

BOOK REVIEWS

Resource Allocation in Agricultural Research. Edited by WALTER L. FISHEL, (Minneapolis: University of Minnesota Press, 1971.) Pp. 391, \$US14.00, ISBN 0 8166 0611 0.

Investment in research in the agricultural industries has increased at a rapid rate in most countries over recent decades. However, it is only recently that much attention has been turned to formal evaluation of the large, mostly-public expenditures in this direction. People with training in economics have been drawn to the broad topic in at least two ways—first by invitation of research administrators who have recognized that at least some aspects of their work involve the economic problem of allocating scarce resources among competing alternatives, and secondly by economists' own spirit of enquiry into an interesting economic phenomenon involving large-scale public expenditures and highlighting questions of social welfare, risky investments and uncertain time schedules.

The subject of resource allocation in agricultural research is topical and I think important, and the relevant theory and methodology are apparently interesting to many economists working in other fields. Thus, when a Symposium was organized in Minneapolis early in 1969 with the objective of bringing together as much as possible of the expertise in the field, something of interest and value was bound to emerge and I think it has—even if all the experts happen to be from the U.S.A. Unfortunately, the book was not available in Australia until recently and is still not easy to obtain in 1973. When it is considered that most of the papers must have been written in 1968 or earlier, it might be feared that the material has become rather dated. But such is not the case, I believe, and we can be confident that this volume will serve as the standard reference on the subject for many years to come.

Fishel has acquitted his editorial responsibilities in a careful and well-structured manner. The twenty separate papers are organized into five parts, the first of which contains one overview paper by Tichenor and Ruttan which neatly places most of the subsequent papers in broad perspective while reviewing problems and issues. "Research and Welfare" is the title of the excellent next section which contains rather long and wide-ranging papers by Tweeton on methodology, by Kaldor on social returns and objectives, by Paulsen on pricing research output, by Heady on welfare implications, and a very comprehensive review by Schultz. Schultz thoroughly discusses the several Chicago-school studies pioneered by Griliches. Three of these studies are elaborated in the next part, "Investments in Research", by their authors Peterson, Evenson, and Welch.

The final two parts are entitled, "Decision Making in Practice", and "Decision Making Experiments". The papers here are rather patchy in quality and scope but all are of interest as statements of how others are presently allocating research resources and how still others are endeavouring to develop improved allocative systems. There is a prevalent emphasis on the U.S.D.A. experiences, understandable with the U.S.D.A. as a co-sponsor of the Symposium. Perhaps Fishel's description of the

relatively novel and ambitious Minnesota Agricultural Research Resource Allocation Information System and Experiment is the most interesting of the outlines of recent experiments towards improved systems.

At almost every turn of page the reader becomes more impressed with the complexity of the research allocator's task and with the difficulty of doing anything constructive to assist him. But does this mean that economists should leave him to his own devices and revert to their sometime sniping role of offering uninvolved criticism? I feel that the topic, even if difficult, is of sufficient importance for economists to involve themselves more actively, especially while some research organizations are favourably disposed to experiment with new decision-making systems.

Of course, there is no need for the agricultural economist to keep his endeavours short of evaluating research and research resource allocation in his own discipline. However, if the controversy over the Musgrave, Dillon and McCarthy Subcommittee report (on financing research in agricultural economics) at the 1972 A.A.E.S. Conference is any guide, this may not prove to be the most popular activity for the scarce resources of the profession.

There is doubtless a long way to go before significant advances in the planning of research resource allocation can take place. But for all those interested in this subject, whether they be practising research managers, research scientists or practical students of welfare economics the Fishel collection will prove an invaluable reference point.

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Agricultural Policy in Wealthy Countries. By P. G. JAMES. (Sydney: Angus and Robertson, 1971.) Pp. 368, \$7.95, soft covers, \$5.50, ISBN 0 207 12326 8.

To attempt to describe and analyse the effects of the agricultural policies of nine separate countries in one volume is an unenviable task, and Professor James must be congratulated on his courage in making the attempt. Professor James overcomes the magnitude of the problem to some extent by limiting his examination to government policy in relation to farm incomes, marketing, price policy and farm size. Agricultural policy in relation to trade is scarcely discussed and the part played by the state in initiating agricultural settlement and in providing capital works such as irrigation projects and communications is not discussed at all.

The book is conveniently divided into three sections. The first discussed the recent changes which have occurred in agriculture, particularly the large increases in output caused by improved technology. The author demonstrates how these have caused supply to exceed demand and so led to a decline in farm prices and incomes and the creation of the so-called low farm income problem. This is followed by a very able summary of the means used for supporting agricultural commodity prices and of the farm adjustment schemes attempted in each country. Finally,

the effect of both price and income support and the various adjustment schemes are discussed. The major aim of the book appears to be an examination of how agricultural policies in the various countries have contributed to or alleviated the low farm income problem.

However, it is disappointing to find that in a work which is so concerned with rural poverty that so little space is devoted to establishing that such a problem exists and to examining its extent. The author is content to accept that the problem is serious because the average income of farmers is lower than for other income earners. The exact basis of this comparison is not given. If it is based on income tax data the validity of the comparison depends to some extent on the degree to which farmers are allowed to charge capital expenditure as an annual cost. Secondly, it ignores a number of items which are charged as a cost although they are really consumed by the farm family. These include the payment of interest on overdrafts which are paying for farm housing as well as for the farm itself and the payment of all rates. This second distortion occurs even if the comparison is based on net output from farming per capita, compared with net output per capita from the remainder of the economy.

Even where average farm income is higher than in other sections of the community as in Australia, the author considers a farm income problem exists because farm management surveys show that a high proportion of farms have low net farm incomes. It is at this point that a curious inconsistency occurs. In the early chapters the author insists that perquisites in the form of free housing, the free use of a motor vehicle and the capital gain due to rising farm land values should not be included when farmers' incomes are compared with other members of society. Yet in the later chapters he is at pains to point out that farmers with net farm incomes lower than they would receive in other occupations will not move out of farming because of the "psychic satisfaction of farming, and the value of the perquisites enjoyed in farming—in particular, the value of foodstuffs produced on the farm." Farm produced foodstuffs particularly in the U.S.A., the U.K. and Australia can only be a small perquisite when compared with housing and the free use of a motor vehicle. The author excludes housing because he considers farm housing would be of much lower value than city housing. He ignores the fact that half the value of city housing is in land and that for those on low incomes in cities, which is the group the farmer would join if he moved to the city as an unskilled worker, the standard of accommodation is in many cases worse than on farms. This is particularly true of the U.S.A. and Britain. Similarly, the use of a car is excluded because free cars are often given to city employees. However, these are not among the low income earners in the city. Capital gains are excluded because they are only available on retirement. In Professor James's words "a farmer may live poor but die rich." However, capital gains cannot be completely discounted for this reason. The greatest poverty problem in the cities is among the aged who may have lived comfortably during their working life but are poverty stricken in their old age. On the other hand a farmer who can die rich can also retire rich.

The real problem is that farm management survey data were designed to compare the income and the efficiency of one farm with another.

They were not designed to compare the standard of living of one section of the community with another or to measure the absolute living standard of people living on farms. In addition to the exclusion of perquisites, farm management surveys exclude non-farm income. Most surveys include all farmers whether they receive income from other sources or not.

It is pertinent to ask, how many of the farms with less than 500 sheep in the Australian High Rainfall Sheep Zone whose major source of income is from wool, are the major source of income of the occupant? Yet such farms make up one quarter of all the farms in this region. It is only when surveys are carried out to measure standard of living in both rural and urban areas that the extent of poverty in either will be known. This investigation should precede any attempt to encourage people to leave farming for other occupations. From a national point of view it is useless to decrease the poverty problem in the countryside if in doing so we increase it in the cities.

Professor James is of course perfectly correct in pointing out that the policy of keeping the prices of farm commodities above the free market price has done little to improve the economic position of the small farmer and has helped to perpetuate the problem by enabling him to stay on the farm. His suggestion that more would be achieved by paying the farmer to leave is an excellent one providing the cost of doing so is not too great. It is here that one finds another contradiction in the author's argument. He rightly points out that the cost of amalgamation and encouraging small farmers to leave the land would be small compared with the cost of the existing price supports. However, he suggests that it would be politically impossible to remove price subsidies. Unless amalgamation is to be accompanied by a decline in the protection given to farmers, one wonders if restructuring the industry is worth while, particularly if the farmer leaving the land does not improve his standard of living by leaving. One of the weaknesses of this book is its failure to explain why farmers have been able to obtain such a large transfer of income from other sectors of society. Surely one of the major reasons has been their ability to demonstrate, with the help of agricultural economists, that many farmers are poor.

It is disappointing that other methods of solving the low income farm problem, such as by means of negative income tax or by substituting part time farming for full time farming are not discussed. It is possible that the problem has already been partly solved, particularly in densely industrialized countries, by the latter means.

While one may criticise both the basis of Professor James's work and the conclusions he draws, his work must be regarded as an excellent summary of the approach that has been made to the small farm problem in developed countries. The views that he propounds have had the support of most agricultural economists during the last decade. It is only now that the relative poverty of the small farmer compared with that of other low income groups in the community is being seriously questioned.

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Size, Structure, and Future of Farms. Edited by A. GORDON BALL and EARL O. HEADY, (Ames: Iowa State University Press, 1972). Pp. 404 \$US9.95, ISBN 0 8138 1440 5.

A useful collection of 20 papers is contained in this book and as would be expected the quality of them is quite variable. The papers attempt to come to grips with the question of the present and future role of farm size expansion in the economic and social progress of the United States. The trend to larger and more capital intensive farms and the consequent migration of farm labour to the cities is discussed. The contemporary and future influence of Government policies, corporation and industrialized farming, credit arrangements and sources, size and scale economies, vertical integration, tenure systems, technological change, specialization benefits and the like, on these trends and on the future of the family farm, are examined. Policy alternatives are outlined, particularly in the final paper by the editors of the book.

The most stimulating papers to this reviewer, in the order they appear in the book, were the four by J. Patrick Madden and Earl J. Partenheimer, Varden Fuller and Willem van Vuuren, Dean F. Schreiner and the final paper by Earl O. Heady and A. Gordon Ball.

Madden and Partenheimer expand the concept of the farm to embrace the off-farm activities of the farmer and his resources. The farm is viewed as a general goods and services producing enterprise—not purely a primary producing firm. They contend that the exclusion of non-farm produced goods and services may partly explain why most average cost curve studies show high average costs for small firms. This has relevance in policy decisions on firm size and rural-urban interrelationships, which are of increasing concern in Australia. Fuller and van Vuuren examine the composition of the farm labour market in the U.S. and the degree of integration between the farm and non-farm labour forces using simple analytical techniques on the basic data. It was of interest to learn for example that serious farm workers do not penetrate non-farm labour markets to anywhere near the extent that non-farm workers penetrate farm labour markets. Reading papers like this and many others makes one realise what a dearth of rural statistical information we have in Australia compared to the U.S. However, it is doubtful if all of the 86 tables which appear in the book are really necessary. Many of them are duplicated and the basic data from which they were compiled are available elsewhere. Their use as references is also impaired by the lack of a list of tables in the book.

The third of the stimulating papers was by Schreiner. He discusses factors affecting the demand and supply of community services in rural areas and outlines models that have been used in studies of these factors. Implicit in this theme is the effect farm enlargement and the consequent migration to the cities has on the demand for community services. Data illustrate that the greatest declines in population occur in the smaller rural towns. The final stimulating paper was by the editors. The second of their contributions contains an overview of the complex interrelationships between the “push” and “pull” factors involved in the current stage of development of both rural and non-rural America. Although one feels he has been exposed to a lot of the ideas in this Chapter before (e.g. there are references to previous works by Heady) there are sufficient original ones to merit the attention of readers. They consider it

is opportune to question the time-honoured tradition among agricultural economists to assume farm enlargement and migration of farm labour to the cities to redress apparent resource use inefficiencies is necessarily a good thing *per se*. With the depletion of rural populations causing the sacrifice of what size and scale economies may exist in the provision of community services and the attendant overflow into already crowded cities, it is imperative that appropriate negative and positive weights should be assigned by society to the objectives and inevitable side consequences or spillovers from national rural policies. Problems of farm size can no longer be separated from those of urban density, pollution, rural labour force, size of cities and spatial distribution of the population.

Of the remaining 16 papers there are about four which could be classed as useful reading. The others do not make a substantive contribution to the topics at hand. The paper by W. Burt Sundquist discusses the changes in management required for the conduct of modern, large scale and growing agricultural firms. John R. Brake examines the factors involved in the provision of capital and credit for the larger agricultural firms of the future. The reasons why corporations establish control and management linkages to agricultural firms is the subject of an interesting paper by Ronald O. Aines. The last of these four interesting papers is the one by T. Kelley White, Jr. and George D. Irwin. They focus on the question: Do farms in theory and practice become more specialized as they grow larger? They conclude that the link is strong for some types of enterprises but not for others.

The book can be criticized for inadequate treatment of such issues as what is an appropriate farm size measure (although one or two authors do allude to this), the precise influence of farm input and output externalities on the future size of farms and the relationship between level of education and farm size structure. Editorial scrutiny also could have been improved to reduce the considerable data duplication and repetitious discussion among the contributions. Summaries and conclusions at the end of all Chapters would have enhanced the book's value, together with a more comprehensive index. Referencing of Journals was inconsistent throughout, with most reference lists failing to include the dates of Journals.

In spite of the fact that in this reviewer's opinion only some 40 per cent of the papers in the book are worthy of study, it is recommended as a worthwhile and readable addition to the literature on the question of farm size and structure. Although the material is predominantly oriented to the U.S. scene, there are many lessons which Australian policy makers, administrators and professional agricultural economists could learn from it. The advice of the editors in the second of their papers is a salutary note calling for a re-orientation of thinking on the problem of farm size. It is appropriate to conclude this review with a quotation from it (p. 379):

"Our knowledge is now so sparse on the range and magnitude of scale economies in farming and on the preference function of society relative to the distribution of the population among rural and urban areas or to the utility of rural institutions and urban culture that specification of a mechanical-economic optimization is impossible".

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L'Economie Agricole. By HENRI DE FARCI. (Paris: Sirey, 1970).
Pp. 446. Fr. F. 56.

The word "economy" in the title of this book carries much the same meaning as it does in the English phrase "political economy"; that is, the book concerns both the economic system in which the agricultural industries operate, and the formal economics which may be used to study the behaviour of that system. There is thus a breadth about this book which is matched by few publications in this area from English-language writers. Professor de Farci sees a consideration of the cultural and social setting of the rural sector as inseparable from any study of farm operation or of the economic functions of product and factor markets. To some extent, of course, this is simply a reflection of the particular role of agriculture in the French economy and of the rural population in the French community. But in larger measure it is a tribute to the author himself, whose view of agricultural economics is founded on a subtle understanding of the human problems to which the process of agricultural development gives rise.

The book begins by placing the transformation of agriculture into historical perspective, leading to an outline of the requirements of the agricultural sector in a modern economy. In the first major section the chief factors of production are studied, with particular stress laid on labour and on the implications of technical progress for the farm workforce. Next, product markets and means of distribution are examined. The third section looks at the farm itself as the producing unit, with chapters devoted to farm income and to farm size under conditions of economic growth. A section on co-operation in agriculture follows, with consideration of the possibilities for associations of farmers both as buyers of inputs and as suppliers of products. Finally, political questions such as the role of government intervention in agriculture, planning, and international aspects of agricultural policy are treated. The conclusion to the volume focuses attention again on the need for "human development" as a means of improving agriculture's performance. "Of all the elements available to agriculture for meeting society's needs, the greatest scope for improvement seems to lie in the farmer himself . . ." (p. 437).

The non-Gallic agricultural economist will find this book very different from his customary texts. There are no mathematics, no graphs, and the analysis is carried on through verbal logic which is far from the formal "value-free" analytics of contemporary English-speaking economic science. Yet in its own terms it is a rigorous book, evocative, scholarly and carefully constructed. There are extensive bibliographies which both help to tie the treatment in with English writings and also give countless leads into the French literature in agricultural economics.

Professor de Farci's book may be seen simply as a textbook in agricultural adjustment with particular reference to the French situation. But it commends itself more widely as a stimulus to us to think afresh about accepted methods of approaching problems of structural change in agriculture.

Organization and Competition in the Mid-West Dairy Industries. By SHELDON W. WILLIAMS *et. al.* (Ames: Iowa State University Press, 1970) Pp. 339, \$US12.50.

There have been significant changes at all levels of the Australian dairy industry in recent years. Pressure for change can be expected to continue and may be accentuated as new markets are sought to replace the traditional United Kingdom market. This book which examines changes in the dairy industries of the United States Mid-west may provide an insight into the changes likely to occur in the Australian industry. In addition, the book may appeal to some as a report which collates the findings of a regional research project, a frequent omission of many projects.

The authors study three elements of the Mid-west dairy industries—structure, conduct and performance, and argue that these elements are related; i.e. structure influences conduct which in turn influences performance. Externalities such as population growth, rising incomes, changing technology and institutional factors also have an impact which the analysis tries to incorporate.

Market structure is discussed in terms of the concentration of buyers and sellers; i.e. their number and size distribution, the degree of product differentiation, and the conditions of entry to the market.

Forms of differentiation include physical product differentiation, container differences, branding and advertising and differentiation of services. Product differentiation has declined in importance with the emergence of retailer's private label brands. Differentiation of fluid milk at the retail level occurs in America to a greater extent than in Australia with a greater range of containers and outlets including vending machines, and a price differential between store and home delivered milk.

Barriers to entry and exit include product differentiation economies of scale in plant operation, distribution and advertising, and institutional barriers at government and industry levels. An important institutional barrier may be access to supplies of raw milk.

Integration and merger activity are other aspects influencing structure. Integration by retailing groups backward into processing, especially the processing of their private label brands, and forward integration by producer co-operatives into manufacturing and distribution are important features of the Mid-west dairy industries.

Market conduct is the behaviour of firms in the markets in which they operate. Conduct is analyzed with reference to price and output determination, product policy, advertising, collusion among firms and discriminatory tactics. In most industries price competition is at a low level either because both buyers and sellers are highly concentrated or because of the activities of large co-operatives. In many industries there is some form of price leadership. However, product competition is common.

The relationship between structure and conduct is analyzed by examining the differences in gross marketing margins (the spread between raw product price and retail price) between markets where there are different degrees of concentration. The authors expected a greater degree

of price and product competition in markets with an important competitive fringe and only moderate concentration. The findings indicated a strong relationship between structure and conduct in the fluid milk and ice cream industries.

Under the broad heading market performance the authors examine "the results that flow from the industry in terms of efficiency, progressiveness, stability, the extent of excess capacity, the presence of excessive sales promotion costs relative to the costs of production, and the character of the product, including design, quality and variety". The criteria used in assessing performance include technological efficiency and progressiveness, margins, profits, and sales promotion costs.

Technological efficiency is analyzed by determining the minimum optimum size of plants using survivorship techniques. The study found that while there were only few plants of optimum size in the early 1960's, the proportion increased during the period studied. Moreover, the proportion of total output from plants of optimum size was greater than the proportion of output from smaller plants.

The authors found that the dairy industries have been progressive. Labour productivity and new capital expenditure were similar to other food industries. Other measures of performance such as gross marketing margins, profit levels and sales promotion expenditure were also found to be similar to other food processing industries.

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The Economics of Agriculture. By MARGARET CAPSTICK. (London: George Allen and Unwin, 1970, Australia—Australasian Publishing Co.) Pp. 163, soft covers, \$4.85.

Although it is designed as an authoritative textbook for undergraduates possessing the rudiments of economic theory, this short book is primarily concerned with the place of agriculture in the economy of the United Kingdom and gives a much less comprehensive treatment to the agricultural features of other developed countries. Chapters deal with factors of production, the main determinants of supply and demand, marketing and international trade in agricultural products and agricultural policy.

The author, as well as being an economics graduate, is a practical farmer and in consequence has illustrated the text with technical insights and terms drawn from the terminology of farm management. Unfortunately, this detail tends to cloud the main argument and a non-agricultural reader might well find the book hard going, and some of the examples would benefit from further clarification and development. Further there are some minor errors such as the assertion that farm rents in the United Kingdom were frozen during the years 1939-1957, and that the establishment of a guaranteed price 'at a sufficiently high level' will eliminate the marginal producer.

The chapter 'States and Farmers' is the most useful in the book and is a helpful introduction to agricultural policy in Britain prior to the radical change brought about through accession to the E.E.C. It charts the major movements in policy from war time until the end of 1969 and places these rather complex changes in a wider social and political

context. This chapter could form the basis for a seminar with the caveat that it does not place much emphasis on structural change in Europe, which is now assuming greater importance than the existing price support measures. Neither does the book consider current problems of adapting production to meet fluctuating world commodity needs.

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Economic Analysis of Agricultural Projects. By J. PRICE GITTINGER. (Baltimore, Johns Hopkins University Press, 1972). Pp. 221, \$US10.00, soft cover \$US3.00. ISBN 0 8018 1386 7.

Robert S. McNamara, President of the World Bank Group, stressed two things in his addresses to the 1972 U.N. conferences on Trade and Development (Santiago) and The Human Environment (Stockholm). First, that growth in G.N.P. *per se* without regard to income distribution is an inadequate approach to development; and second, that development without environmental concern is an inadequate approach to living. Concurrently, we have the publication of this manual or hand book which was developed as teaching material in the World Bank's Economic Development Institute. All that the author has to say in relation to the McNamara message noted above is that "Even though the analytical methods we will be discussing can be of great help in identifying which project alternative will increase social income most rapidly, they will *not* make the project investment decision for us. That decision is one on which many factors other than quantitative or even purely economic considerations must be brought to bear . . . In the end, any national investment decision must be a political act summing up the best judgement of those responsible." (p. 3). So Gittinger has covered himself, but one would have liked to see a more continued emphasis throughout the book on the non-pecuniary and political aspects of project appraisal. With this proviso, the book is exceptionally good. It is undoubtedly a cookbook manual but none the worse, benefits-wise, for that. Undoubtedly, the book is one of the few published in 1972 with a social benefit/cost ratio greater than one.

In simple language and with fully detailed real-world examples, Gittinger shows agricultural development administrators (not necessarily economists but more usually agriculturalists) how to undertake project analysis. Chapters 1 and 2 define projects, their role in development and discusses the identification of their costs and benefits. Careful distinction is drawn between economic (social) analysis and financial (private) appraisal. Chapters 3 and 4 respectively outline the criteria for choice of prices in economic analysis and the comparison of benefits and costs. Discounting and sensitivity analysis are presented in Chapter 5. As a bit of a digression, Chapter 6 treats financial (i.e. private or firm-oriented) appraisal of projects. A real-world case study in full detail comprises Chapter 7. Chapter 8 finishes the volume with a round-up of various international agency sources of assistance for project preparation.

Overall, as necessitated by its handbook aim, the emphasis of the book is pragmatic. Its concern is with getting appraisal done despite initial data deficiencies. The investment criterion adopted is the internal

rate of return. This choice appears to be the author's own but it is also the criterion the World Bank uses. On both theoretical and pragmatic grounds, this reviewer would argue that net present value is a preferable approach. But after all, the difference between the two procedures in terms of choices between projects is not of great practical significance. A far more significant deficiency in real-world terms is the lack of consideration of uncertainty in project analysis. Sensitivity analysis can help but it doesn't resolve uncertainty. Maybe that's unfair, however, given that the only decent outline of handling risk so far available is Shlomo Reutlinger's *Techniques for Project Appraisal under Uncertainty* (John Hopkins Press, 1970) which is No. 10 in the World Bank Staff Occasional Papers series.

All in all Gittinger has given us a bloody good handbook for appraisal of real-world agricultural projects.

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Regional Economic Policy. By F. J. B. STILWELL. (London: Macmillan, 1973). Pp. 80, \$2.05, SBN 333 13249 1.

This paperback is one of the "Macmillan Studies in Economics" and like others in the series, it is far from a thorough textbook. The content is, verbatim, that of a roneoed 41 page survey paper presented by the author to the Second Conference of Economists in Sydney, August 1971.

The first half of the book summarizes the conclusions of some of the most important pre-1971 writings in regional economic theory. Notably, a detailed coverage of location theory, regional growth theory and urban economics is absent but this allows an uncluttered (if at times narrow) discussion of many features of regional macroeconomic policy in the second half. No attempt is made to support arguments with mathematical constructs or detailed empirical evidence. Usually only Western European experience is cited, so from the Australian reader's viewpoint the treatment is rather sterile.

A few of the author's own ideas permeate the discussion but they have little impact because the presentation lacks rigour. The undisciplined usage of terms such as "underdevelopment", "underutilization" and "mobility" is sometimes distressing.

In spite of these flaws the book retains value as a listing of recent literature—a handy annotated bibliography is included. Furthermore, in the concluding paragraphs Stilwell rightly points out that no operational model of regional development currently exists. He contends that economists face particular problems in measuring the effects of alternative regional policies and thus in choosing instruments that are consistent with spatial and other policy objectives. The plea for greater attention to these problems is perhaps the most pertinent comment in the book.

In short though, at \$2.05 one cannot recommend that a student with "some knowledge of elementary microeconomics and macroeconomics" should buy *Regional Economic Policy*. He should simply photocopy the reference list at the back and buy Richardson's more thorough *Elements of Regional Economics* which sells for half the price.

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Production Functions. By DAVID F. HEATHFIELD. (London: Macmillan, 1971.) Pp. 91, \$2.55, SBN 333 12840 0.

This book is one of the series "Macmillan Studies in Economics". It is a terse summary of four aspects of production economics theory namely, the production function concept, the Cobb-Douglas and C.E.S. functions, and some general equilibrium functions along input-output lines. The treatment is essentially mathematical, and although the preface indicates that efforts have been made to provide supplementary intuitive explanations, these efforts have not been particularly successful. In fact the rather token efforts in this regard, and the lack of imaginative approach to geometric analysis would mean that few students would develop any 'feel' for the functions studied.

The entire discussion revolves about the aggregate production function concept to the neglect of micro analysis where concepts are more easily grasped, and the usefulness of the functions more apparent. There is little discussion of empirical aspects and the problems likely to be encountered, and the general comment on the Cobb-Douglas and C.E.S. functions covers less than two pages in total. In summary, it is a useful straightforward, and generally mathematical treatment of two popular types of functions, but provides nothing new in either content or approach.

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A History of the Co-operative Movement in Israel, Book 7 Consumers' Co-operation. By HARRY VITELES. (London: Valentine Mitchell, 1970), Pp. 348 £UK4.20.

This is the final book in a series by Harry Viteles on Co-operative Movements in Israel. It is not recommended reading for those wishing to obtain a broad general view of consumer co-operation in Israel. Rather it is a source book on the detail of the growth and development of consumer co-operation in Israel which should prove invaluable for research workers and teachers who already have a considerable knowledge of the growth and development of consumer co-operative movements in Israel and wish to have available an authoritative statement of what happened at any time in the history of the movement.

The book is difficult to read because it consists largely of a chronological narrative written by someone (Viteles) inside and intimately associated with Israeli co-operative movements. This narrative is interspersed with extracts from minutes, letters, reports and statements of co-operative organizations and their various officials.

The book is in two parts, the first describing the establishment, growth and administration of Israel's Co-operative Wholesale Society and the second part examining the Consumer Co-operatives sponsored by the Israeli Labour Federation (Histadrut).

For someone like this reviewer, who has recently been enquiring into the effectiveness of consumer co-operatives in a developing country, there is an all too familiar ring to the account of muddle, high prices, inferior goods, problems of credit, inadequate financial and business methods and lack of loyalty of members to the co-operative if they could buy cheaper and better outside it. Certainly this book should be

required reading for those idealists and politicians who see consumer co-operatives as an answer to the amounts of control exercised by a few large stores in Australia over the retail market for basic consumer goods.

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