
Multiple Purpose River Development, Studies in Applied Economic Analysis. *John V. Krutilla and Otto Eckstein.* The Johns Hopkins Press, Baltimore. 1958. 301 pp. \$4.50.

Krutilla and Eckstein have made one of the first attempts to analyze economically the problems of multiple purpose River development. They have tried to determine the economic efficiency of alternate plans for multiple purpose River development, and the redistribution of income accruing to members of society on a regional basis resulting from these plans.

The book is divided into two parts; the first part treats the concepts and methods of economic analysis and the second part deals with the application of the derived concepts and methods to three selected cases. In Part One, the authors set up the framework for analysis by introducing the reader to the concept of the competitive model, as an illustration of the operation of the market mechanism. The competitive model fails to take into consideration the satisfaction of group wants, direct interdependence and indivisibility of production, all of which must be considered in the water resources field. These features defy traditional methods of market analysis.

Multiple purpose river developments within a river system are generally undertaken by private interests or by a public agency or a combination of the two. The economic efficiency of the individual developer is based on the cost to each developmental unit to develop the same project, and the benefits that accrue to the purchasers of water resource derivatives result from differences in development costs. It has been found that the efficiency of the developer varies with the nature of the system to be developed. In comparing the cost of development of public and private developers the difference between opportunity cost and interest rates are a prime concern. These differences receive a thorough treatment in Chapter Four.

The cases selected for analysis in the second part of the book are: (1) The Hell's Canyon Project; (2) The Alabama-Coosa System; and (3) The Willamette Project. The efficiency of alternative plans is determined in the case of the first two projects, whereas an analysis of the redistribution of income applies to the third project.

This approach to the problem is unique in that it does not undertake to make value judgments or ethical decisions, but indicates only the more efficient of the alternative plans for the development of water resources based on economic analysis. This type of study is probably the beginning of a trend in natural resource-use analysis. But, such analyses will be of little value unless they are supported by the political process.

The market for this book will probably be limited to the small number of interested persons in this particular area of resource analysis. The substitution of the theoretical approach for the practical approach may not be readily accepted by geographer-conservationists.

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