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Environment-Economy Trade-offs and Forest Environmentalism

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Public opinion polls have consistently demonstrated the public's willingness to "tradeoff" economic growth for environmental protection. The absence of a middle ground position in these polls raises questions as to whether or not respondents view economic growth and environmental protection as necessarily inimical. Furthermore, little research has examined whether these tradeoff preferences actually relate to how individuals view environmental problems at the local level. This research examines the tradeoff problem in light of a current resource conflict, forest management, using a statewide probability telephone survey. Most respondents prefer to see that "both the environment and the economy" are important in the case of forestry management, but favor weighting the balance in favor of environmental protection. Furthermore, general tradeoff preferences correlate with specific value choices (relating to private property), definitions of the current forestry situation for the state, and attitudes toward development of forest resources. At least in the case of forest management, how individuals conceptualize the economy/environment tradeoff is central to how they think about forest problems more generally.

Introduction

A central question in environmental debate today is how environmental protection and economic growth interrelate. As Schnaiberg (1980) notes, economic growth is dependent on "biospheric withdrawals" and a "treadmill of production" that does not easily accommodate environmental protection. The complexity of the environmental-economic relationship, however, doesn't lend itself to simple generalizations. There is a great deal of evidence that environmental protection and economic growth aren't necessarily antithetical (Schug & Western, 1997) and even that economic growth is necessary for pollution abatement (Byrne, 1997). Some analysts have begun to make headway in decoupling these issues. For example, Lovins, Lovins, and Hawken (1999) argue that reducing demand for energy (e.g., through energy efficient motors) may be essential for continued economic growth. As Hertsgaard (1998, p. 300) notes, environmental innovations that save money (and resources) will become an important way to generate new jobs. In short, it is not unreasonable to assert that economic systems can be made more both more environmentally benign *and* more profitable. Increasing resource efficiency in the future, however, may be entirely offset by the growth and expansion of human population with its attendant

demand for resources.

Pollsters have attempted to tap public loyalties in this debate through the so-called "trade-off" question. The typical form of this question has been to present respondents with dichotomous alternatives between favoring environmental protection or favoring economic growth or jobs. Longitudinal trends in the United States (as documented in publications such as *Cambridge Reports Trends & Forecasts* by Cambridge Reports, Inc.) indicate growing support for the environmental choice implying, for many, decreasing commitment to traditional economic and materialistic values (Inglehart, 1995). The public's apparent willingness to promote environmental quality over economic growth is often viewed as evidence of deepening environmentalism (Dunlap, 1991).

While trade-off questions provide some indication of changing public values about the environment, their abstract as well as dichotomous format raises many issues regarding how the public views the relationship between economic growth and environmental protection. Are they seen as necessarily inimical, requiring that we trade off one against the other? Conversely, might the public see a healthy economy and a healthy environment as desirable end-states of social policy, both of which can be equally maximized? Furthermore, do trade-off questions implicate how individuals think about environmental problems? Do individuals think of the relationship in the same way when dealing with local conflicts between the environment and the economy? This paper examines these issues in light of a current environmental conflict, forest management.

Overview

Poll data in the United States indicate growing support for the environmental choice in environment-economy trade-offs (Dunlap, 1991; Kempton, Boster, & Hartley, 1995). Perhaps the best long-term evidence for this can be seen in the *Cambridge Reports*, which asked a form of the trade-off question between 1976 and 1996.¹ The question has two choices and includes a "don't know" response. The trend in these data indicates an increasing percentage of respondents who are willing to sacrifice economic growth for environmental protection. For example, between 1976 and 1993 the percentage willing to "sacrifice economic growth in order to preserve and protect the environment" increased from 39% to 64%. The percentage of those willing to "sacrifice environmental quality for economic growth" on the whole does not vary widely, ranging between 15% and 32%. Between 1977 and 1996 the percentage indicating, "don't know" was almost halved, going from 41% to 24%.

Like *Cambridge Reports*, Gallup has also asked a form of the trade-off question using two response categories: "Protection of the environment should be given priority, even at the risk of curbing economic growth; or economic growth should be given priority, even if the environment suffers to some extent." The question was asked in 1984 and intermittently between 1990 and 2001. The data is consistent with *Cambridge Reports*. Between 65% and 71% of the respondents favor environmental protection over the decade of the 1990s, similar to the 61% who favored environmental protection in 1984. Over the entire period the percentage indicating no opinion was cut in half, going from 11% in 1984 to 5% in 1999.

We get a slightly different picture of the trade-off, however, when the question switches to a real policy debate. Ladd and Bowman report that in a survey by the Wirthlin Group in 1994, three quarters of respondents selected the response "it does not necessarily have to be a choice between the two." Thus, most Americans probably see very little antagonism between economic growth and environmental protection in the abstract. For example, Gallup found in 1991 that 78% of respondents supported taxing corporations who produced hazardous waste more, even if this resulted in higher prices on consumer goods. Yankelovich found a threefold increase between 1984 and 1990 in the public's willingness to spend more on consumer goods if this assured that business would not harm the environment (Kempton et al., 1995, p. 5). How much more individuals would be willing to pay is another test of how much the public is willing to trade off economic prosperity for environmental protection. For example, Gallup found in 2001 that 75% of the public is willing to pay \$100 more in prices for consumer goods each year if this would help reduce pollution. When the dollar value is increased to \$500, 61% of respondents are willing to agree. Thus while the public is willing to make economic sacrifices, the extent of these sacrifices may be quite limited.

One additional feature of the trade-off question can tell us something about how the public views the relationship between the environment and the economy; that is, the "don't know" response. Ladd and Bowman (1995) note that the *Cambridge Reports* data have high percentages of respondents who don't know-as high as 42% in 1983. This would suggest that the trade-off idea is problematic for the public. As Ladd and Bowman note, the inability to choose between the two alternatives "could reflect ignorance, or ... indicate that the choices presented do not capture public thinking on the problem" (p. 24). Ladd and Bowman report that in a survey by the Wirthlin Group in 1994, fully 74% of respondents picked a third choice-"it does not necessarily have to be a choice between the two," and only 15% said economic growth need be sacrificed. Thus the public may not see environmental protection as inimical to economic growth-that it is a false choice. Given the general lack

of attention to environmental issues, most Americans probably see very little antagonism between economic growth and environmental protection in the abstract. As Ladd and Bowman note: "Because Americans firmly believe that we can have both a clean environment and economic growth, questions that ask Americans to choose between one and the other are highly misleading" (p. 24).² The view thus emerging from the research conducted thus far is that public expects to achieve both economic growth *and* environmental protection. Brechin and Kempton (1994) state this succinctly when they argue that "rather than being a postindustrial luxury, a healthy environment is now widely viewed as essential for a sound economic base" (p. 265).

The potential conflict between economic growth and environmental protection becomes more apparent to respondents when they are asked to view the trade-off in light of their own local resource issues. This conflict is evident in the poll data already discussed regarding how trade-offs might affect the respondent's standard of living or local unemployment. One view would suggest that attitudes toward environmental protection and economic growth both tap into larger quality of life concerns (McBeth, 1995). O'Connor, Bord, and Pflugh (1994) support this view in their study of a New Jersey community's opposition to coastal economic development. They critique the notion that environmentalism implies hostility toward economic growth. Environmentalism at the local level may be more of an expression of concern for *how* development is occurring—declining green space, misuse of resources, and population growth—rather than opposition to economic growth *per se*.

This research points out the necessity for understanding the question of trade-offs in light of particular development or resource issues. Most national studies have been unable to do this given the unique circumstances of these issues. This study examines the trade-off problem in light of questions relating to forest management. We believe forestry management presents a good case study for how the public thinks about trade-off questions. Forestry management issues have come under increased public scrutiny, often eliciting emotional debate (Fortmann & Kusel, 1990). This has been particularly evident in the old growth forest debates in the Pacific Northwest. As Perry and Pope (1995) note, forestry debates tend toward polarization. At root, these conflicts emerge from the fundamental value and ethical divide that views forest resources as commodities to be harvested for human uses or as natural resources to be preserved for their ecological, esthetic, and recreational value. This tendency toward either economic utilitarianism or environmentalism in forestry debates makes them ideal for understanding economy-environment trade-offs more generally. This study examines trade-off preferences within the area of forestry management using a statewide survey of Georgia residents. In particular, we will examine whether or not

trade-off preferences relate to more specific attitudes toward forest protection and forest development.

Methods

In order to examine these issues, a statewide random sample of Georgia residents 18 years and older conducted by phone between April and May in 1996 will be used. The sample was obtained from Survey Sampling, Inc. in order to assure representativeness. Telephone interviews were supervised and coordinated at Valdosta State University. The total number of completed surveys is 844, representing 71% of the original sample size. The sampling error is approximately 3% at the 95% confidence level. The survey was specifically designed to look at issues and attitudes pertaining to forestry management and resources. A number of other questions are included in the study, including environmental trade-offs, attitudes toward specific components of forestry management, and selected demographic variables.

The review of literature suggests that environmental trade-offs present respondents with what they may perceive to be a false dichotomy, forcing fence-sitting respondents into one or the other alternative or the "don't know" category. Providing respondents more of a continuum of choices will alter this outcome, providing us a truer picture of how individuals view such trade-offs. In addition, trade-off questions ask respondents to think about the relationship between the environment and the economy in the abstract; are they equally supportive of environmental protection when considering specific resource issues, such as forestry management? Furthermore, do the different trade-off preferences correlate with more specific opinions of forestry management?

For this study, the trade-off question asks individual to think about the relationship between environmental protection and economic growth in light of forest resources. The environmental trade-off question is asked in the following way: "Many forest management issues involve difficult trade-offs between environmental and economic considerations. Which of the following statement best describes your view?"

- 1 .The highest priority should be given to protecting the environment, even if it hurts the economy.
2. Both the environment and the economy are important but the environment should come first.
3. Both the environment and the economy are important but the economy

should come first.

4. The highest priority should be given to economic considerations such as jobs even if it hurts the environment.

Other questions are included in the survey for examining a respondent's definition of the forestry situation in Georgia, including overall concern for forests, the degree of tree cutting, government regulation of forestry resources, private property rights, and specific forest development activities.

Results

The trade-off question provides for extremes in the environment-economy trade-off as well as the two middle categories that affirm the belief that "Both the environment and the economy are important." The vast majority of respondents have picked the middle ground, 72.1% in the second group (tilting the balance toward the environment), and 13.3% in the third group (weighing in on the economic side). A total of 85.4% saw both the environment and the economy as important; a percentage not remarkably different from the Wirthlin Survey in 1994 alluded to earlier. Only 5.3% favor jobs to the detriment of the environment. A comparable number of respondents, 8.5%, believe that protecting the environment is of paramount importance, even at the risk of hurting the economy. Unlike previous poll data, virtually none of the respondents (less than 1%) picked the "don't know" category. This is undoubtedly due to the fact that respondents were given a range of responses rather than an either/or choice.

Overall, these data attest to the enormous popularity of the notion of balancing environment and economic interests, but weighting those interests more heavily on the environmental side. As we noted earlier, a dichotomous trade-off question fails to capture how most individuals think about the relationship between the environment and the economy. The evidence here would suggest that respondents reject a polarized definition of the problem. Respondents obviously value both economic growth and environmental protection within the area of forestry management; if a trade-off has to be made they would prefer that it be for environmental protection.

Earlier, we raised the question of whether or not respondents' trade-off preferences implicate more specific attitudes toward local resource or development issues. If the apparent preference for environmental protection over economic growth reflects merely the current socially desirable response, we would not expect it to correlate strongly with these more specific attitudes. On the other hand, trade-off preferences might emerge from how respondents view environment-economy relationships at the local

level and are thus more likely to be linked to specific attitudes and beliefs. We think this is relevant to understanding how the public engages in debates regarding real environmental or economic trade-offs.

Table 1 examines this problem by looking at a central issue in forestry management-the role of private property rights. This table cross tabulates the trade-off (Tradeoff) question with four questions on government regulation of private land. Overall, the data suggest that those more favorable to the environment side of the trade-off are also more supportive of efforts to regulate private land in order to protect the environment. The biggest percentage difference between groups is in the last question (Private), and is statistically significant, as are Property and Limit. Interestingly, the majority of respondents in the most pro-economy groups (last two groups) favor government regulation of private land on behalf of the environment. Furthermore, there is little difference between the two pro-economy groups in terms of their support of private property rights. Thus, the evidence would suggest that the majority of respondents in the pro-economy groups should be viewed as supportive of environmental protection even when this conflicts with private property rights, but to a lesser degree than the pro-environment groups.

Question	Protect Env. Hurt Econ. % Agree	Both Important Favor Env. % Agree	Both Important Favor Econ. % Agree	Protect Econ. Hurt Env. % Agree	χ^2
Compensate ¹	75.9	75.6	80.9	76.8	8.8 (p=ns)
Property ²	92.3	91.9	77.7	78.0	37.7 (p<.001)
Limit ³	87.9	89.0	65.6	70.8	58.4 (p<.001)
Private ⁴	37.3	27.2	53.2	62.5	51.9 (p<.001)
N=743					
¹ <i>Compensate</i> : "If a forest landowner is prevented from cutting trees on his land because of government regulation, the landowner should be paid for the economic loss."					
² <i>Property</i> : "Private property rights are important but only if they don't hurt the environment."					
³ <i>Limit</i> : "Private property rights should be limited if necessary to protect the					

environment."

⁴ *Private*: "Private forest owners have the right to do as they please with their forests regardless of what it does to the environment."

Table 2 reports the cross tabulation of Trade-off with specific definitions of the forestry situation in Georgia. First, 49.1% of respondents picking the most pro-environment trade-off indicate that they have concerns about forests in Georgia compared to only 19.4% of those in the most pro-economy group, a significant difference ($X^2=14.8$, $p=.003$). Also, a significant difference exists between respondents with respect to perceptions of tree cutting in Georgia; the majority of pro-environment respondents would like to see less tree cutting, while only 23.5% and 30.6% of the two pro-economy groups respectively feel the same way. Finally, no difference exists between trade-off groups regarding perceptions of forestry owners. These data suggest that pro-environment respondents view the forestry situation in more problematic terms than pro-economy respondents do.

Table 2
Tradeoff by Definitions of Forestry Problems

Question	Protect Env. Hurt Econ.	Both Important Favor Env.	Both Important Favor Econ.	Protect Econ. Hurt Env.	X^2
Concerns about Forests ¹ %Yes	49.1	47.6	33.7	19.4	14.8 ($p < .003$)
Tree Cutting ² <i>More Tree Cutting</i>					
<i>Less Tree Cutting</i>	3.1	2.4	4.9	2.8	
<i>About Right</i>	53.1	49.4	23.5	30.6	28.6 ($p < .001$)
Opinion of Timber Owners ³ %Favorable	43.3	46.9	59.6	63.9	15.9 ($p = .ns$)

¹ "Do you have any concerns about the way forests in Georgia are being treated?"

² "In general, do you think that there should be more tree cutting, less tree cutting, or is it about right?"

³ "Do you have a favorable or unfavorable opinion of the timber land owners in Georgia?"

Table 3 cross tabulates each of the trade-off groups by the percentage

forestry resources. Overall, the first two groups are less favorable to forestry-based development activities in Georgia than the last two groups. These differences are statistically significant in four of the six types of activity. For developing tourism, statistical significance exists between those respondents choosing the most pro-environmental response ("hurt economy") and everyone else. Still, the lowest percentage favoring a particular activity is 59% for the first trade-off group. Thus while pro-environment groups are less supportive of specific forest developments, the majority of respondents favor these activities.

Table 3
Tradeoff by Percent Favoring Specific Forestry Development Activities¹

Question	Protect Env. Hurt Econ. % Favoring	Both Important Favor Env. % Favoring	Both Important Favor Econ. % Favoring	Protect Econ. Hurt Env. % Favoring	χ^2
Constructing Lumber Mills	60.7	73.3	84.0	88.9	20.5 (p<.03)
Exporting Lumber	59.4	60.6	76.3	65.7	14.9 (p=.ns)
Developing Tourism	66.1	87.3	88.0	86.5	32.1 (p.<.001)
Exporting Wood Chips/Logs	67.7	65.0	80.0	76.9	16.7 (p.=ns)
Constructing pulp/paper mills	69.3	69.9	83.1	90.2	31.9 (p.<.001)
Constructing chipmills	78.3	77.9	88.8	89.8	21.9 (p.<.05)

¹ "Future economic development in Georgia could potentially include growth of the forest industry. I want to read some types of economic development activities to see which you would prefer, assuming that they are carried out under good forestry practices."

Overall, these results point to several findings. First, the majority of respondents prefer a balanced approach to the environment-economy trade-off. Very few respondents wish to pursue environmental protection or

differences were found between trade-off groups with respect to their attitudes toward forest protection. Pro-environment respondents (first two groups) tend to be less supportive of private property rights when these conflict with forest protection and more supportive of government regulation of private property than pro-economy groups (second two groups). Difference between the trade-off groups was one of degree, however, given that the majority of respondents favor these things. To put it differently, pro-economy groups are not hostile to efforts to ameliorate environmental problems. We also found significant differences between groups in terms of their definition of the forestry situation in Georgia. Pro-environment groups have a more problematic view of Georgia forests, that is, they were more willing to voice concern about forests and view logging as excessive and to support policies to protect forests. These attitudes result in significant differences regarding support for some forestry development activities in the state.

Conclusion

Environmental protection and economic growth are often portrayed in public debates in zero-sum terms, particularly at the local level (Clarke & Moss, 1990). As Hertsgaard (1998) has argued: "The assumption that environmental protection must cost jobs and lower profits ... has been repeated for so many years by so many people ... that it has come to be regarded as a fact" (p. 298). While policy debates have tended toward polarization—a "pro-growth" or "pro-environment" worldview—public opinion is more complex. On the one hand, solid majorities support trading off economic growth for environmental protection and appear ready to accept the costs of doing so via increased taxes or prices for consumer goods. But the data also suggest that the public's willingness to do so drops off fairly quickly when dollar values rise above token amounts. This implies a tacit realization that reducing economic growth with its attendant job loss or redistributing economic growth through higher taxes and prices can impact individual quality of life in negative ways. Thus, while environmental protection AND economic growth may be viewed by many as complementary public goods in the abstract, the balance of these goods will vary significantly at the individual level.

Data reported here suggest that most respondents are neither exclusively pro-environment nor pro-growth. Rather, they perceive the need to balance these concerns when dealing with forest resources. The majority of respondents favor environmental protection while recognizing the continuing need for economic growth. While this may seem like an easy out, respondents are willing to sacrifice private property rights, reduce the amount of logging, and restrict forestry developments in order to accomplish

this. This suggests not an antithesis to economic interests, but a realization that environmental protection is less likely to be factored into the equation when short-term economic interests are at stake. Furthermore, many view trading-off individual and economic interests in the short-run for environmental protection as the means to sustainable economic growth. This is precisely the view emerging in many environmental circles (e.g., Lovins et al., 1999). The conservation and wise-use of natural resources has always been at least a part of American culture, particularly in rural populations (McBeth, 1995). Such values complement rather than conflict with a desire for economic growth. It follows that policy leaders should pursue a strategy in which environmental protection and increasing resource efficiency are viewed as the *means* to enhancing future economic growth, rather than a strategy of zero-sum.

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Notes

¹ *Cambridge Reports Trend Data* (Earl Taylor, personal communication, January 15, 1999):

	1976	1977	1978	1979	1981	1982	1983	1984	1985	1986	1987
Sacri. Env. (%)	21	26	23	32	26	31	16	27	23	19	23
Sacri. Econ (%)	38	39	37	37	41	41	42	42	53	58	57
DK (%)	41	35	39	32	33	28	42	31	24	23	20

	1988	1989	1990	1991	1992	1993	1994
Sacri. Env. (%)	19	21	15	18	19	24	23
Sacri. Econ (%)	52	52	54	63	56	64	53
DK (%)	29	27	22	19	25	22	24

² Ladd and Bowman add that when we must take into account that while many people express a growing concern for environmental problem, these issues are not highly salient to them personally. Environmental issues have more or less dropped off the "most important problem" list (which are typically elicited with an open-ended question). This lack of salience is ironic given other poll data showing that Americans strongly identify with the environmentalist label (as many as a quarter of the public would identify themselves as such according to a 1987 Times Mirror study).

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