

Book Reviews

Eichhorn, W., et. al. (Eds.): Economic Theory of Natural Resources. Physica-Verlag, Würzburg–Wien 1982, 645 p.

During the last decade or so, the awareness that the conditions of life on the 'spaceship earth' may change tremendously if societies continue to ignore the fact that natural resources (as for example rawmaterials like oil, copper, iron, etc., or biological resources like fishes or woods or clean air) are becoming increasingly scarce. The stirring studies of the Club of Rome reached the public through the mass medias and shook them up. Economists challenged by those studies – which are thought to having neglected, inter alia, the possibilities of substitution or the force of technological progress – were going to draw their attention on research efforts more intensively to ecological questions. The rapidly growing economic literature on that problems has recently been enriched by a voluminous collection of articles on 'Natural Resources and Production', which grew out of a conference on this topic held in the middle of 1980 in Karlsruhe.

This book contains 42 hitherto unpublished contributions about the theoretically as well as practically highly challenging problems arising from this theme. It nicely illustrates the power and usefulness of modern mathematical economics; almost all the papers, written by distinguished economists, contain important contributions to the topic and are of highest theoretical standards. As it is almost impossible to provide on a few pages a thorough evaluation of all the papers contained in this volume, I shall merely outline the main topics touched in the book.

The first part on "Depletion and Substitution" contains six papers which show, among other aspects, the importance of learning and finance, the effects of the existence of substitutes and of possibilities of recycling on the intensity of extraction of depletable resources. In part two locational aspects of resource depletion and the influence of different market structures on fishery are analyzed.

The behaviour of resource prices and questions of efficiency and regulation are discussed in part three, entitled "Markets and Prices".

The future potentialities for growth are argued about in seven articles in the following part four. Six papers in part five are devoted to problems of externalities, environmental quality and their implications on welfare and the quality of life.

The papers in the last part are addressed to questions of energy modeling and forecasting.

All in all, this book contains an important pool of significant ideas and research efforts on a couple of the most burning actual problems that may influence our situation of life in the nearest future. It is highly recommended to all who are seriously interested in those questions. I fear, however, that politically inclined people soon may become discouraged from surmounting the obstacles of mathematics. But I strongly believe that the gains in clarity and the theoretical support for practical policy will pay the effort. The present controversial discussions about an appropriate natural resource-policy reveal the need of sound theoretical foundations for it and this book is an important step in that direction.

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