

BOOK REVIEWS

Agricultural Decision Analysis. By JOCK R. ANDERSON, JOHN L. DILLON and J. BRIAN HARDAKER. (Ames: Iowa State University Press, 1977.) Pp. 344, ISBN: 0 8138 0400 4.

The authors' concern in this book, as stated by them, is 'the making of decisions—it is to be hoped good ones—in a managerial context'. Their more specific purpose is to produce an advanced text book oriented to managerial applications in agriculture. In a sense they have been very successful in reaching this objective: the book is well constructed, the text is clear, the examples are numerous. At the end of each chapter they give a set of problems and a list of References and Selected Further Reading.

Justly convinced that they have played a major role in the development of decision analysis for agricultural management, they have written a book which is strongly influenced by the orientation of their previous research works. The first four chapters give a clear presentation of the theoretical foundations of this approach. The introductory Chapter 1 presents 'decision analysis' as a complete logical procedure for making risky choices. Chapter 2 deals with the elicitation of subjective probabilities. Chapter 3, titled Revision of Probabilities, covers the essential features of what has become the Bayesian school of thought. Chapter 4 is on utility and preferences. The treatment here relies on Bernoulli's principle (maximization of expected utility), and thus, as shown by von Neumann and Morgenstern, on a small number of 'reasonable' postulates and axioms. A section is again devoted to the elicitation of preferences through interviews.

In an earlier very lively review article John Dillon had written that 'utility is the best possible approach to risky choice in agriculture' (*Review of Marketing and Agricultural Economics*, March 1971). This position is reasserted by the authors, who write at the beginning of Chapter 5, that 'any attempt to analyse decision problems under uncertainty without recourse to subjective probabilities is at best an unimportant theoretical exercise'. Accordingly the remainder of the book presents Procedures for Decision Analysis (Chapter 5) and then the consequences of their approach. Thus Chapter 6 is devoted to the exploration of the impact of risk on agricultural producers. Risk usually 'acts as a friction to production and induces a lower level of resource use than would otherwise prevail'. Chapter 7 deals with whole-farm planning under risk, the problem being tantamount to selecting a portfolio of activities in a situation involving a single accounting period (a crop year in most empirical analyses). In Chapter 8, entitled Investment Appraisal, attention is given specifically to the expectation that returns on an outlay are received over several future time periods. The authors show the theoretical limitations of maximizing net present value and point out the theoretical soundness of the multidimensional utility approach to investment appraisal. They also recognize its practical difficulties.

In the final chapter, Decision Analysis with Preferences Unknown, it is recognized that 'there are many occasions (perhaps a majority) in agricultural management when analysts, for reasons of cost or

expediency, cannot obtain appropriately elicited preferences'. The authors introduce then the concept of stochastic efficiency. The problem becomes one of finding an efficient set of decisions in the sense that, on the basis of some reasonable and hopefully robust assumptions concerning preferences, decisions in the set are undominated and hence admissible. A brief section of this chapter is devoted to the implications of stochastic efficiency analysis for research, extension and agricultural policy.

The authors say, in the context of extension, that the eliciting of 'individual farmers' attitudes to risk and perceived probability distributions' does not seem to be imminent. The last chapter (unknown preferences) therefore holds considerable potential interest for policy-makers. There cannot be much disagreement with the implications for action derived by the authors at the end of that chapter. But in fact one does not really need an analysis as sophisticated as theirs to reach these conclusions. Hence one may question the fruitfulness of the stand taken by the authors in rejecting any approach not based on the elicitation of utility functions.

This position may be due to an exaggerated importance given to the beauty of a few 'reasonable' postulates and axioms, from which is derived a vision of how reality should be. Accordingly the question which underlies the authors' whole approach is: how can one find the 'best' decision? Thus it is not surprising that our three authors do not quote in the otherwise very extensive list of references the seminal work on the empirical analysis of how farmers actually make decisions, that is, *Managerial Processes of Mid-Western Farmers* (1961) edited by G. L. Johnson *et al.* Yet I believe that, in the analysis of agricultural decisions, the main problem is not so much to find the 'best decision' but rather to understand how decisions are actually made, for what reasons, on the basis of which information and with which consequences.

This is not the place to develop another approach to the analysis of agricultural decisions. This reviewer believes that one needs to be somewhat more eclectic than our three authors and personally places some faith in a more general adaptive approach. (See the special issue of *European Review of Agricultural Economics* (1976) entitled Agricultural Change and Economic Method.)

In spite of these criticisms, the book under review should be commended as a clear, thorough, professional work providing the profession with an excellent text on the state of the art in a difficult field and thus facilitating further progress in this field.

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Rural People, Support Services and Counselling. KRAU Bulletin No. 1.

Edited by G. N. F. GREGORY. (Armidale: University of New England, 1977.) Pp. 187, ISBN: 0 85834 166 2.

This edited, modified version of a series of papers presented at a Kellogg Rural Adjustment Unit School in November 1976 is not only

the first bulletin issued by KRAU but is an important contribution to the study of problems of rural adjustment in Australia.

The progression is from a statement and limited interpretation of the known statistical data about rural incomes, rural adjustment agencies, and the schemes they administer, to the qualitative problems associated with the nature and provision of education, career, social and other community services provided in non-metropolitan areas and thence to the details of the agencies established by the States and the Federal Government to provide assistance to farmers, farm employees and non-metropolitan people generally. The outline of problems and assistance measures is followed by a detailed conclusions section dealing with the changes which ought to be made to organizations such as State Departments of Agriculture, social service agencies and the like and the possibility of establishing 'rural counselling' and rural community services.

There is a set of conclusions and recommendations whose range and generality accurately references the original workshop's difficulties in providing any explicit advice about rural adjustment. However, that is largely a function of a lack of detailed analytical data from most of the rural adjustment agencies. One of the positive results from the workshop is the recognition of an urgent need to extract specific information about the sociological and economic nature of existing rural adjustment programmes. The assessment of the value of existing adjustment programmes is effectively prevented by the lack of data and the limited number of sociologists and social welfare workers operating in non-urban areas.

For the regional offices of Departments of Agriculture, Social Security and Local Government the document provides about the only summary of available schemes and programmes. It provides also a basis for building a set of criteria for judging the operation of the recently introduced States Grants (Rural Reconstruction) Act which is intended to co-ordinate a range of financial assistance programmes for primary producers.

It would have been useful had the editor devoted a brief chapter to the definition of terms for both the financial and sociological varieties of adjustment. There is confusion about what 'communicated services', 'counselling' and 'adjustment' mean. A discussion of definitions might have helped to stop debates about rural adjustment from travelling parallel to each other without meeting.

As with the workshop, the document is a mixture of the academic, the practitioner and the 'adjusted'. If more time and effort had been spent in rationalizing prose style and presentation the document would have flowed more easily. The criticism is justified because the novelty of the work means that most readers will be taking on a completely new subject, and a coherent overview is important.

In spite of stylistic and presentation faults, this first bulletin from the fledgling KRAU represents a substantial, valuable attempt in a sorely neglected area of studies in Australian rural communities. The attention to 'quality of life' and related problems is usually represented in the shallow debate about city versus country. This document advances it to a more serious level and amply illustrates the deficiencies

in research and some of the important sociological inadequacies of the broad range of rural adjustment programmes.

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Agriculture in the Tokyo Round Negotiations. Thames Essay No. 10.

By T. E. JOSLING. (London: Trade Policy Research Centre, 1977.)

Pp. 42, ISBN: 0 900842 326.

Professor Josling initially drafted a paper for a week-end conference on international trade in temperate-zone agricultural products which was attended by government officials and independent economists with special interest in the Tokyo Round of multilateral trade negotiations. The initial paper has subsequently been revised, developed and presented as this publication.

In a concise forty-page document Professor Josling has attempted to place the Tokyo Round in context, outline the basic attitudes held by the two main groups, the E.E.C. and the U.S.A., and adumbrate the political and economic conditions for the negotiations to be 'successful'. In order to cover the issues outlined above adequately, the publication is almost exclusively concerned with temperate-zone agricultural commodities, with the discussions on grains receiving most attention. Although the broad issues are canvassed frequently, only the U.S. and E.E.C. perspectives are presented. However, the publication is noteworthy as it does not become involved in the many minor and supplementary issues that have resulted in almost five years passing since the initiation of the Tokyo Round of negotiations.

The paper realistically presents areas which are likely to be resolved and the types of conclusions that may be expected. Throughout the paper Professor Josling succinctly comments on the issues and attitudes in a manner that reflects the reasoning behind his comments without becoming overly involved in attempting to justify his position or present the associated lengthy detailed arguments. The limited size of this article may mean that readers without any knowledge of multilateral negotiations concerning agricultural products may not fully appreciate many of the points made or the clarity of vision necessary to present the issues, ramifications and comments in this manner. However, this is a worthy publication overall and would be of particular value where further discussion on the subject is envisaged.

P. E. FLINT

Bureau of Agricultural Economics

Microeconomics: An Introductory Text. By PETER CALVO and GEOFFREY WAUGH. (Sydney: Wiley, 1977.) Pp. 412, ISBN: 0 07 093432 0.

This book adds to the growing list of textbooks with an Australian flavour. It is designed for a semester or full-year introductory course in microeconomics. Prose and diagrams are used throughout. The book adopts an interesting three-tier approach to the subject. Each chapter has a section on the relevant theory, a couple of case studies drawn from published articles and government documents as well as from the authors, and a set of problem questions.

Topics covered in the text are organized into six parts. After an introductory chapter, Part II provides a conventional neo-classical analysis of the price system and in Part III some applications are presented. Agricultural examples are dominant in the case studies. Selected topics of monopoly, oligopoly and imperfect competition are presented in Part IV. Income distribution topics including the neo-classical theory of derived demand, trade unionism and wages, and rents are covered in Part V. Part VI, titled Equilibrium and Growth of the Economy, includes a quasi-classical assessment of aggregate economic growth and a brief coverage of measurement of aggregate economic activity. It does not incorporate general equilibrium models for drawing together the decentralized decisions of producers and consumers discussed in earlier parts of the book. A final section delves into issues of externalities and public goods with specific chapters on cities, pollution and natural resources.

As a text for teaching, the book has a number of pros and cons. The non-controversial nature of the way in which material is presented facilitates learning but it belies the current state of economic theory. For example, some discussion of alternative objectives to profit maximization, of uncertainty, of information costs, and of 'second-best' arguments would be desirable. There is considerable doubt whether all the topics treated in the book could be covered during a full-year course, let alone a semester course. For the main part, the case studies are disappointing as a means of illustrating either the application of theory or its relevance to real problems. Many case studies are no more than examples of problems requiring resolution. References to further problems would have been useful. The material is clear and concise and no major errors of logic were detected by this reviewer. An impressive and potentially very useful aspect of the book is the set of problems given at the end of each chapter. They could form the basis of a self-teaching course.

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