economics of Government Regulation

- Government regulation is an alternative to market process. While regulation holds some promise it also possesses deficiencies.
- Regulation is often sought because the harms are difficult to measure and the source of the problem cannot easily be demonstrated, and so relief from the courts is difficult to obtain.
 - But when the harms are uncertain, so too are the benefits from reducing them.
- **Tunnel-vision** by regulators often leads to their failure to appropriately consider costs.

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Economics of Global Warming

- Global warming (*a hot button issue*) illustrates issues that often accompany government regulation.
- Fuels such as coal, oil, & natural gas emit carbon dioxide when they burn.
- Carbon dioxide is not a pollutant in the normal sense, rather it is a gas that is essential for plants, and thus is necessary for life on this planet.
- Nonetheless, a build up of carbon dioxide creates a greenhouse effect and it may have contributed to the 1.4 degrees (fahrenheit) increase in global temperatures during the past 100 years.
- But, there is uncertainty about the importance of carbon dioxide as a source of global warming.

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Economics of Global Warming

- There is uncertainty about the importance of carbon dioxide as a source of global warming:
 - The earth experienced substantial temperature change long before the Industrial Revolution began to dramatically increase fossil-fuel consumption.
 - Two periods of the past 2,000 years stand out:
 - the Medieval Optimum (a warm period from about 700 A.D. to 1200 A.D.), and,
 - the Little Ice Age (a period of temperatures significantly colder, on average, than today, from about 1560 A.D. to 1850 A.D.).

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Is Global Warming Necessarily Bad?

- There is a tendency to assume that a warmer world will be bad. But this may not be true.
- The climate in some areas — particularly those distant from the equator — will become less harsh and more livable, enhancing the productivity of people in those areas.
- The warmer climate, longer growing season, and the higher levels of carbon dioxide will tend to enhance productivity in agriculture.
- While some diseases might become more prevalent, economist Thomas Gale Moore has shown that warmer climates are on balance healthier.

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Mitigation vs. Adaptation

- The approach of the Kyoto Protocol is *mitigation* —reducing carbon emissions to keep temperatures from rising as much as they otherwise would.
- The opportunity cost of slowing global warming under the Kyoto Protocol would be extremely high —growth would be reduced— and the expected affect on world temperatures extremely small.
- The *adaptation* approach makes changes when and if problems actually occur.

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Mitigation vs. Adaptation

- Growth and development will make it easier to deal with problems that may arise as the result of global warming.
 - Wealthier people are better able to make adjustments and deal with risks.
- Given the uncertainties related to the cause of global warming, uncertainties of its net impact on quality of life, huge cost of taking mitigating actions, and uncertainty of the possible benefits, most economists believe that adaptation is the more sensible strategy.

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Market-Like Approaches To Pollution Control

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Economics of Pollution Control

- There are 2 major “market-like” approaches to control pollution:
 - *pollution charges & taxes*, and,
 - *Emissions standards & tradable permits*.

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Economics of Pollution Control

- *Pollution charges & taxes*:
 - Under this approach, the government levies a *tax* (or charge) on pollution emitters.
 - The amount of the tax (or charge) decreases with emissions, thereby providing emitters with an *incentive* to reduce the pollutants it is putting into the air, water, and / or soil.
 - *Efficiency* results only if the tax (or charge) is set at equal to the marginal cost imposed on those harmed. **But**, without a market, there is no way regulators can obtain this information.
 - This approach has been used only sparingly in the United States.

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Economics of Pollution Control

- **Emission standards & tradable permits**
 - A pollution-control authority (such as the *Environmental Protection Agency*) sets the total amount of emissions allowed in an area (a "cap"). It then assigns (*or sells*) permits for the emission of a given amount of pollution.
 - These permits are tradable.
 - If a firm can cheaply reduce emissions below the level that its permits allow, it may sell excess emissions permits to other companies that face higher costs. These firms save money by buying permits from low-cost reducers.
 - Tradable permits will often substantially reduce the total cost of reducing emissions.

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Some Drawbacks of *Cap-and-Trade*

- Although *cap-and-trade* programs can reduce the overall cost of reducing emissions, they also have some drawbacks.
 - Without a market it is difficult to know the appropriate level of emissions, especially in the case of nationwide standards.
 - Even things that are worth doing, such as reducing levels of pollution, are not worth doing perfectly. At some point, the benefits of achieving still lower levels of pollution will not be worth the cost.

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Government Provision: The Case of National Parks

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The Economics of National Parks

- Most funding for national parks comes from tax dollars appropriated by Congress.
- Park visitors pay only a small fraction of the cost of the services.
 - In 1995, national park recreation fees covered only 7.5% of the cost of park operations.
- Thus, park managers have limited information about how visitors value the various services.
- Without this information, park managers allocate budgets with information missing that would be crucial to a private business serving the public.
- Because funding is dependent on decisions in Congress, the Park Service spends more time figuring out what the relevant congressional representatives want rather than what the park visitors want.

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Movement Towards Market Approaches

- During the 1990s, state parks began to rely more on admission fees and user charges -- increasing the park managers' incentives to serve the park visitors' interests (*not those of the state legislature*).
- By 1997, 16 state park systems relied on user fees for more than half their operating budgets.
- Parks received their entire operating budgets from user fees in Vermont & New Hampshire.
- Under legislation adopted in 2004, a federal demonstration program raised park access fees and allowed the park to use 80% of those fees rather than send them to Washington.
 - This provided park managers with a stronger incentive to serve their visitors.
 - The new fees have already led to major repair and rehabilitation of roads and trails.

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Questions for Thought:

1. "The national parks belong to all of us. No one should be charged money to enter."

Evaluate this statement using the economic way of thinking.
2. "The buildup of carbon dioxide and other gases in the air threatens to warm the planet and cause enormous damage worldwide. We must immediately stop this buildup for the sake of future generations."

Why do many economists disagree with this statement? Are they not concerned about the future? Explain.

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Questions for Thought:

3. “Unlike a marketplace, where pollution is profitable, government control of resources and pollution can take into account the desires of all the people.”

Evaluate this statement using the economic way of thinking.

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**End
Special Topic 13**

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