



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

BOOK REVIEWS

Assessment of Agricultural Research Priorities: An International Perspective. By J. S. DAVIS, P. A. ORAM and J. G. RYAN. (Australian Centre for Agricultural Research, Canberra, 1987.) Pp. 85, ISBN 0 949511 31 5.

This small book provides a good guide to the state of the art with respect to the determination of research priorities. While the relevant extant procedures for estimating research benefits are clearly elucidated in Chapter 2, the application of this framework in Chapter 3 to the establishment of research priorities for ACIAR's funding program provides a useful 'cookbook' of how to measure research benefits and costs for neophytes in this area. The results of the empirical analysis in Chapter 4 provide an interesting insight into likely future directions of ACIAR's activities.

For professional economists conversant with the literature on assessing research priorities, the conceptual framework and analytical methods used by Davis et al. will be familiar, and the main interest is in the procedures used to assemble the necessary data. Most of the data elicitation procedures described in Chapter 3 are not controversial, but the estimation of some of the variables was, in the authors' own words, 'subjectively derived'. Perhaps the most heroic 'assumption embodied in the framework is that, over the range of research expenditure contemplated, research output per unit of expenditure is likely to be constant' (p. 20). This approach ignores the fact that research on tree crops (for example, coconuts) or animals (for example, sheep and goats) is generally more expensive than that on annual crops (for example, wheat). Another corollary of the Davis et al. approach is that any systematic cross-commodity, or cross-country, differences in research productivity have to be embodied in the estimates of probability of success. Given the crucial importance of these estimates of probability of success and their subjective derivation, it is disappointing that the authors have only published the figures for groundnuts.

Another area of concern is the estimation of the spillover effects. As can be seen from Tables 4.1 and 4.4, these effects tend to dominate the estimation of total international benefits, a result which may surprise some readers. Again 'the estimates eventually used are all subjective', so publication of the estimates for all commodities rather than just for groundnuts would have helped readers to make their own judgments about relative research priorities.

Most of the other variables used are much easier to quantify and much less contentious. A possible exception is the rate and ceiling level of adoption. In my opinion, we do not have the knowledge to predict, *ex ante*, differences between countries and/or commodities in the adoption of unknown innovations, so these variables would best be left as constant parameters in the analysis.

To sum up, this book is a good guide for anyone wanting to find the frontiers in the quantitative assessment of agricultural research priorities. The most valuable contribution is the attempt to derive

empirical estimates of research benefits for a range of commodities on a global scale. As such, the work highlights the strengths and weaknesses of the current state of knowledge, and thereby provides an agenda for future research. In particular, further work is needed on how best to estimate the size of the cost reducing effect for particular research programs, and on the extent of any spillover effects to other regions and countries.

R. K. LINDNER

*University of Western Australia,
Nedlands, Western Australia, 6009*

Subjective Equilibrium Theory of the Farm Household. By CHIHIRO NAKAJIMA. (Elsevier, Amsterdam, 1986.) Pp. 302, ISBN 0 444 42646 9.

Agricultural Household Models — Extensions, Applications and Policy. By INDERJIT SINGH, LYNE SQUIRE and JOHN STRAUSS (eds). (Johns Hopkins University Press, Baltimore, 1986.) Pp. 335, ISBN 0 8018 3149 0.

In the first book Professor Nakajima presents an elegant theoretical analysis of the farm household. The author has been central to the development and refinement of subjective equilibrium theory of the farm household since the 1950s and it was his work published in English that brought the extensive Japanese literature to the notice of the English speaking profession in the late 1960s. *Subjective Equilibrium Theory of the Farm Household* is based on the translation of the Japanese language book of the same title published in 1983. The author states he has extensively reviewed the original and, as such, the English language version represents a more complete development of the author's ideas.

The farm household is defined as 'an economic entity which is composed of the farm firm, the labourer's household and the consumer's household and where the behavioural principle is utility maximization'. Using both Hicksian and Marshallian concepts, the author begins by developing a basic model of the farm household where all the production is sold, land and labour are the only inputs, land is fixed in quantity and no labour market exists. The basic model is developed in subsequent chapters with models examining the subjective equilibrium of the farm household under varying assumptions as to the existence and nature of product and input markets. The recursive nature of the farm household when these markets exist is established. In the final two chapters the author develops models first of the farm firm and then of the farm household under fixed rent tenancy and share tenancy.

The book is very readable with a clear mathematical treatment of the subject. The use of diagrams is excellent and makes enjoyable reading for those who would agree with the author's belief that 'My ideas can best be understood with the aid of relatively simple, two-dimensional geometric models'.

In the second book *Agricultural Household Models — Extension, Applications and Policy* published for the World Bank, Nakajima's contribution to the theoretical developments of farm household modelling is much in evidence. The book consists of two parts: the first,

written by the editors, reviews the theory of agricultural household models developing a basic model of the farm household and establishing the conditions for recursive and non-recursive models. Given the existence of markets for inputs and outputs where households are price takers, production decisions are made with reference to market prices independently of consumption and leisure choices, but with consumption and labour decisions of the agricultural household dependent on the production decision. The importance of this recursive nature of the model is reflected by what the authors term the profit effect, which may be of sufficient magnitude to overcome the substitution and income effects of a price change. In support of the use of agricultural household models, which the authors acknowledge to involve complex theoretical structures and considerable amounts of data, they cite the effects of inclusion of the profit effect on estimates of own-price and cross-price elasticities of demand for agricultural and non-agricultural commodities and labour supply for seven countries. Not only are there differences in the size, but also in the sign of the respective elasticities in a significant number of cases. They maintain that where the profit effect is likely to be important agricultural household models should be used. In addition, the ability of the models to provide estimates of the effects on policy changes in landless labour and non-agricultural rural households makes them a powerful tool for policy analysis.

Several methodological issues are considered such as when a recursive or separable model can be used. The data requirements are discussed and the comparative statics of both recursive and non-recursive models are derived in an appendix in Chapter Two. In addition, shadow or virtual prices are defined for those situations where some prices are endogenous and models are developed for situations where labour markets are absent. Models incorporating Z goods and product heterogeneity are discussed.

The case studies included in the second part of the book are developments and empirical applications of the basic models. The first study, using Korean and Nigerian data, extends the basic model to a multicrop analysis. The second disaggregates the consumption side of the model and, using data from Sierra Leone, demonstrates the use of the agricultural household models in examining the effects of pricing on nutritional status. The third study uses the agricultural household model to analyse the relationships between the food intake and household health and farm profits in Indonesia. In the fourth study, the recursive model is abandoned to study household borrowing in rural India where household characteristics are viewed as influencing borrowing levels and production.

Two further chapters examine the consequences of policy intervention for different types of households using microsimulation, the second incorporating explicit market clearing conditions in the agricultural household model. An attempt to introduce production risk into the agricultural household model is made in the seventh study. However, in most cases, the introduction of risk prohibits the separation of the model into independent production and consumption components. As the authors suggest, much more work is required in this area. The eighth study develops a model of a Chinese collective, subject

to imposed quotas and restrictions. The model is not recursive because of these restrictions. The analysis concentrates on the production data. However, the consequences of restrictions imposed by the State are determined. In the last study, the problem of differing preferences for the off-farm and on-farm work is assessed using Canadian data. It is established that if these differences exist or if there are costs involved in commuting to off-farm employment, then production, consumption and labour supply decision are interdependent and a recursive model is inappropriate.

The two books are complementary; Nakajima's orientation is the theoretical development of the agricultural household model while Singh, Squire and Strauss provide both a review of the methodology and an excellent collection of empirical applications to a variety of policy questions.

PETER MCCOLM

*Curtin University,
Perth, Western Australia 6001*

The Making of the AWU. By JOHN MERRITT. (Oxford University Press, Melbourne, 1986.) Pp. 417, ISBN 0 19 5546679.

The Making of the AWU has been long awaited by Australian historians interested in the history of the labour movement and rural life. A brief taste of John Merritt's extensive research into shearing and the pastoral industry appeared in his important article, 'W. G. Spence and the 1980 maritime strike', published in *Historical Studies* in 1973. A decade later, Merritt has expanded upon this article and presented an extremely detailed account of the first twenty years or so of the most important Australian rural trade union.

One of the major strengths of Merritt's work, unlike many other union histories, is that he introduces the reader to the industry in which his unionists worked, and he provides a detailed account of the workplace. All too often, union historians venture no further than the union office and the deliberations of union officials. Readers of this *Journal* may be familiar with the work of Professor N. G. Butlin (and his school) on the expansion of the wool industry during the years 1860 to 1890, and its retreat in the 1890s. Merritt's opening chapter is a masterly synthesis of the difficult work of Butlin and his colleagues, and should be read by all those interested in these critical decades in the history of the Australian wool industry. In his second chapter, Merritt provides an outstanding account of the life of shearers during the 1880s, the critical decade in which the union was formed. Themes examined in this chapter include: the length of the season and regional differences in its commencement; the craft of blade shearing; how young men learnt the trade and were recruited into the ranks of shearers; who were the shearers (only 1375 were listed in the 1891 New South Wales census); what monetary rewards they gained from shearing and the methods of wage payment; their living conditions on the job; and the occupational hazards that attended shearing.

In this discussion of the life of shearers, Merritt argues at some length that the ranks of shearers were made up to a large extent of small

holders, or selectors, who turned to shearing to help finance their farms. In the development of the AWU, this was crucial as it proved difficult to organise men who were only part-time shearers and themselves occasional employers of labour. Full-time, or near full-time, shearers may have displayed greater willingness to fight for improved rates and conditions. This argument is not totally convincing. Admittedly only 1375 shearers were returned in the 1891 census, but Merritt's own table (p. 47) shows that there were 20 503 agricultural labourers listed in the census, and his table mistakenly omits a further 8000 pastoral labourers. During the shearing season little work would have been available for these men on farms and it is likely that a substantial proportion of them turned to shearing. Wages in nineteenth century agriculture varied according to the season, and rose substantially during shearing and harvesting. It is likely that poorly paid agricultural labourers would have seized the chance to earn extra money at shearing. Merritt further argues that one of the attractions of shearing was the high wages it offered. My own calculations, from pastoral station account books, show that shearing wages were high in relation to general agricultural labouring but were not particularly high in comparison with urban wages.

Merritt's discussion of industrial activity during the years 1888 through to 1911 is the core of the book. Here the going gets heavier and the reader often risks becoming lost in a mountain of minute detail concerning the minutes of union conferences, negotiations with pastoralists and the internal debates and discussions of union officials. However, the reader's perseverance is rewarded. In this long chronological section Merritt outlines the formation of the Union in the Victorian township of Creswick; the role of W. G. Spence in its formation; its growth in the late 1880s and its subsequent defeat during the great strikes of 1890. Using the papers of pastoralists and their organisations, Merritt demonstrates how pastoralists fought back and, in the 1890s, largely wiped out the Union's early victories. With the introduction of a federal award in 1907, the Union's fortunes changed. With the award, the AWU was able to offer high minimum wages, improved working conditions and protection from unscrupulous employers. In this way, the Union could offer rewards for men who joined the Union. Furthermore, pastoralists were no longer prepared to subsidise non-unionism. Indeed Merritt argues that pastoralists 'were more likely to offer non-unionists rates and conditions below those to which unionists were entitled'. Finally by 1911 the small holder was disappearing from the ranks of shearers and the workforce was becoming 'more distinctly working class'. Aided by the federal arbitration system, Merritt very briefly outlines the manner by which the AWU subsequently went on to organise thousands of other rural workers.

The length and often overwhelming detail of Merritt's book may deter non-specialists from persevering with *The Making of the AWU*. This is unfortunate, for Merritt's account of the birth of the AWU will be the standard account for many years to come, and deserves a wide audience.

CHARLES FAHEY *Department of Conservation, Forests and Lands,
Melbourne, Victoria 3000*

Introductory Statistics. By G. E. BATTESE. (University of New England, Armidale, Teaching Monograph Series 4, 1985.) Pp. 539, ISBN 0 85834 616 8.

This monograph provides a simple introduction to statistics and, in particular, its applicability to economic data. For pedagogical purposes, this is quite a useful monograph since it minimises the mathematical derivations and emphasises instead the application of theory. Readers are taught by example, rather than motivated by a particular methodology.

The book is organised into fourteen chapters, along the standard lines of an introductory statistics course. From elementary probability theory and random variables, the monograph progresses to sampling theory, estimation, hypothesis testing and then basic multivariate analysis, closing with two chapters on time series and index numbers. The ordering of these chapters seems quite sensible; for example, unlike many other introductory texts, the section on joint distributions of random variables is placed after the discussion of the univariate case is completed. A feature of the book is its simplicity, particularly in the presentation of definitions and theorems which are suitably highlighted throughout the text. The author does not attempt to broach some of the more subtle problems in statistics, preferring to remain with the basic problems of statistical inference.

While this monograph will be useful as a teaching guide, it does have several limitations. First, there is no discussion of the available computer software. This would appear to be a serious omission since most of the extant introductory business statistics books are orientated to a particular package. Secondly, the references to economic data are inadequate. Apart from the chapter on price indexes, there is very little that is specific to economic statistics. Thirdly, I would have preferred to see greater discussion of Australian data and especially financial data, as this is a major area of economic statistics. Finally, there should be at least some discussion of new techniques in statistics such as exploratory data analysis and bootstrapping.

Notwithstanding these limitations, the monograph will prove useful as a teaching guide for introductory business statistics, particularly when supplemented with other references.

KIM SAWYER

*University of Melbourne,
Parkville, Victoria 3052*

Mallyon's Principles and Practices of Farm Management Accounting (3rd edition). By D. G. NEILSON. (Law Book Company Ltd, Sydney, 1986.) Pp. 293, ISBN 0 455 20645 7.

This third edition of the book updates the earlier work by C. A. Mallyon, last published in 1966. While breaking no new ground, this edition provides a well-balanced coverage of the issues within this discipline and is therefore aptly titled. Target readership is not specified; however it would be useful to students in farm management whether they be business oriented farmers or the accountant/advisor attempting to interpret the business jargon of those in primary production.

The format follows that of the previous edition which results in a logical progression from the principles of accounting systems through to the practices of analysis and budgeting within a management accounting context. The selected bibliography is a useful inclusion, even if somewhat dated.

The book is easy reading because of its numerous short chapters and the use of relevant subheadings. Most accounting jargon is avoided by good introduction of concepts and explanation of their practice through numerous examples. In addition, key parts are emphasised by succinct conclusions in most chapters and by reference to other parts of the book. A valuable quote is that 'Simplicity is a virtue in accounting' (p. 48). It is commendable that the author practises this principle.

The book is essentially text with tabulated examples. It would hold the reader's interest even more if a varied form of presentation were used. The use of diagrams and flow charts would be of some advantage in explaining the components of an accounting system and in describing the interrelationships between accounting records and reports.

The book is quite thorough in its treatment of the essential areas of farm management accounting. Its only obvious flaw relates to its treatment of computers. The two chapters on this topic provide a summary of computer use and applications; however, whilst reading this book, the impression gained was that computer application should have been integrated throughout all chapters, both by reference and example. The author's Preface anticipates this improvement in the next edition. After all, most readers who open the covers of this book will either need, desire, or have a concurrent exposure to the specific application of computers in management accounting. It is of some disappointment to see a continued emphasis on the traditional techniques suitable for manual analysis, without a coverage of the use, for example, of databases for farm recording or spreadsheets for sensitivity analysis and financial modelling.

In the midst of the fundamental techniques is a overview chapter on the more sophisticated technique of linear programming. Whilst this is good in itself, its inclusion further highlights the gap left in the middle ground of farm management accounting. It is this middle ground, where basic techniques have been computerised, that deserves more explanation. Despite these drawbacks, one is able to understand the basic manual techniques which are fundamental to more advanced analyses, whether they be computer based or not.

Another isolated shortcoming is the simplistic treatment of the bank reconciliation process which, although in theory is simple, often in practice defeats the novice. A more in-depth treatment of this important step would be valuable for many readers.

We are reminded of the difference between management accounts and tax accounts and also that in many cases statutory accounts are required. Because of the different underlying assumptions in each of the above, the importance of the 'Notes to the Accounts' is paramount. Unfortunately they are not mentioned.

The book correctly emphasises the flexibility desirable in a good accounting system with the users of management reports being the dictators of its output. No recognition is given to the fact that accountants, by comparison, are restricted in the style and format of

reports by professional rules in the form of the Australian Accounting Standards. Companies' financial statements must conform with the statutes and Approved Accounting Standards. A significant amount of formal research is continually in progress to improve the quality, uniformity and usefulness of financial statements. Integration of the management accounting system with these requirements is the challenge of those designing efficient, on-farm, management information and reporting systems and is thus deserving of some mention.

In summary, it must be said that the book provides an understandable and comprehensive introduction to the area of farm management accounting. The book maintains its perspective by continually emphasising relevance and simplicity in the application of techniques. It also rightly warns of the dangers of misinterpretation. The book should find a niche in the libraries on Australian farm management because of its quality of content, its reasonable price and convenient size. There are few books that cover this area of farming so well.

The author's pleas for renewed efforts in further development and co-operation in this area are justified. The increasing and necessary emphasis on better financial planning and control in all business, especially the rural sector, necessitates further consideration of the matter by those working in this field. The individualistic management style of the Australian farmer, and therefore of his management accounts, would seem to be a large hurdle to those seeking uniformity of such systems. The book may direct those who value the benefits of management accounting to re-kindle their efforts on behalf of the efficiency of Australian agriculture.

L. A. FERGUSON

*V.C.A.H.-Glenormiston,
Glenormiston South, Victoria 3265*