THE CONTRIBUTION OF ECONOMICS TO STATE FORESTRY PLANNING

by

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ABSTRACT

Two recent state-level activities--preparation of Forest Resource Plan for Alabama and preparation of a study entitled The Contribution of Forestry to Alabama's Economy--will be described in the paper, and in each case, the apparent role of economic analysis will be analyzed. The Forest Resource Plan is not based on a specific economic analysis, whereas the Contribution of Forestry to Alabama's Economy is based on a state-wide input-output model.

The nature and uses of these two recent efforts prompt some ideas about the limits and usefulness of economics. Recent work in economics (the general area of public choice) can be used to understand trends in state planning activities, and some observations about our legal system and the role of lawyers can help raise some issues about the legitimate role of economists and their work.
Introduction

The title of this paper is advantageous because so many interpretations are possible. The first phrase of the title - Contribution of Economics - may be broadly interpreted. Some may think of short-run forecasts of economic activity; others may think of the day to day financial pressures of business and political life; still others may think of theoretical problems or analyses of underlying social conditions which aid our general understanding of economic life. The last phrase of the title - State Forestry Planning - suggests many possibilities also. For example, it may suggest short range planning to some, long range to others. It may suggest planning on the part of state agencies, federal agencies, industrial firms, universities, and so on. It may also suggest activities of state legislatures.

Putting various combinations of these meanings together yields many different ideas about economics and planning at the state level. All of them can be important, and though I will focus on some specific cases, the large variety of contexts in which this topic is relevant should not be forgotten.

As Mr. C. W. Moody's paper has already indicated, Alabama has had two recent experiences with policy and economics. One, The Forest Resource Plan for Alabama is due to Mr. Moody's initiative and is an effort to ensure coordination among all the State agencies involving forestry. The second, an economic study on the contribution of forestry to Alabama was
conducted by a group of us at Auburn partly under the sponsorship of the Alabama Forestry Association, an industrial forestry association. Each of these experiences offers a different perspective on state forestry activities. The Forest Resource Plan is a general document without special disciplinary orientation, so an examination of it may improve our understanding of how forestry planners rely on economic analysis. Alternatively, since the study by us at Auburn is specifically economic, an examination of it may help us understand what characteristics of economic analysis are found most useful by others.

Beside these two topics, I will also comment on the role, not of economics, but of the economist, in these state-level forestry activities. Until ten to fifteen years ago, forest economists (that is, people who identified themselves as such) were relatively rare. Now, and for several years, we hold large regional meetings, occupy positions in industry, government and universities, and provide, to the great consternation of my biologically oriented colleagues, much of forestry's leadership. How do such people fit in this old, tradition bound profession, how are they likely to fit in the future, and how should they fit? I will not have the temerity to answer all these, but I would like to open them for discussion.

Forest Resource Plan for Alabama

The final draft of Alabama's plan was not available to me at the time of writing, so my remarks are based on a draft document circulated during 1980 (Kelly 1980). Many public agencies in Alabama have responsibilities that relate to forest land, and several years ago, at Mr. Moody's initiative, representatives of these agencies formed the Alabama
Forestry Planning Committee. The Committee helps improve communication and coordination among its member agencies, that is, it helps ensure that public forestry in Alabama presents a unified front. The Committee identified thirteen issues in Alabama forestry, and the Forestry Commission then prepared an analysis of these issues. Issues are "areas of concern," and they deal with the various forest outputs (timber, recreation, water, range, and wildlife) as well as important problems associated with these resources (fire, insect and disease losses, urban forestry, public support of forestry, wetlands).

The analysis of each issue follows a common format: the issue is identified in one or more opening paragraphs, types of people affected by the issue are identified, major public programs addressing the issue are listed, and finally some operational objectives are set. These objectives have great variety. For example, the objective regarding the fire protection issue is to limit the loss annually to two-tenths percent (0.2%) of the total protected area, with the average fire size less than 10 acres. The objective for wildlife is that "wildlife habitat is to be managed as favorably as possible for wildlife as compatible with other uses."

For a planner's or public forester's viewpoint, the Alabama Plan may have a number of merits and uses. It may well serve its purpose to help Alabama forestry agencies coordinate activities and present a unified position on areas of major concern. But from an economist's viewpoint, the plan is weak primarily because it doesn't explicitly employ much economic analysis.

In places where the plan does invoke economics, it refers to the U.S. Forest Service projections about demand exceeding supply in the
future. This is deemed sufficient justification for organizing several forestry activities to enlarge prospective supplies of timber.

The Contribution of Forestry to Alabama

By the middle 1970's many people involved in Alabama forestry were eager for a study that would describe the economic contribution that forestry makes to the State. Forestry business people, Forestry Commission employees, university extension foresters, my department head and others all knew intuitively that forestry was important to Alabama. They had watched new pulp and paper mills constructed at such a rate that more than half of the state's capacity was less than 10 or 12 years old, and of course, all the State's plywood capacity was that new also. Yet they had listened for years about the importance of agriculture, textiles and heavy metals, and they had been treated as back country step-children by public officials at the state and local level.

These forestry people wanted to document the size and impact of their industry so they could gain influence in the State's various political arenas, and they wanted the work to be done by someone publicly regarded as objective.

With a little negotiation, an agreement was created between the forestry department at Auburn and the Alabama Forestry Association to undertake the work. The heart of the project was to be an input-output model based on secondary data similar to that described in Porterfield, et al (1978). In preparing the work, we visited with William Miernyk at Morgantown, West Virginia, and he suggested we try our own survey of the State economy. We ended up following his advice, at least in part, and the results have been and are being published (Flick and Bowers 1980; Flick et al 1980).
We learned a great deal from our study. The principal result from the input-output study, in the eyes of our sponsors, is that forest industries have an economic multiplier effect which is larger than other manufacturing industries. "This means Alabama will have larger increases in business activity, household incomes, and employment from expansions in the forest industries than from comparable expansions in other manufacturing industries." (Flick et al 1980, p. 560) From a researchers viewpoint, the principal result is a survey research procedure that allows a primary data input-output model to be developed in two years or less. And the model incorporates estimates of state imports and exports and state and local taxes - two important sets of data which are nearly impossible to estimate otherwise. And from a planning viewpoint, the model is a tool which can be (and has been) used to make forecasts about economic change.

In addition to the input-output model, we also examined published federal statistics, following the lead provided by Gary Zimm's 1972 Ph.D. dissertation, and described the major economic characteristics of Alabama's forest industry. We extended Zimm's work by stressing the role of the forest industries in context, and we identified the relevant contexts as time and space. The results, which are somewhat akin to what has been published for other States by Kushner et al (1974), Brodie et al (1978), Wisdom and Hudspeth (1978), and Field (1980), show Alabama's forest industry to be the State's largest manufacturing industry, and the second largest forest industry in the Southeast.

We are continuing the work on input-output analysis. The first model was a hybrid model using both primary and secondary data. We are now building a complete primary data model and a complete secondary data
model. When finished, we will be able to describe the incremental gains in modelling accuracy from varying amounts of primary data, something which has only been attempted twice before in economics.

This work has played an important role in Alabama. Mr. Moody has used it to increase his state appropriations nearly 66% in two years. The forest industry has based several advertisements in newspapers and magazines on the results, and several papers have written features on forestry in Alabama in which the results have been incorporated. Our state and federal legislators have been bludgeoned with the results at every opportunity, and many of them have indicated recognition of forestry's new stature.

Several attributes of Alabama and the study combined to create the positive results mentioned above. First, Alabama has an aggressive, articulate and relatively unified forestry community. Georgia had this several years ago (they may still), Wisconsin has almost nothing in this regard, and most states fall somewhere in between. Second, by historical standards, the forest industry of Alabama had just recently attained its great economic stature and the people were largely unaware of it. Third, the study provided practical results which could be explained in standard English and understood by people of varying walks of life. Fourth, the research was cooperatively sponsored and carried out. The Forestry Association provided money and the Forestry Commission provided some manpower. Again, it was the assemblage of these attributes that created the usefulness of the work.

The Forest Economist

If economics is to influence forestry at the state level, then economists, especially forest economists will also have an influence, and
if state-level planning is to become relatively more important, then so will forest economists. One central question about the role of the forest economist, especially the publicly employed forest economist, is, to what extent and under what circumstances is it appropriate to become an advocate for forestry in social and political decision making? This question is relevant in a wider context than just state level planning; it occurs in federal, academic, even industrial settings. In the conduct of our study in Alabama, this question occurred in several instances. Everyone who expected to 'profit' from forestry's new stature was interested in the results. Economists in the U.S. Forest Service have a similar problem. What would the U.S. Forest Service do with an economic model showing the demand for forest products declining in future years (the current answer is, I understand, to revise the assumptions about exogenous variables until the demand forecasts show an acceptable rate of increase)? The issue raised here is interesting partly because it is answered so clearly and unequivocally by forestry decision makers. Most managers believe strongly in forestry and want to see it grow and develop. Mr. Moody clearly expressed this faith in his paper.

Forestry programs, like other public programs, have grown in modern times. The most satisfying explanations of this growth come, I think, from what has come to be known as the public choice literature. Theories of public choice are theories of democratic decision making, and many recent contributions to this traditionally noneconomic subject have been made by economists (Mueller 1979).

The literature is methodologically individualistic in its orientation, and its authors try to explain democratic decisions by modelling the individual behaviors of various types of public decision makers. In all
cases, the fundamental assumption about human decision making is that people know and act in their own interest, that is, "that man is an egoistic, rational, utility maximizer" even when participating in public choices (Mueller 1979, p. 1).

Special interest lobbies are easy to understand in those terms. Each by definition is consecrated to the pursuit of laws, policies and programs which will enlarge the wealth, broadly defined, of its members. Bureaucrats can also be characterized in these terms as Niskanen does in his seminal book, Bureacracy and Representative Government (1971). Niskanen argues that the best hypothesis about the objectives of bureaucrats is that they try to maximize their budgets. Personal rewards of office, he argues, are well correlated with the size of a bureau's budget. He reaches hypotheses about bureau behavior such as, "...both the budget and output of all bureaus will be larger than that which maximizes the net value to the sponsor," and "A bureau will supply an output up to twice that of a competitive industry faced by the same demand and cost conditions." Other authors such as Anthony Downs (1967) and Gordon Tullock (1965) describe the complex institutional environment in which bureaus develop ideologies, recruitment and socialization procedures, territories, and allies all to help the bureaus survive, grow, and prosper.

In the forestry community, the timber industry and environmental groups are easy examples of well defined interests, but so too are the Society of American Foresters, the Forest Service, the Bureau of Land Management, and the various state forestry organizations. (I've not mentioned universities, because, as we all know, they are objective, disinterested groups, totally consumed by the unbiased pursuit of truth, and, of course, deserving of more public support).
Legislators, in pursuit of their interest, look toward reelection. They get special interest support by supporting special interests, and they get the support of the bureaus by supporting the bureau's interest. The overall mechanism is well known. Your legislator can support your interest and get your vote, and because that support costs other people, at the margin, an almost imperceptible amount, he does not lose their vote by supporting you. Since it works that way for almost everyone, our legislator gets many votes by supporting many programs. Conversely, he loses many votes by withdrawing his support from our programs.

Most of these ideas are familiar and to a large extent have become publicly acceptable. It's expected, for example, that the Secretary of Agriculture and the Chief of the Forest Service should be pursuers of agriculture and forestry interests.

What happened, one may ask, to the by-gone purity of yesteryear when legislators, bureaucrats and others were thought or at least expected to work in the "public interest?" I would like to isolate one idea which contributes to answering this question - the influence of our idealized legal system - and discuss its contribution to legitimating the pursuit of private interest in public life. Implications for forest economists will be discussed near the end.

The change in sentiment about the role of our public institutions, has, I believe, been greatly influenced by lawyers and their belief in an adversary system of justice. The number of lawyers in America is large, and they have an even more disproportionate representation in public organizations. (In China, for example where there are about 800 million people, there are about 3500 lawyers. The U.S., with 1/4 as much population has 400,000 lawyers, more than 100 times as many (Li 1978)).
The central concern of the adversary system of justice is the settlement of disputes (Golding 1978, Frank 1950). The lawyers are "hired guns." More generally, a lawyer's functions are thought to fit variously into four categories: fighting, negotiating, securing, and counseling, and all of these functions involve identifying and advocating a client's interest (Mayer 1967). Lawyers naturally, then, think of advocacy. Indeed, they are expected to be advocates, even to the point of deliberately lying to law enforcement officers, to juries and to judges (Freedman 1975, Frank 1950, Lieberman 1978).

Lawyers, of course, would usually not state the point so flatly. To quote one recent attorney/educator/author: "Is it ever proper for a criminal defense lawyer to present perjured testimony?" "One's instinctive response is in the negative. On analysis, however, it becomes apparent that the question is an exceedingly perplexing one. My own answer is in the affirmative." (Freedman 1975, p 27).

It's paradoxical that our adversary legal system, which has the discovery of truth as one of its central purposes, can involve lawyers in deliberate lying and misrepresentation of fact. The paradox is explained, that is lying is justified, by bringing to mind a second central purpose of the adversary system - the preservation of an individual's rights. We cherish individual rights, and it is in defense of these rights that lawyers become involved in lying. In fairness to lawyers, it should also be mentioned that prosecuting attorneys are not expected to lie. They are expected to seek justice, avoid misrepresentation, and according to some authors, "actually believe" that the accused is guilty (Freedman, Chapter 7).

The hypothesis presented here is that the preponderance of lawyers in public life and their attendant procedures and phosology of advocacy
have helped move "public servants" to positions of advocacy regarding their individual concerns. Advocacy has become more widespread, intense, and legitimate. Even the rhetoric surrounding the advocacy of public programs has reflections of its legal heritage. People speak of "fights", of fairness and justice in budget hearings, and of the "rights" of the constituents of public programs.

All of this is relevant to forest economists because they have become the 'lawyers' of special interests in pursuit of larger public programs. The forestry interest is viewed as the defendant whose 'rights' need preserving. Economists are hired to discover and organize knowledge which will justify, advocate, and persuade — knowledge which will help foresters pursue their interest in more forestry. Such work is very alluring because it is so greatly appreciated by others in the forestry community, but it can also be dangerous because it can involve loss of objectivity and, in the extreme, loss of truthfulness.

Economists, especially young ones, often have difficulty in such roles because they are educated in the traditions of science where advocacy is not particularly meritorious. Advocacy is rejected by scientists and researchers because it presumes decisions and conclusions; the traditional view is that inquiry should be genuine, that knowledge should be sought with as little presumption as possible. If research is aimed at justifying positions already formed, particular lines of inquiry are automatically ruled out. Collectively we are left with less information than would otherwise be possible, and therefore we have restricted our ability to make intelligent social choices.
Conclusions

There are four major points I would like to make by way of conclusion.

First, because there are many interpretations of economics and state planning, there are many possible contributions economics can make at the state level.

Second, one of the best studies an economist can do, best in the eyes of the forestry community, is to define the economic contribution of forestry.

Third, studies of economic contribution are most useful when they place forestry in context, and there are several contexts that may be relevant. We studied forestry in Alabama in relation to forestry in other states, and we described changes in these relations over time. We also studied forestry in relation to other sectors of Alabama's economy, and with input-output analysis, we were able to make forecasts about multiplier effects of forestry in relation to those of other industries.

Fourth, in most research of this kind, there will be social pressures on forest economists to become advocates for forestry interests. Advocacy may not be consistent with the long-term scientific research interests of the forest economist in that it tends to be antithetical to the aims of genuine inquiry. Simple awareness of this problem may well be enough to ensure appropriate self restraint.

LITERATURE CITED


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