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BOOK REVIEWS

Economic Models and Quantitative Methods for Decisions and Planning in Agriculture. Edited by Earl O. Heady. (Ames: Iowa State University Press, 1971.) Pp. 518, \$US10.50, ISBN: 0 8138 0540 6.

This book has something of interest for all those concerned with the development and application of planning techniques in agriculture. It consists of papers and opening discussions presented by delegates to an East-West seminar held in Hungary in 1968. The seminar was attended by participants from twelve countries in Western Europe plus the U.S.A.,

and five countries in Eastern Europe plus the U.S.S.R.

The scope of the seminar was well planned, if ambitious. The main themes were the development of planning techniques, their formulation and application at the micro and macro levels, success in their application, and the approaches taken by different countries to planning agriculture within their own institutional framework. As might be expected in a seminar of this nature, no innovations in techniques appear. Reviews of farm planning are comprehensive and well illustrated, and obstacles to more widespread application are discussed. The formulation of regional and national models tends to be more speculative. Probably the chapters of greatest interest are those describing national models in use in various countries, and those concentrating on the reasons for and significance of discrepancies between model predictions and actual outcomes.

On the whole the standard of the papers presented is high. In most cases a paper originating from a country with one economic system was replied to by a participant familiar with some other system. This was probably essential in order to get a dialogue going. Sometimes the opening discussion followed up the paper well, but at other times the opportunity was taken to introduce new themes. Several opening discussions were very thorough in the analysis of the preceding papers and raised many interesting questions the replies to which go unrecorded in this book. In the Foreword it is stated that the intention is to publish a summary of other discussions in a subsequent volume.

Overall the book is of interest for highlighting the similarities and differences in planning agriculture in different countries. The impression given by the papers is that the West is further ahead in planning at the farm level, where individual farm plans do not have to be integrated with national plans. At the regional and national levels both East and West are developing ambitious programming models. The socialist countries appear to be more at the formulation and experimentation stage, although the potential for programming models in their countries is clearly recognized. Of all the socialist countries Hungary was the country which participated most actively, and which was most responsive to papers from capitalist countries. In large part this was due to Hungary's use of the price mechanism for regulating output.

In general the presentation of the book is reasonable. It includes a

list of participants and a combined subject and author index. What was disconcerting was to find so many errors in mathematical notation in a number of papers. Subscripts are a heavy casualty.

The book is valuable for showing the recent developments and inadequacies in planning agriculture in various economic systems. For details on progress since 1968 we must await the results of a future seminar. In the interim this book will stimulate future work in agricultural planning.

J. O. S. KENNEDY

University of New England, Armidale.

Benefits and Burdens of Rural Development. By IOWA STATE UNIVERSITY CENTRE FOR AGRICULTURAL AND ECONOMIC DEVELOPMENT. (Ames: Iowa State University Press, 1970.) Pp. 311, \$US7.50.

This volume reports the papers and formal discussions of a specialist seminar designed 'to review the total complex of economic and social problems' of the U.S. rural population as at 1969.

There are 15 papers and a final chapter of formal discussion. This chapter consists of brief end-of-conference statements which add little to the papers, and could have been omitted.

The papers are in four groups: (i) economic and social characteristics of rural communities; (ii) effects of stages of growth and technology on rural communities; (iii) policies for improvement of rural living; and (iv) public policies to relate welfare of rural people to national goals.

The total population of the U.S. in 1950 and 1960 included 54 million classified by residence as rural, of whom 23 million in 1950, and 13 million in 1960 were rural-farm. Thus in 1950 31 million were rural non-farm and 1960 there were 41 million rural non-farm. The 1970 census was expected to show a continuation of these trends.

Although income opportunities of the farm population, both farm and off the farm, are improving, 'nearly 2 million farm residents remain below the poverty line . . . (and) the rural educational and social environment frequently has failed to prepare many people for the transfer to off-farm opportunities.'

In a detailed paper concentrating on the impact of public policy and technology on marginal farms, and on the non-farm rural population, Tweeten and Schreiner conclude that 'technology and government programs have increasingly brought disadvantages to the marginal farmer compared to the commercial farmer . . . The \$50 billion spent from 1933 to 1966 to support farm income with government commodity programs largely eluded the marginal farmer. It seems to be an unduly large price to pay for the indirect, downward adjustments in the number of marginal farmers caused by these programs. Better programs could have been devised.'

In his examination of benefits from farm programs Schnittker shows that 'direct benefits arising out of price support programs for agricultural commodites go primarily to persons who have relatively large farms, enjoy a comfortable living out of current income, and have substantial equities in property'. He argues that too much is being spent on farm programs, and examines how to spend less on them.

On farm structural change, Heady notes that economic growth 'forces us to larger farms, the substitution of capital for labour, a smaller farm population, and a negative effect on income over the rural community.' One of the consequences is change in the 'state of mind' of management to capital.

Gardner examined the distribution of gains and losses from economic growth in rural areas. He suggested that the rural farm/urban income ratio would be 0.70 to 0.75. Farm labour is much more mobile than had formerly been supposed, and it therefore 'may no longer make sense to treat the welfare of farm people as an independent problem

for which special kinds of public policies are required.'

In his paper on structural and technical change Welch notes difficulties in explaining the sharply rising price of farm land, and observes, 'capital gains through appreciation of land values now constitutes a very significant share of net farm income.' Also, 'the rapid rate of technical change has placed peculiar emphasis on the ability of farm operators to accurately evaluate information about the flow of new inputs and techniques and to respond accordingly. Since operator education appears to be correlated with this ability, the rapid pace of change in American agriculture appears to have increased its value.'

In one of a group of papers dealing with improvement of rural living Spitze concentrates on education. He sees 'public educational investment, which develops individual competence for participation in public decision making about social organizational and operational problems', as of 'most important concern to the future welfare of rural people.'

Gratto discusses optimal population distribution but is not hopeful that an 'explicit national policy of dispersal of industry will emerge to reverse the locational tendencies of the rural population.'

Pulver deals with policies directed to improved living in rural areas. He 'places highest priority on man and his needs rather than the economic development of an area or region.'

The final paper in this group, by Gross and Donohue, emphasizes the organizational diversity of the economy. 'Perhaps the area in which agriculture lags mostly is in the socio-psychological integration and the understanding of many of the new forms of social organization that have been developed to meet the conditions which arise with interdependence as a result of specialization and diversification. There is a notion among many rural people that a uniqueness is possible with the traditional rural model that is not possible within alternative forms of social organization.'

Dealing with political dimensions of rural welfare, Talbot first identifies the problem as being that an 'underemployed and unskilled or poorly skilled, rural labouring class is against the best interests of all of rural America.' .To alleviate these conditions, immense and well-co-ordinated programs will have to be instituted, . . . to educate rural youth . . . to re-educate and retrain those in the early twenties to the forty-five-year-old group . . . to institute semi-retirement and retirement programs of a comprehensive type.' Despite widespread belief that the U.S. political system is 'designed to protect the "haves".' Talbot sees 'signs of political innovation and modernization' that are ameliorative in nature. Even so, he recognizes that 'time is not on the side of rural America', and 'farm leaders have always understood their commercial

interests better than they have the welfare and educational interests of rural America.' He is 'not notably sanguine' that 'farm leaders, small town business interests, rural politicians, educational institutions, public and private bureaucracies serving rural America (will) be able to comprehend both the political linkages which must be formed and the means whereby it can be done' to make the needed 'incisive decisions' and 'wise programs'.

In the final paper Jansma and Day conclude that 'one of our major policy concerns should be the redirection of our research to include as a target group the entire population and especially the rural non-farm portion rather than the current emphasis on the production state of commercial agriculture'. They end by saying, 'it is possible that America

will become:

A nation with a few highly efficient farms surrounded by many

small poverty stricken operators.

A nation with an industrial complex located in a number of megopolis type areas where well-paid workers and executives live in apartments rising high into polluted air while the unemployed live in squalid slums nearby.

A nation with a GNP of well over one trillion dollars being the home of 25 million people who don't know where their next meal is

coming from.

A nation of private wealth and public poverty, a nation of congested

cities, and a depopulated countryside.'

This book of papers is strongly recommended to all persons in Australia whose concern is rural policies.

H. P. SCHAPPER

University of Western Australia.

Agricultural Policy. Edited by C. D. Throsby. (Ringwood: Penguin Books, 1972.) Pp. 311, \$1.95.

For those seeking to unravel the tangled skeins of Australian Agricultural Policy, particularly for students stumbling blindly but hopefully from one journal to another, this volume will prove an unqualified blessing. The contributors are all widely accepted as leading authorities in their respective fields.

This book contains eighteen articles, all published initially over the period 1961-71, and is divided into six parts: (1) 'Background to Agricultural Policy', (with papers contributed by McKay, Glau and Gruen); (2) 'Adjustment Problems and Policies', (Standen and Musgrave, Harris, Lewis and Schapper); (3) 'Land and Development Policy', (Campbell and Lloyd); (4) 'The Wool Reserve Price Issue', (Parish and Lloyd); (5) 'Wheat Industry Policy', (Campbell and Lloyd); (6) 'Reconstruction of the Dairy Industry', (Gruen, Edwards and Drane, Parish and Lewis). Each part is preceded by a brief but valuable commentary, not only on the readings that follow but also, by reference to quite exhaustive bibliographies appropriate to each section, on the relevance of work by other authors.

It is unfortunate that Throsby (or his publishers) elected to restrict this volume to papers published over the past decade. Admittedly, the debate on agricultural policy issues was much more animated in the sixties than it had been previously. But the foundations of both agricultural policy and the policy issues subject to debate, emanate from decisions taken in circumstances that need to be appreciated, over the fifteen years or so prior to 1960. For example, the balance of payments crisis in the early fifties, the setting of production targets by the Australian Agricultural Council, the privileged position of farm organizations in relation to the Coalition Government, the use made of cost-of-production surveys in the process of price fixing, the introduction of tax concessions and the easing of credit restrictions as incentives to farm investment, all contributed to some extent to problems that emerged during the sixties. Papers by Campbell (1944) on cost-of-production surveys, Crawford (1952) on measures taken in response to the balance of payments crisis and Campbell (1966) on the role of farm organizations in the policy-making process are some which might have led the reader to a better appreciation of the issues and prospects in the sixties.

The sequence of papers in the first two parts of this book is difficult to follow. The title to Part One ('Background to Agricultural Policy'), leads the reader to anticipate explanation of the circumstances leading to the array of policy measures which contributed, in one way or another, to the problems debated in the sixties. McKay's article, 'Stabilization in Australian Agriculture', is clearly appropriate. But the papers by Glau (on the cost-price squeeze) and Gruen (on future market prospects) seem out of context and more appropriately placed at the beginning of the final section dealing with reconstruction. All papers in Part Two ('Adjustment Problems and Policies'), deal more generally with farm adjustment and direct intervention to accelerate this process and would seem better placed at the end of the book, immediately following the case for reconstruction in the dairy industry.

Given a similar limit on space available, most people who have undertaken research or offered courses on Australian Agricultural Policy would no doubt have selected essentially the same collection of readings. Some of us might not agree with the sequence or grouping of these papers. Nevertheless, Throsby has rendered a valuable service in putting together, between two covers, articles which cover the substance of debate on farm policy issues in the sixties. Furthermore, by the addition of bibliographies immediately preceding each section, brief but particularly perceptive discussion regarding the relevance of the contributed articles and other literature to recent policy debates and the inclusion of separate author and subject indexes, he has offered a book particularly appropriate as the core text for any tertiary course on Australian Agricultural Policy. At the same time, he has produced a readily readable book which should be prescribed reading for all policy makers and representatives of farm organizations.

R. K. HEFFORD

University of Adelaide.

Corporate Farming and the Family Farm. By The NATIONAL FARM INSTITUTE. (Ames: Iowa State University Press, 1970.) Pp. 118, \$US3.50. ISBN 8138 0365 9.

The title of this book was the theme for the annual forum of the National Farm Institute, Des Moines, Iowa, in 1969. Fourteen papers

are reported, mainly from politicians, farmers, and economists. By Australian experience this collection of short papers represents a high standard of discussion for a farmers' conference.

For the President of the National Farmers Union (T. T. Dechant) 'family agriculture is being destroyed' because policy gives 'tax advantages to the conglomerate corporation with taxable income from other sources'.

For the U.S. Congress Representative (J. Culver) 'corporate farming . . . gives the already too rapid process of rural-urban migration an added push'.

Farmer attitudes seem aggressive and challenging. One family farmer (J. Morris) says, 'one of our management techniques is that of surrounding ourselves with the best supporting cast of brainpower available'. Another (D. Kleckner) says, 'I'm willing to match my management skills against the giants, so long as I can be sure they have to play fair. Unfair tax advantages are my greatest area of concern'.

The economists are cool. The conclusion by N. E. Harl, in his paper, Agricultural Structure and Corporations, is that 'in most instances, the greatest threat to the small farmer is and will be the neighbour down the road who is operating at or near the minimum cost point and is rapidly expanding his operation in an attempt to remain at the point of minimum cost on the volume scale. Changes in farm size and structure are likely to continue to be stimulated by technology and not by entry of large scale firms operating with non-farm capital . . .'

Reporting results from a national survey by the Economic Research Service of the U.S.D.A., W. H. Scofield concludes that 'outside (nonfarm) corporations have not as yet taken over any significant proportion of total farm production. Still there are forces at work that are altering the business organization and capital structure of firms producing food products'. Some of the major statistics he gives for 1968 show that agricultural corporations are about one per cent of all commercial farms. They operate about seven per cent of land in farms. Non-family corporations represent about 0.2 per cent of all commercial farms and about two per cent of gross sales. Not all corporations are large. Nearly two-fifths had sales of less than \$40,000 in 1967. Less than 1,000 had sales of \$500,000 or more; many of these larger firms had agribusiness interests.

About the future, W. G. Murray writes, 'it is evident that farming is going through an enlargement revolution and the end is far from being in sight.' 'For the foreseeable future . . . the enlarged family farm with the ability to incorporate, has a lot of economic survival strength.' This is echoed by J. A. Hopkin. 'There will continue to be economic pressure on most commercial farmers to expand their operation.' In his paper, Financing Farm Growth—Requirements and Alternatives, he says, 'most farmers are not aware of how much borrowed capital they can generate, nor do they really devote much effort to seriously merchandising their credit.'

In the final paper D. Paarlberg sees the family farm as a 'durable and resilient institution' which has 'survived a technological revolution'. It could survive others because 'with a representative government, the people can have any kind of agriculture they want'.

These excerpts portray the nature and content of most of the papers in this book. Two others, interesting in themselves but not closely related to the theme of the forum, are the terse statement by C. E. Bishop on Rural Poverty and National Policy, and the wide-ranging dialogue between two agricultural writers on How the New Administration Looks to Us.

The papers in this volume are a good background starter for empirical study of what in Australia is called corporation farming.

H. P. SCHAPPER

University of Western Australia.

The Northern Myth. By B. R. DAVIDSON. (Melbourne University Press, 1972.) Third edition, Pp. 298, \$4.95, ISBN 0 522 84035 3.

The third edition of this book is identical to the second edition but for the addition of an epilogue. This examines the changes that have occurred since 1960. Brief consideration is given to land use by aborigines, foreign land ownership, further developments on the Ord, dryland cropping and the pastoral industry. Davidson suggests that aborigines would be better served by education or vocational training; that foreign companies operating in Northern Australia are not earning large profits; that a further ten years of development on the Ord, including commercial farming, has not shown it to be profitable; and that an intensive pastoral industry based on *Townsville stylo* is only marginally profitable because of heavy superphosphate subsidies. Thus, his 1970 conclusion parallels his 1960 conclusion, that the only viable development for Northern Australia is large dry-land cattle properties.

ROY A. POWELL

University of New England, Armidale.

Structural Reform Measures in Agriculture. By Organization for Economic Co-operation and Development. (Paris: OECD, 1972.) Pp. 286, \$2.65.

This book is a useful description of policy measures adopted in OECD countries to facilitate structural adjustment in farming. It has two parts. The first is a general discussion of particular policy measures; the second is an examination of farming structure and structural policy in selected countries.

The first part commences with a brief justification of government intervention to improve the size and structure of farms. Ensuing sections deal with specific measures including land consolidation programmes, retirement and discontinuation schemes, retraining programmes, and intervention agencies (controlling and participating in land transfer). Within each broad policy section the particular features and historical development of policies in different OECD countries are described. The two final sections, apart from a summary and conclusion section, examine recent institutional developments in landowning and leasing with some comment on special credit arrangements for farms making structural adjustments.

Strengths and weaknesses of the various policies receive only general comment often because the policies have been recently implemented or

have been varied frequently or, more importantly, because little formal assessment has been made of benefits and costs. Some indications of success and failure of measures are given by accounts of government expenditure, farms and acreages consolidated, farmer participation, etc. The lack of formal assessment of structural reform measures is recognized in the conclusion: '. . . it is difficult to say how far structural measures . . . have contributed to structural improvements, and whether they have justified their cost'. It is undoubtedly because of this that some very weak assessments of measures are to be found in the generally quite good comment contained in the book.

In the second part, separate sections are devoted to the examination of existing farming structure, structural reform measures and results in four countries—France, The Netherlands, United Kingdom and Sweden. The information presented in these chapters is particularly extensive. For example, the section dealing with agricultural structure and reforms in France extends to over fifty pages. A few pages of notes on other European countries and Japan completes the volume.

Despite the lack of any comment on the structural reform measures in Australian agriculture the book provides useful reference material for research workers and policy advisers.

BRUCE STANDEN

Department of Agriculture, Wollongbar, N.S.W.

The Pastoral Age: A Re-examination. By G. J. Abbott. (Melbourne: Macmillan of Australia and Dalgety Australia Limited, 1971.) Pp. 221, \$5.00, ISBN: 0 333 11959 2.

It is refreshing to see a slightly cynical attitude displayed towards the wool industry's glorious past, if only because it helps to keep present circumstances in better perspective.

Dr. Abbott is not such a thorough-going cynic as some isolated paragraphs in his study suggest, for although he firmly eschews the romanticism of other writers, he nevertheless creates an overall picture of the early days of the industry from 1788 to 1851 which still has rather romantic overtones, albeit somewhat muted. But he does look at the alternative, practical explanations for attitudes which have been unduly (in his view) glamorized, and leads his reader to query some of the accepted lore of the industry in a well-sourced, easily read fashion.

Take fencing, for example. Non-historians equate the advent of pastoral fencing with the depopulation of the countryside caused by the gold rushes, and/or the shortage of labour in colonial New South Wales. Dr Abbott reviews his sources carefully, and comes up with some straight practicalities: in squatting areas, squatters had no fixed land tenure until 1847; they could not borrow against woolclips or livestock until 1843, and prior to the depression of the early 1840s, the use of available loan capital for pastoral activities had been determined by Sydney merchants. The crunch comes in a speculative suggestion: 'It is doubtful whether squatters wanted to consider fencing or for that matter any other possible improvement, for their main interest was in the exploitation of the colony's pastures while making the fortune needed for a future life of comfort in Britain.' So much for the glamour of squatting days!

This realism also emphasizes the whole farm enterprise—it was not wool alone but sheep seen also as saleable livestock which led to everpresent demands for more labour and land in the period up to 1851 covered by Dr. Abbott's re-examination. His chapter on sheep-farming costs and returns explains the importance of the livestock sector in a manner which might well have a useful reminder for analysts of the present-day wool industry. It is quite salutary to note his insistence, in relation to the period 1822-1851, that the importance of returns from war has been exaggerated and that the evidence suggests that pastoralists' profits depended on the sale of sheep 'to an inordinate degree'. Indeed, he argues that the pastoral industry in those three decades seems to have been geared to the supplying of the local market for sheep as much as to supplying the British market with wool.

A further contemporary note is worth recording here: drawing heavily throughout his study on evidence given to various official committees of enquiry, Dr. Abbott comments: 'While pastoralists giving evidence to the various Legislative Council committees on immigration unequivocally complained of a shortage of labour, it is possible that exaggeration crept into their claims if for no other reason than to goad the government into immediate action.'

The study is, indeed, a re-examination of some fairly well-used sources, but it includes quite a few novel ones, in an assessment of the role of wool in the colonial economy of New South Wales from 1788 to 1851. Traditionally, the general view of this role has seen the wool industry as the most important influence in the development of New South Wales prior to the discovery of gold. Dr. Abbott sees other possibilities. He is, for example, much interested in the supply of capital and of immigration as determinants of the development of the colony at large, and he makes a fair case for their primacy.

He is conscious, too, of the importance of attitudes rather than facts. Indeed, his concluding paragraphs are at pains to emphasize that it was recognition of the potential future income from wool exports rather than the income actually realized, that was the key factor in the growth process of the 1830s and 1840s.

There is much in the book for the non-specialist reader, although the technique of doubly reviewing the period in a single work can be a little irritating, as are the fairly frequent printing errors. However, the second run around the court takes place in a context which is well previewed in the first two parts of the book, and the resultant familiarity does assist in recognition of the main lines of the argument in the latter part of the study.

Of great value to the general reader is the comprehensive bibliography of contemporary and secondary sources, and the index is useful and clear

Hylda A. Rolfe

Australian Wool and Meat Producers' Federation, Sydney.

Microeconomics: The Theory of Economic Allocation. By C. A. TISDELL. (Sydney: John Wiley and Sons, 1972.) Pp. 424, \$10.95, soft covers \$7.96, ISBN 0 471 87440-X.

The introduction of this book states that it is intended 'primarily as a university text to meet the needs of a one-year intermediate course in

microeconomics'. The author has undoubtedly achieved his aim and has succeeded in placing microeconomics within a much wider social and economic framework than is normally done.

The first four chapters are scene-setting in nature. Rather than delving immediately into supply and demand concepts, as is frequently the case in microeconomic texts, these chapters outline the nature of economic problems, stressing concepts of optimizing and efficiency, and statics and dynamics. Chapters 5-11 introduce the basic concepts of demand, supply, price, production and cost relationships, the effect of market structures on price, output and general equilibrium. The theory is well presented, uncluttered, highly readable and quite adequate. Diagrammatic exposition is used where possible and differential calculus is used as an aid to understanding.

Various parts of the book have been specifically marked for more advanced needs or a deeper treatment of the subject and as such the book caters for a range of abilities and interests of tertiary students. These advanced sections are printed on screened paper and can be avoided if necessary. Of interest is the author's attempt to show the relevance of set theory in explaining, simplifying and extending the basic economic theory. The author's aim has been merely to give 'a flavour of the possibilities' (p. 173) of using the 'new maths' but the problems and extensions of this approach would be valuable and could perhaps be developed in an accompanying workbook.

Chapters 12-22 provide a development of the theory discussed in earlier chapters and highlight the controversial nature of microeconomic theory. Attention is given, for example, to arguments surrounding the appropriate objective function of the firm, static allocative efficiency as opposed to economic growth and the organizational efficiency and advantages of free markets as compared with centrally controlled economies. Socialism is briefly examined as an alternative form of economic organization. Theories in welfare economics are presented and somewhat more attention than usual is given to technical progress, innovation and research and the allocation of resources by the public sector.

Emphasis in several chapters is on the use of analytical techniques in economics. Input-output analysis, linear programming and general activity analysis are introduced and discussed in relation to economic theory. A useful though sketchy chapter is included on problems of measurement in economics.

The book is sound and undoubtedly takes a place among the two or three better microeconomic text books presently available. One major defect, however. is the lack of empirical material and worked examples which are invaluable in the teaching of microeconomics. Again, the idea of a supplementary workbook may be useful for teaching purposes. Despite this deficiency the book is a useful contribution to the teaching of microeconomics.

O. T. KINGMA

La Trobe University.

Business Cost—Benefit Anlaysis. By R. F. J. DEWHURST. (Maidenhead U.K.: McGraw-Hill, 1972.) Pp. 280, \$13.75, ISBN: 07 094171 8.

The author's declared aim with his book . . . is to reduce the non-figure area and convert as much as possible of it to fertile figure ground!

and in the book there are many examples given of how the usually considered 'other unmeasurable factors' can be reduced to measurable

concepts and priced.

The book is divided into 11 chapters. Chapter 10 on Expenditure on Marketing, was written for the author by M. Hirst. The first three chapters outline the nature of the problems faced by decision makers and the need to quantify and value benefits and costs to make useful decisions. The fourth chapter, the longest in the book (54 pages), deals with the introduction and explanation of analytical methods that people applying cost-benefit analysis to other simple problems should be familiar with. It covers linear programming, integer programming, how network analysis, transportation, and assignment problems can be converted for computer analysis with a linear programming algorithm, regression analysis, Markov chains and input-output analysis.

The fifth and sixth chapters deal with the problems that costs and benefits occurring at different points of time create for decision makers, and the seventh chapter outlines how Bayesian analysis can be applied

to multivalue estimates of future benefits and costs.

The final four chapters deal with the problems of measuring management, forecasting technological change, evaluating marketing decisions

and job training respectively.

The detailed explanation of points and mathematical formulation of problems are covered in appendices to the chapters in all cases except chapter four where the subject matter of the chapter makes this impossible. This layout has given a book that would be intelligible to the non-mathematically trained and is easy to read.

The main emphasis of the book is on how Cost-Benefit Analysis can be applied to the more difficult areas of business decision-making. Hence it is likely to find use in applied microeconomics and business management courses and by people with these interests. People interested in the finer theoretical issues and details of Cost-Benefit Analysis will have to look elsewhere. There is an appendix to Chapter 8 on controllable variances that would make a useful contribution to most of the conventional accounting courses on standard costing and variance analysis. The introduction and integration of so many different analytical techniques to business cost-benefit analysis make it an unusually comprehensive treatment of the subject. However, the necessarily brief treatment of the different techniques imply that the reader has had some previous exposure to them or should study them further to more fully appreciate their strengths and limitations.

The book is well presented, free from obvious typographical and arithmetical errors and contains many well chosen illustrative examples.

H. J. PLUNKETT

University of New England, Armidale.

Ecology and Economics—Controlling Pollution in the 70s. By Marshall I. Goldman (Ed.) (Englewood Cliffs, New Jersey: Prentice-Hall, 1972.) Pp. 234, \$3.55, ISBN: 0 13 222729 0.

This book of readings on environmental problems is like a breath of fresh air after the verbal pollution produced by some of the more hysterical doomsday men. In particular, the almost obligatory list of ecological disasters is balanced by analysis of the underlying causes and a reasoned approach to methods of controlling the problem. In part, this balance is the result of the widely differing backgrounds of the authors who have contributed articles. Authorship of the fifteen articles is shared between five economists, five journalists, two medicos, a biologist and a politician. However, most of the credit for the balanced approach must go to the editor for the way in which he has structured the book.

After a lengthy introduction (61 pages), the book is divided into five sections. The first section is concerned with 'The Nature of the Problem', and contains three articles outlining the technical aspects of air and water pollution. The next five articles are grouped in a section entitled 'Economic Analysis' and cover topics such as the reasons why neighbourhood effects or externalities lead to pollution, the justification for state intervention in the market place when externalities occur, the efficiency of various methods of controlling pollution, and the economic assessment of particular pollution control programmes. The third section contains five case studies, the first of which looks at the Japanese experience. All of the other articles discuss cases where progress towards reversing the trend of increasing pollution has already been made, and are a welcome antidote to the unrelieved gloom presented by some writers on pollution. The most interesting by far is the article on water pollution control in the Ruhr area in Germany, as it demonstrates that economic principles can be remarkably successful when intelligently applied. The fourth section consists of one article on pollution in Russia, and explains why pollution is not exclusively a capitalist problem and may in practice, if not in theory, be more difficult to control in planned economies than in their free enterprise counterparts. An article by Edmund Muskie entitled 'Where Do We Go From Here' makes up the concluding section.

Some of the articles are well worth reading, and might not otherwise come to the attention of an economist interested in problems of the environment. Apart from the case study on water pollution control in the Ruhr and the editor's contribution on Russia mentioned above, an analysis of the different methods of air pollution control by Mills, and Rose's discussion of the problems associated with benefit-cost analysis of control programmes are examples of articles in this category.

However, in spite of the fact that this is a revised and enlarged edition of an earlier book, a number of the articles are disappointing. Economic analysis is a flattering description for the article in the second edition by Hazelton, which is largely a description of the zoning scheme used by the New England Water Pollution Control Compact. Furthermore this article, together with the case study entitled 'The Rebirth of a River' and the concluding article by Muskie, are all largely concerned with American institutions, and will be of little interest to readers outside the U.S. It is also difficult to understand why one of the classic articles on externalities was not included in preference to the article by Kapp on 'Social Costs of Business Enterprise'. Not only is the technical jargon employed unnecessary to develop the relatively elementary concepts covered, but the more difficult problems associated with economies of scale in control, and with the public goods aspects and redistributive effects of pollution are either ignored or receive inadequate treatment.

As an example of the consequences of rapid industrialization, the case study of the Japanese experience is superficial in the sense that it fails to come to grips with the dilemma faced by L.D.C.'s concerned both

with growth and environmental quality.

The introduction dominates this book, and also highlights both its strengths and shortcomings. The main criticism which can be levelled at the introduction is that it duplicates the material in some of the articles to such an extent that one has a distinct sense of $d\acute{e}j\grave{a}$ vu when one finally reads the articles. For example, problems of measuring the social cost of pollution take up thirteen pages of the introduction and only sixteen pages in the article by Rose, while the twenty-eight pages of introduction devoted to the relative merits of different methods of pollution control discusses this topic in even more depth than the corresponding article by Mills. Similarly, the explanation in the introduction of why polluters pollute is more lucid and covers certain aspects better than the article by Kapp on the same topic.

Goldman's obvious mastery of the various disparate aspects of the pollution problem together with his ability to organize the material in a cogent manner are the most impressive features of the introduction. Apart from the topics mentioned above, the introduction also provides a brief history of pollution and the reasons for the recent dramatic upsurge in the seriousness of the problem, while the questions of income redistribution, population control, effect of type of society on amount of pollution, and the dilemma faced by L.D.C.'s are also mentioned briefly. Indeed, in view of the breadth of coverage of the introduction and the fact that Goldman also contributed three of the articles, the quality may have been improved if he had authored a text on the same subject rather than editing a collection of readings.

On balance, this book has considerable merit marred mainly by the excessive duplication and the uneven quality of the articles. If the recent explosion of literature in this field continues, it should become increasingly easy to overcome the latter fault, and for this reason it will probably not be long before a better collection of readings appears on the market. For those who have to teach in this area in the interim, Goldman's book should serve as a useful reference source provided

that it is used selectively.

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Intersectoral Capital Flows in the Economic Development of Taiwan, 1895-1960. By Teng-Hui Lee. (Ithaca: Cornell University Press, 1971.) Pp. 197, \$US10.50.

This book outlines part of a programme of research at Cornell University dealing with intersectoral relationships in the process of economic development. The particular concern of this study is the contribution which agriculture can make to capital formation in the industrial sector in less developed countries where a high proportion of the population is engaged in substistence agriculture. Attitudes to this question are generally coloured by one's viewpoint on how to modernize the traditional agriculture and opinions on the amount of capital required for this transformation. Clearly, there is little evidence to sustain the notion that economic development must occur in a sequential fashion—invest-

ment and growth in the agriculture sector as a base from which major transfers can then be made to the non-agricultural sectors. The flows of capital into and out of agriculture will be determined by circumstances specific to each development situation. Transfer mechanisms nevertheless exist, and appeal to the specific experience of developing countries can be useful in improving our understanding of the development process.

In this book, the author's concern is solely with the experience of Taiwan from 1895 to 1960. His detailed methodology should have much wider application in the study of intersectoral capital flows in the early stages of economic development. It is less certain whether findings based on the special circumstances of Taiwan will be of immediate value in planning specific programmes and policies for application to other countries (as suggested in a Foreword to the book).

The economy of Taiwan appears to offer unusually favourable circumstances for a study of the process of economic development and, in particular, a study of intersectoral flows as they relate to agriculture and the remainder of the economy. Taiwan has had considerable success in modernizing its agriculture and in divorcing the total economy from agricultural dominance. The rapid growth which has characterized the agricultural sector has been accompanied by readily identifiable technological change. Again, Taiwan has made use of various devices for transferring capital from agriculture to the non-agricultural sectors. Finally, reasonable data is available to allow construction of a set of social income accounts dating from 1895. Lee has assembled these accounts to describe the gross and net flows of resources and income between agriculture and other sectors of the economy.

Capital flows are identified by Lee on the basis of economic transactions between six sectors: agricultural production, agricultural household, non-agricultural production, non-agricultural household, Government, and foreign trade. Interdependence between agriculture and the non-agricultural sectors is based on commodity and income flows and sectoral capital accounting. The transactions are reduced by Lee to a form in which intersectoral capital flows can be derived statistically from the social income accounts including income, consumption, and savings-investment in a sector. He then proceeds to show that there was net real capital outflow from Taiwan agriculture through the entire period 1911 to 1960.

Subsequent chapters are concerned with the conditions underlying Taiwan's agriculture in various periods and the means by which agricultural development was achieved. The process of capital flow out of agriculture is examined with respect to the demand and supply of agricultural products, government policies, other institutional changes and financial arrangements. Rent and taxation payments are shown to have played an important role in the transfer of capital from agriculture prior to 1930. In later years there was increasing outflow of capital through financial institutions and, after land reforms in 1953, the direct capital transfer of farmers' savings.

In the final chapter, Lee discusses the implications of the Taiwan study for contemporary developing nations. He concludes that agricultural transformation which simultaneously maintains a net capital outflow, calls for a variety of strategies. The most important of these are that

agricultural investment should be accompanied by technological improvement; the appropriate investment should have a large labour input in preference to capital goods; and a capital transfer mechanism should be established. Readers concerned with the problem of transforming traditional agriculture and the implications for overall national policy will find much of interest in this chapter. For the most part, however, the detailed methodology and numerous appendices will appeal to a far more limited audience.

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Evaluation of Land Reforms. By M. L. Dantwala and C. H. Shah. Volume I, General Report. (Bombay: Department of Economics, University of Bombay, 1971.) Pp. 197, Rs. 15.

The 1955 Amendment to the Bombay Tenancy and Agricultural Lands Act declared April 1, 1957, as the 'Tillers' Day' on which every tenant 'shall be deemed to have purchased from his landlord' the land held by him as tenant. This book is a report of an empirical study of the effects of this legislation in thirty-six villages in the Indian states of Maharashtra and Gujarat, undertaken in 1965 and 1966. The principal aims of the project were to examine the impact of the amended Act on the structure of ownership and incidence of tenancy, and to study the implementation of the Act and pinpoint weaknesses in implementation.

Although the title page credits Dantwala and Shah with authorship, they acknowledge at the outset that the bulk of the material in the book was contributed by other members of the research team. A companion volume, containing the interview schedules and the detailed survey results, was not available to this reviewer.

From the point of view of the reader unfamiliar with Indian agriculture and land tenure systems, the book begins badly. The reader is required to plough through a detailed and uninteresting account of survey procedures and definitions without any background information about the agricultural, social and political context in which the tenure reform was carried out. Chapter three, which outlines the main provisions of the amended act, is more interesting, but the motives behind the act are still not mentioned. This narrow focus on procedures and results makes it difficult for the reader to assess the significance of the tenure reforms or of the research project itself, as well as making the book less interesting and less comprehensible.

A specific difficulty for readers is the absence of definitions for terms used in the text. This is not a serious difficulty in the case of administrative terms, e.g. 'taluka', but terms describing important types of tenure, e.g. 'ryotwari' and 'zamindari', and technical terms, e.g. 'concentration ratio', certainly require definition.

The major findings of the project are reported in chapters four and five, which deal with the success achieved in implementing the act and the changes in tenure resulting from it. Together with chapter three and the appendices, this is the most interesting part of the book. The results demonstrate how exemptions and evasions reduced the effect of the act, and the significance of absentee ownership and mixed tenure as they affect changes in tenure status is discussed. At times the results are too

detailed; for example, the discussion of differences between the six local government units involved is likely to confuse and/or bore most readers.

The final chapters dealing with inequalities in land ownership and with land rental markets are disappointing, particularly the latter. In each case a large amount of space is devoted to defining terms and describing the analytical devices used, but the analyses carried out are rudimentary. In assessing market structure, number of participants, freedom of entry and the availablility of information are not considered. The structural parameters which are used provide some useful information, for example, they highlight the diversity of participants on both sides of the rental market, but their relationship to market conduct and performance is not made clear. A considerable amount of time is devoted to assessing the 'exploitativeness' of lease relationships, as measured by relative bargaining power scores assigned to lessors and lessees. However, since 'exploitation' is not clearly defined and the author of the chapter himself admits that the scoring is tentative and arbitrary (p. 120), the results do not add anything over and above what we already know about the characteristics of lessors and lessees. More than anything else, the market structure analysis in chapter seven suffers from the lack of price information of any kind which could be used to support the structural parameters used.

The main conclusions of the report are that while the legislation was successful in reducing tenancy, it did not greatly affect the inequality of land ownership, mainly because of the prevalence of mixed tenure and large tenants. Implementation was found to be slow and incomplete, due to exemptions, evasions and administrative inadequacies, particularly inadequate land records. While the tenancy legislation probably improved tenants' bargaining power *vis-a-vis* landlords, it probably also reduced competition.

The major virtue of the book is that it gives the reader a feel for the enormity and complexity of the task involved in land tenure reform under Indian conditions. This is best brought out in the appendices dealing with the state of village land records and the machinery and problems of implementing the Act. The number of tenancy cases investigated under the Act was 2.9 million and the legal process followed in each case involved five or six stages stretching over several years. Land tenure reforms carried out in such circumstances and under reasonably democratic conditions (as opposed to 'at the point of a gun') are very expensive in terms of administrative talent. Between 1957 and 1960 the two states created a total of 2,116 posts, with salaries varying from Rs 900 to Rs 65 per month, specifically for the implementation of the tenancy act. Whether all this input was worthwhile, either on equity or efficiency grounds, is a question the reader must ponder alone since it is outside the declared scope of the report.

Despite the limitations of the book, the sections dealing with the tenancy act and its implementation are well worth reading for the wealth of detail they contain about the actual mechanics of land tenure reform under Indian conditions. Nevertheless, the book leaves at least one reader wondering whether such an extensive survey, involving a field staff of one hundred and sixty-five, was justified by the results obtained.

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Basic Concepts of Rural Sociology. By G. Boguslaw Galeski. (Manchester Univ. Press, 1971.) Pp. 209, £2.76, ISBN: 0 7190 0432 2.

In this book, the author deals with some of the main problems of rural sociology in a socialist country, in which the social transformation of the farming sector makes slow headway. Galeski is a noted Polish rural sociologist. It is interesting to see how he applies Marxism and its special interpretation in Eastern Europe to the particular conditions of his country. Under Soviet advice and pressure, the Polish government had started a relatively smooth collectivization drive in 1949, following the Soviet pattern. This was one reason for the political crisis in 1956, when W. Gomulka was reinstated to the leadership. As an old communist opponent to collectivization, he immediately made decollectivization possible, and this occurred rapidly. After Yugoslavia, this was the second unsuccessful attempt to transplant the Soviet pattern to foreign countries. Only 1,100 collective farms function today, with little tendency for the 3.6 million small holders to join.

Chapter 1 describes the basic features of peasant farming, the main point being 'the fusion or (more exactly) the identification of the enterprise (i.e. the commodity-producing establishment) with the domestic economy of the family household' (pp. 10-11), even if the farm is quite specialized. This part then goes on to categorize the Polish farms according to their size, starting from

- 1. farms as secondary or additional source of family income,
- 2. those which provide the main, but inadequate, source of income,
- 3. farms as sole source and based on family labour only,
- 4. farms based on hired labour, capitalist farms (rare in Poland),
- 5. multi-family peasant farms or production co-operatives,
- 6. large farms without the characteristics of peasant farming.

The co-operative farms retain some features of the family farms, from which they originate, e.g. individual plot, family labour, income division in the family. Within limits, the small and medium farm is able to use modern techniques, with small economic losses. Still, large farm units are much more limited than in industry, and diseconomies appear at an earlier stage. But 'the future of agriculture lies with the large farm'. A slow equalization of the entrepreneurial features of co-operative and State farms is foreseeable.

In 'Farming as an Occupation' the differences between this and other occupations are analysed: family labour, not replaceable by hired workers. The family's occupational status is given by its class. Though the farmer participates in the general division of labour, he is rather autonomous in his daily work. Due to limited specialization, training is difficult to achieve and not in high esteem. With large scale, farm production and the domestic economy are gradually separated and the work is more specialized. Stability and sometimes stagnation arise from the relatively low family mobility and the professional succession.

Chapter 3 deals with the peasant family and its old features (size, three generations, etc.). Due to its compactness and interdependence of functions, the peasant family is less dependent on society as a whole and its production organization. This relative independence is fading away slowly along with self-sufficiency. The members of the family are

subordinated to it, and the family in its turn is bound into and supported by the village community. But the different development of family and farm and of their respective functions leads to serious internal conflicts. These are aggravated by the expansion of the industrial society, with its norms and technology, into village life and farming.

The village community is analysed in Chapter 4 without any romanticism: advantages and disadvantages of village life, close personal contacts, etc., are noted. Social control is still strong. Its agricultural character decreases with the transformation from agrarian to industrial society. The emergence of formalized co-operatives (be it collective farms, as in the Soviet Union, or agricultural circles, as in Poland) contributes to the dissolution of the peasant farm and, in its wake, of the village community. Modern mass-media, club-rooms, libraries, etc., have the same effect. The two types of large-scale farms in socialist countries—State and collective farms—approach each other slowly, but still differ in their effect. The collective farm retains certain features of peasant farms and presents economically the most cohesive village community;

the State farm preserves some traits of the landed estate.

The social structure is explicitly approached from the standpoint of Marxism 'with its special interpretation', in Chapter 5. The change in rural socio-economic structure is a process of class stratification with a number of intermediate groups emerging from the disintegration of former classes. The rate of change depends on the level of economic activity and is slower in agriculture than in industrial towns, because capital formation and accumulation is slower. Different forms of social 'degradation' are observed: small-holders become industrial workers, medium-size farmers are transformed into dependent 'cottage workers', and those working for banks or trading corporations become 'proletarians with land'. The peasants under capitalism approach the position of the working class, in some countries they become the 'lowest social class' (p. 116). In spite of its social stratification, the peasantry can act as a homogeneous social force under certain conditions. How these changes occur under socialist industrialization has never been thoroughly analysed. Research in the Soviet Union was stopped during collectivization. In Poland, such studies have been done but the author warns against transferring the 1929 Soviet ideas to the Polish village for there are no real capitalists, and peasants would not perceive collectivization as their liberation from capitalists or feudal landlords. There is social stratification, even impoverishment, but no social polarization and antagonism. If a small-holder wants to be free from rural exploitation, he can easily choose the alternative of industrial employment. On the other hand, the rural population can emerge as a social class, with some influence (e.g when attempts are made to introduce mass collectivization in Poland).

The development from peasant class to a stratum of farmers is discussed in Chapter 6. Specialization in farming, new occupational structures and occupations, vertical integration and other developments change the social cohesion and role of the peasantry. Commercialization comes slowly in Poland including large-scale farming, but the 'workers' self-government in the State farms and the (democratic) principles governing the functioning of production co-operatives' (p. 145), approximates the Yugoslav model.

An analysis of the sociological problems of the contemporary Polish village is presented in Chapter 7, which sums up the earlier discussions. To find a path into the future, the drawbacks of old-time peasantry have to be recognized (the barriers against technical progress, the small role of the agricultural school, etc.). Motivation is not only derived from land ownership, while the author discusses the effects of collectivization on adoption of change. The production co-operative cannot provide all the advantages of industrial production, yet retains many of the disadvantages of peasant farming. Here the influences on the Polish peasant family and the Polish village are spelt out clearly.

The final chapter deals with prerequisites for the transformation of the peasant farm. It reviews the discussion on the future form and structure of farming in a predominantly planned economy. The discussion, since the mid 50s, is free from dogmatic condemnation, party censorship and even from party interference. Nobody and no institution offers a simple solution to be implemented by one stroke. Agrarian policy is not committed to any goal as yet. The necessity of radical transformation, its economic profitability and whether the peasants desire it are all questioned. Galeski puts forward a number of economic reasons and concludes, 'that under Polish conditions the immediate replacement of peasant farms by a system of large State or co-operative farms cannot be regarded as economically advantageous' (p. 186). Further the present surplus population of working age makes the release of rural manpower unnecessary.

Naturally, not only economic issues are at stake, but also the fundamental aims of socialism, e.g. to overcome alienation in all its forms, which is not associated only with capitalism. It is argued that the peasant family farm under prevailing socialist conditions no longer breeds capitalists, but is subordinated to the socialist economy and becomes an integrated factor in its further development. The aims of socialism are not incompatible with the retention of the family form of production (p. 191). But, the social problems of the village reach further than to the farm structure. Social discrimination against the farming population and the distinction between village and town have to be relaxed; children's work ought to be abolished in favour of better education. Premature establishment of large farms hinders the realization of socialism, so that only if agriculture, the economy and society are highly developed and the producers are interested and motivated, should these changes take place. The last point is strongly emphasized, since peasant opposition erodes the economic advantages of large farms while the initiative and activity of the peasants would help to overcome objective and other difficulties. Generally, peasants are not 'anti-socialist', but they oppose changes which offer no advantages. Galeski envisages the change towards large socialist farms as a long process, which could finally be accepted voluntarily by the peasants. Since socialism first emerged in industrially retarded countries, the transformation of farming must be a long-term process.

The book by Galeski is an important publication in relation to the special conditions of Polish agriculture. The agricultural economists and rural sociologists of Eastern Europe are strongly influenced by the theories and arguments of A. V. Cajanov on the peasant farm. On socialist grounds, Galeski shows the features and advantages of peasant

farming and argues frankly against a repetition of the abortive attempt to collectivize Polish agriculture. Editors (T. Shanin, P. Worsley and A. Allen) and translator (H. C. Stevens) might have had a difficult task, but they have presented a valuable insight into Polish Marxist rural sociology for Western scholars, who are underfed with such material.

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