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BOOK REVIEWS

Agriculture in the Australian Economy. Edited by D. B. WILLIAMS. (Sydney University Press, 1967.) Pp. 349, \$6.00.

This book consists of a series of sixteen essays on economic aspects of Australian agriculture. Many of these provide valuable references for Agricultural College and University courses in economics, agricultural economics, geography, history, and politics, but most of the book will have an appeal to the educated layman with an interest in agriculture. Only in a few instances would the jargon be daunting.

In a number of senses, the book marks the coming-of-age of agricultural economics in Australia. It was sponsored by the Organizing Committee for the Thirteenth International Conference of the International Association of Agricultural Economists, held in Sydney in 1967, and served to inform overseas visitors not only on our agricultural economy, but on 'the scope and character of the profession in Australia'.

Most of the early chapters are purely descriptive. As a preliminary, A. G. L. Shaw's chapter on 'History and Development of Australian Agriculture' is a readable and illuminating summary of the boom-and-bust progress of our agriculture, through droughts, market collapses, the dislocations and stimulus of the gold rush, the land squabbles of the last century, the bungles of War Service Land Settlement after World War I, the rapid development of agricultural protection in the last four decades, and over the same period, the striking advances in our agricultural technology. Many of the problems and issues discussed have a contemporary ring, such as this quoted lament of 1931—'The colonists . . . pressed forward to purchase land at a price which no present mode of employing land in the interior will afford'.

B. R. Davidson's chapter on 'The Economic Structure of Australian Farms' provides a useful consolidation of scattered data. It consists largely of a detailed account of the environmental factors affecting land use in Australia, followed by a series of tables and commentary on the physical and financial characteristics of B.A.E. survey farms in each industry.

A leading agricultural scientist, C. M. Donald, presents an excellent account of the major technical innovations in our agricultural development, together with some speculation on future technology.

P. C. Druce gives a concise outline of the administration of Australian agriculture, with special reference to research, extension and education. He highlights important recent developments, such as private extension through farm clubs and consultants, the belated development of University research in agriculture, and the growing importance of industry funds, provided by levies, in financing research. The latter development is a not-unmixed blessing, and some of the problems it raises might have been mentioned. One of these, of special concern to agricultural economists, is the sanction created against criticism of agricultural policy; the University department which aims to maximize its research grants has an incentive to avoid 'touchy' research topics or public statements which might antagonise industry representatives.

The aim of G. D. 'A. Chislett's contribution on 'Primary Producer Organizations' is 'to show how Australian primary producers have or-

ganized themselves for the purpose of protecting and advancing their economic welfare'. After outlining the origins, structure and activities of each of the major grower organizations, he argues persuasively that in the Australian situation, farmer unity is a chimera, because of conflicts of interests between different industries. He also disputes the general assumption that there is a direct association between the producer organizations and the Country Party, pointing out that the original links have gradually been severed over the years, and for good reasons.

D. H. McKay's chapter on 'Agriculture in the Economy' is largely descriptive and statistical. Of particular interest is McKay's discussion of the cost-price squeeze, and his exposition of the McEwen policy of 'off-setting protection', which seems to imply protection for everybody. Policy measures to foster the growth of secondary industry, such as the tariff, have diverted resources from agriculture. But the dependence of growth on exports has necessitated a range of policies to divert resources back to agriculture ('compensatory action'). Devaluation is mentioned as an alternative to this circuitous process, but McKay seems to pin his faith on improved technology in agricultural production and marketing to offset the inflationary content inherent in our national policy goals. This solution loses some of its appeal when it is remembered that our competitors in export markets are also increasing their productivity, so that a very rapid rate of improvement would be needed to offset productivity-induced price declines.

Gruen, Ward and Powell provide an outline of changes in output which have occurred in Australian agriculture, and a discussion of the reasons for such movements. In the process they fill a long-felt gap by providing a 'seasonally-adjusted' output index (which, incidentally, suggests that one-third of the rate of growth of output in the first half of the 'sixties was attributable to favourable seasons). They present a technically impressive 'six-sector supply analysis' for wheat, wool, dairying, lamb, beef and veal, and coarse grains-products which are highly interdependent, in that they compete for the same resources. The supply elasticities presented are surprisingly high, given the type of model used; the intermediate-run (five year) elasticities range from 0.93 for lamb and 0.82 for wheat to 0.25 for wool. Presumably the model would underestimate the elasticities, since it sets the constraint that cross-elasticities plus own-price elasticities must add to zero for each product, and yet is confined to only six sectors.

The essay on 'Land Policy' by K. O. Campbell is largely concerned with ownership and tenure and with closer settlement—both areas in which the platforms of our political parties 'reflect the beliefs of 50 years ago'. After making the observation that Australia is probably unique among the western countries in the high proportion of its land still in public ownership (approximately 90 per cent) Campbell discusses the various types of tenure, the 'home maintenance area', and the policy of closer settlement.

H. P. Schapper, writing on 'Rural Labour', makes a useful contribution to a neglected topic, particularly on the point of the training of farm labour. 'Farm labouring tends to be a residual occupation . . . a last resort job . . . farm labour is poor, it is treated accordingly, there are no incentives to improve it and none for it to improve . . . Farm labouring does not lead to farm management, and there are no formal

educational or apprenticeship requirements'. Schapper sees this as a challenge to farmer and educationists, which offers 'tremendous potential for improvement in manpower efficiency . . .'

A. W. Hooke's well-organized chapter on 'Farm Investment' should be read in association with the overlapping contributions on Supply and Credit. Unfortunately, Hooke is largely pre-occupied with the determinants of investment, and gives virtually no consideration to its effects, e.g. there is no mention of the cross-sectional production function studies which have provided estimates of the marginal productivity of capital for a number of industries and areas.

F. C. Jarrett considers the role of credit in agriculture, changes in sources of farm credit, and recent modifications of credit policy as it relates to agriculture. He sees agriculture's basic credit difficulties as arising from its limited access to the capital market. The assurance societies lend relatively little to the farm sector and Jarrett makes the suggestion of a Federal Government insurance scheme on farm loans, expanded to cover lending from the assurance societies. He adds the rider '. . . such lending should be channelled into capital formation which will increase productivity in the farm sector rather than into increased land prices'—presumably a reference to increased credit for land purchase. Yet adequate credit for land purchase is required for efficiency-improving structural adjustments, as Jarrett himself implies later in his paper when discussing credit to increase farm size. The bogey of increased credit causing increased prices is often advanced, most recently in relation to credit for post-drought replacements of sheep. It needs careful examination. *With the availability of credit 'neutral'* as between different investments, farmers will presumably bid inputs to levels reflecting their productivity (including non-monetary returns). The stricture about avoiding increases in land prices requires clear evidence that existing credit institutions favour the purchase of land over other inputs, relative to their 'productivity', *broadly defined*. In the case of land, productivity must incorporate 'prospective value', and since 1831 (see A. G. L. Shaw's quote) it has always been 'obvious' at the time that land is too dear, and even more obvious a few decades later that it was absurdly cheap.

The long chapter on Agricultural Development Projects will prove a useful reference work. A major impression which emerges from Hoffman's survey is the massive scale of government expenditure involved at a time when large increases are required in many parts of the public sector. However, there is a trend, not highlighted by Hoffman, towards *privately* financed large-scale agricultural development. Perhaps governments should do more to enlist private risk capital for this purpose. Through competitive tender, profit-sharing terms can be reached for the purchase of crown land and its sale after development, government expenditure being limited to items which are inescapably in the public domain. Hopefully, the terms need not constitute a hand-out to the developers, as seems to have been the case at Esperance. Even under the traditional system of government-financed development, the drain on public revenue could be reduced by eliminating various hand-out features (e.g. concessional interest rates, land prices and rentals). But surely the critical point is that public revenue diverted to land development reduces expenditure on activities which only governments can provide.

Hoffman mentions with approval the increasing use of benefit-cost analysis as a 'sieve', but warns that it does not enable order of priority to be established among the variety of projects that come forward, 'for want of the requisite basic data or by lack of comparability in the assumptions which have to be made for the purpose of evaluations'. The term 'sieve' implies that rankings above the cut-off point are ignored. These are shortcomings in the ranking procedures of benefit-cost analysis, especially when the alternative projects vary widely in capital intensity. But lack of comparability can be largely overcome by imposing standardized procedures and a common set of price forecasts; and lack of adequate data (e.g. yields) is a characteristic of the problem, not of the technique of analysis. At the least, benefit-cost analysis is a rational method of organising the best available data, adequate or not, for a choice which *must* be made. The resultant rankings surely merit some weight in the final decisions, since only the most naive could believe that sets of rankings obtained solely through the political process are clearly more accurate as reflections of social welfare. Some of our decision-makers would stave off the introduction of more objective procedures until they were confronted with a miraculous technique of analysis which overcame the lack of data.

The chapter by Gruen and McLaren on food consumption in Australia provides some international comparisons and a discussion of changes over time, including some estimates of price and income elasticities for meat and dairy products in Australia.

Finally there are three very good related chapters on 'Marketing Agricultural Products' (Parish), 'Agriculture Price Policies' (Lewis), and 'Agricultural Trade and Trade Policy' (Harris). Before discussing the main features of the marketing of each of the major products, Parish presents an excellent piece of lucid compression in his outline of 'orderly marketing'. In this section, one statement in particular needs elaboration, viz:

"It is possible to make a case for protection of Australian agriculture on the grounds that such protection is desirable to correct the allocative distortions introduced by the existence of tariff protection for secondary industry. (*Acceptance of this argument is likely to involve rejection of the usual arguments used to support protection of local manufacturing industry.*)" (My italics.)

The statement is clearly correct for a situation in which the existing levels of protection can be fully justified by 'the usual arguments' (e.g. defence, external economies). But it requires considerable innocence to believe, for example, that the 100 per cent protection we give to peanut oil, by special administrative arrangements, is unrelated to the fact that the Kingaroy area in Queensland was, until recently, represented by the Deputy-Leader of the Country Party and Minister for Primary Industry. Thus a disenchanted pessimist might argue: 'Only half of the protection granted to peanut oil could possibly be justified by the usual arguments, and since this "excess protection" seems to be politically "given" and irreducible, the second-best solution is to offset the *excess* protection. This argument need involve no rejection, in principle, of 'the usual arguments'. But it does encounter the difficulty that the granting of offsetting protection to relatively unprotected industries, such as wool

and meat, would erode not only excess protection given to peanut oil, etc., but also justifiable protection for other products.

The real trouble with 'McEwenism' is not that the notion of 'offsetting protection' is invalid (it has support in the Theory of Second-Best) but that the swings seem destined never to catch up to the roundabout, both being pushed vigorously by 'the vote mechanism'. Nevertheless, it is difficult to see how economists can justify an attitude of doctrinaire and indiscriminating hostility towards protection in a situation in which it ranges from the 'sublime' (i.e. zero) to the ridiculous (e.g. 150 per cent for some cotton textiles).

Lewis' review of the weaknesses of our agricultural price policy ('a series of expedients, with the future left to cope with the consequences') leads him to conclude that we are indeed 'The Lucky Country': something has usually turned up to permit escape from unpleasant consequences, such as the opening up of the Chinese wheat market. (This might be premature—will Micawberism work for sugar and cotton?) Lewis sees the main objectives of our price policy as having been price stability, and the implementing of monopoly power by farmers. It would seem that the pursuit of these objectives has left us with an almost bimodal distribution of protection as between industries, with about half of our agriculture virtually unprotected and most of the remainder heavily protected (wheat being the only important intermediate case). Lewis offers a 'Marxist' interpretation of the graziers' laissez-faire political conservatism, which is sometimes advanced as a *reason* for the absence of government intervention: because of its size, the pastoral industry did not stand to gain from a direct price subsidy (too expensive for a Government to contemplate) or from price discrimination on the relatively small local market for wool.

The comments (p. 310) on the Harris estimates of protection, that protection increased over the ten to fifteen years prior to 1962-63, needs up-dating: estimates for the three years ended 1965-66 show a marked reduction in protection for most of the products listed.

And the following statement (p. 313) is misleading:

'Between the years 1946-47 to 1952-53 stabilization programmes for wheat transferred no less than \$331.8 million from Australian wheat growers to other sections of the community'.

This implies an equality between income forfeited by wheat growers and benefit to the rest of the community. However, Longworth has pointed out that the savings made by Australian consumers through low wheat prices were much less than the losses sustained by the growers, which implies that a large part of \$331.8 million was forfeited by the economy as a whole.¹ This point weakens the 'quid pro quo' argument being put forward by wheat growers in current negotiations on the new Wheat Stabilization Scheme.

Australia's trade policy is reviewed by the Director of the Bureau of Agricultural Economics, S. F. Harris, who points out that we have made very limited progress towards our main policy aims, viz. the reduction of trade barriers, the improvement of our competitive position

¹ Longworth, J. W., 'The Stabilization and Distribution Effects of the Australian Wheat Industry Stabilization Scheme', *Australian Journal of Agricultural Economics*, II:1 (June, 1967), pp. 29-30.

by bilateral arrangements and negotiations, and a reduction of instability in commodity trade. Harris is surely correct in asserting that 'the international marketing mechanism has broken down as a means of allocating resources in world agriculture'. He identifies agricultural protectionism as the villain of the piece, but modern criminologists would point out sympathetically that the villain has been guilty only of poor adjustment to the hostile intractable environment created by the problems of agriculture under economic growth.

The profession is heavily indebted to Professor Williams for his thorough and discerning editing.

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Why Growth Rates Differ: Post-War Experience in Nine Western Countries. By E. F. DENISON and J. R. POUILLIER. (Washington: The Brookings Institution, 1967.) Pp. 494, \$U.S.4.95.

Amidst the barren desert of model-building economics, this book comes as a welcome relief and as an indication that the economist can still sometimes bear the title 'applied'. Not that the Denison/Poullier work lacks a basic model—no serious work in applied economics could exist without one—but here the model is lucidly explained in recognizable English. And the reader, satisfied in the early pages that he knows the basic premises, is led through an ever more complex series of calculations and quantified economic deductions in a dexterous manner. All that is required is perseverance! There are some 184 tables, several of them occupying a whole page, in the text and an 80-page appendix. Only a careful reading of the text can make many of these tables come alive.

The work can be considered to be a successor to Denison's earlier study on *The Sources of Economic Growth in the United States* (Committee for Economic Development, 1962). This time, however, whilst the period covered is shorter (generally 1950-1962) the countries considered, besides the United States, are Belgium, Denmark, France, Germany, Italy, Netherlands, Norway and the United Kingdom. Like the previous study, the basic model is the Cobb-Douglas production function and this alone, unfortunately, will be enough to cause rejection of the conclusions by those for whom the model is too *simpliste*. It is clear that Denison has been unimpressed by the criticisms of his previous model based on the unacceptability of the assumptions underlying the Cobb-Douglas approach. However, in a chapter headed 'Income Shares and their Use in Growth Analysis' he has gone to some trouble to explain why he finds the Cobb-Douglas type production function adequate—at least for the nine similar, developed economies considered. Perhaps, however, some of the criticisms have led him to explain the marginal productivity theory slightly differently. In his first study (on Pp. 30 to 31) he said:

'Under competitive conditions, in equilibrium, each unit of any factor of production of uniform quality will receive the same income. According to the marginal productivity theory, the amount of this income will equal the value of the marginal contribution to production of one unit of the factors . . . However, the average income per unit

and the marginal income per unit will be the same and both will equal the value of the marginal product of a unit of the factor'.

In the Denison/Poullier study we find (on P. 34):

'(The) factor share approach . . . provides an accurate estimate if the earnings (prices) of the various factors of production are proportional to the value of their marginal products . . . The proportionality of earnings and marginal products must be present *if economic units combine factors in such a way as to minimize costs* (original italics) . . . (i.e.) factors are combined in that proportion which makes the marginal product of each factor proportional to the marginal cost of obtaining it'.

I think the later version is preferable.

The book is a mine of information on levels of national income (some advances are made on the Milton Gilbert OECD 1950 study), inputs of labour, capital, education, land, etc. It will prove invaluable for those who wish to use some of the information as a prerequisite for greater study in depth of a particular topic.

Perhaps Tables 15-3 and 15-5 represent the core of the study. In these tables are shown the contributions of factor inputs and output per unit of input to growth rates of total national income (the latter table is on a 'per person employed' basis). The first of these tables shows, for example, that of the 3.32 per cent per annum real growth rate of the U.S. National Income between 1950 and 1962, 0.49 percentage points (or 14.8 per cent) was due to the input 'education'. Altogether, the labour input contributed 1.12 percentage points (nearly three fifths of the 3.32 per cent) came from an increase in labour and capital inputs, and 1.37 percentage points from an increase in output per unit of input, i.e. the 'productivity' factor. It is a remarkable fact that, while capital input rose more than labour input in all the countries over the period considered, the European countries (except Belgium) became more capital intensive at a much more rapid pace than the United States between 1955 and 1962.

This latter statement applies to the United Kingdom too, but it is very noticeable that in the majority of the tables the U.K. occupies a bottom or near-bottom position with figures frequently less than that for Northwest Europe as a whole. For instance, whilst the rate of growth of capital input per person employed between 1950 and 1962 was 3.57 per cent per annum for Northwest Europe, for the United Kingdom the rate was 2.69 per cent (lower than all countries except Belgium). Other tables on capital input and levels of national income per person employed give significant support to those economists who suggest that a much greater degree of capital intensification is necessary to attain the income level of the United States. For instance, whilst national income per person employed in Northwest Europe was 59 per cent of that in the United States (U.S. weights) in 1960, the total capital input per person employed in Northwest Europe was only 49 per cent of that in the U.S. The U.K. with a national income per head 59 per cent as great as the U.S. had 51 per cent of the U.S. capital per head. (Table 15-6). It would seem that those who have persisted (against their colleagues' objections) in maintaining that the root cause

of Britain's malaise lay in the *wastage* of Britain's capital in out-moded East-of-Suez, etc. policies have been proven right.

It is one of the virtues of this study that whilst the authors provide the detailed statistical work for the formation of hypotheses and policy directives, they themselves eschew such appraisals. As Denison says:

'For example, I estimate the amount by which capital stock . . . increased in each country, and the amount that this contributed to the growth rate, but I do not try to explain why the capital stock increased at the rate it did and no other, nor to estimate how much the increase in capital stock would have differed if a country had followed different policies. I do not seek to decide whether indicative planning in France or its absence in Germany was more conducive to growth . . .' etc. etc.

The economist who believes that the science of economics *should* be directed to economic policy-making will, however, remain in debt to Denison and Poullier for some time to come.

D. T. HEALY

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Agribusiness Co-ordination. A Systems Approach to the Wheat, Soybean and Florida Orange Economies. By R. A. GOLDBERG. (Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1968.) Pp. 256, \$U.S.12.00.

This book is an extension of an earlier work, *A Concept of Agribusiness* (Davis and Goldberg, 1957). 'Agribusiness' is 'the sum total of all operations involved in the manufacture of farm supplies; production operations on the farm; and the storage, processing and distribution of farm commodities and items made from these'.

Davis and Goldberg employed input output analysis to derive a flow chart for 1947, for the three sectors: farm supplies, farming and processing-distribution. Chapter 2 of this book compares the 1947 flow chart with that for 1962, and a number of features significant for agricultural policy are documented. First, the dollar value of agribusiness products bought by consumers rose by 62 per cent (while population rose by 29 per cent). Professor Goldberg does not mention that the Consumer Price Index rose by some 33 per cent over the period: inter-industry flow charts are expressed in current dollars. In terms, therefore, of real per capita consumer expenditure, agribusiness output rose by far less than 62 per cent, and may even have fallen. This point can only be resolved by ascertaining for each of the 35 items in Appendix II the output growth relative to the price change, both of which contribute to growth in sales. Secondly, Goldberg calculates that food and fibre purchases in 1962 accounted for 30 per cent of total consumer expenditures, compared with 44 per cent in 1947. Goldberg attributes this to the income inelasticity of demand for agribusiness products, and to efficiency in keeping costs down within the agribusiness sector, without indicating which has been of most significance. The majority of the National Committee on Food Marketing concluded in 1966 that most functions are efficiently performed in the American food marketing system, but that advertising and selling expenses could be reduced, and

that high and growing concentration is a danger in some segments. Within agribusiness, Goldberg documents the growth of the off-farm sectors relative to the farm sector: farm sector value-added actually declined over the period, in current dollars, while the number of farm workers declined by 44 per cent at a time when the off-farm work force rose by 40 per cent. The ratio of off-farm workers to farm workers has risen from 1·5 to 1 to 3 to 1, a change which, Goldberg argues, has not been fully appreciated by policy makers, as they have focused too intently upon the problems of the farm segment. The percentage of agribusiness employment in total employment has slipped from 41 per cent to 30 per cent—still a significant part of the economy. Estimates of this kind would be useful in Australia, for the 10 per cent of the work force on farms may well be supplemented by another 20 per cent in off-farm segments of agribusiness.

In the following chapters, the structure and performance of the three systems are considered in depth. Commodity specialists will find these of interest, for a wealth of statistical and institutional material is presented. Goldberg's aim is to compare three very different systems, with a view to adducing results applicable for all managers in agribusiness. In each case, he analyses market performance in terms of pricing policies and price stability, ease of entry and exit, profitability, and concentration; this is done for all links in the chain, from farmers to consumers.

Of particular interest in the section on wheat is Goldberg's new study on profitability of flour milling, where he found even lower profit results than those reported by the National Committee on Food Marketing. For major firms (using 40 per cent of flour volume) he estimated profitability on flour milling activities, considered separately from other activities of the firm; net income after taxes averaged (1958 to 1963) 0·33 per cent of sales, and 1·92 per cent of net assets. In one year (1962) small losses were actually made. The emphasis is mainly upon problems as they affect the American manager, but some attention is paid to commercial and P.L. 480 sales abroad, and to the world wheat situation. Goldberg concludes firmly that the P.L. 480 Food for Peace Programme became a dumping exercise that may have hindered the agriculture of developing countries. He does not discuss in detail its impact upon America's trading competitors, and the book's preoccupation with internal policies is echoed in the selected bibliography: only five items out of over 300 were published outside North America.

The chapter on soybeans (or soyabeans—from which oil is obtained for margarine, and meal, as a protein source in animal feeds) has no immediate Australian significance, in view of the quota system, the use of other oils by margarine producers, and the animal feed situation here. The discussion takes the form of a very careful analysis of the effects on farmers, processors and exporters, of the phenomenal growth in demand for the product.

The development of the Australian orange economy has been quite different to that of the Florida industry described by Goldberg. The emergence of frozen orange concentrate (now 65 per cent of the crop) in the 1940's led in the U.S. to vertical integration and large-scale production and processing: as well, the new product cut into the American market for fresh oranges and canned juice. In turn, there is now some

fears of overproduction, for synthetic concentrated orange drinks are becoming more competitive, and orange grove production is currently at a high level. In Australia, frozen orange concentrate, introduced in the 1960's has not got off the ground. One reason is the strong market for canned juice, in which Australia did not suffer from technological and taste problems at the time frozen concentrate was being introduced. The final blow to the concentrate product here may well be the imminent introduction of 'tetra packed' chilled juice (airtight packs made of polythene and cardboard).

The last chapters consider the future of 'agribusiness commodity systems'. This reviewer is not convinced of the value of the concept as an analytical tool. Nobody would deny that empirical description, economic statistics, and policy decisions must be related to the total business environment, but it is questioned whether terms such as 'agribusiness co-ordination' and 'systems analysis' are productive theoretical concepts.

Goldberg is aware of a conceptual problem for he refers, in both the wheat (p. 16) and soybean (p. 101) sections, to the difficulties of analysing multi-product and multi-process firms. Phillips¹ has argued that the term 'marketing' i.e. 'all business activities involved in the flow of goods and services from physical production to consumption' (Kohls), suffers from this weakness. He proposes to replace the present ambiguous concept which embraces both production activities and information-getting activities; marketing would be considered as the process of obtaining information, while production would include processes traditionally considered under marketing such as transport, storage and processing. Production economies could then be supplemented by a theory based upon the supply of and demand for information resources. This reviewer has also considered some of the problems of uncertainty and information in agriculture.² The 'agribusiness' approach used by Goldberg, while invaluable in determining empirical market structure and performance under changing technical and economic conditions, seems to compound the ambiguity from a theoretical standpoint, and if this is so, prevents the use of econometric techniques in testing the many valuable hypotheses that this study throws up.

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Australian Federalism in the Courts. By G. SAWER. (Melbourne University Press, 1967.) Pp. 258, \$6.50.

This book appears to be the first of a series of Studies in Australian Federation. It is an admirable first. It is lucid and learned, thoughtful and well-reasoned.

The prime aim of the book is to examine various aspects of judicial interpretation of the Constitution. Professor Sawyer's conclusion is that, 'Constitutionally speaking, Australia is the frozen continent.' The dynamics of federalism is political, not legal. The writer refers to political

¹ Phillips, J., 'A Revised Approach to Marketing', *Review of Marketing and Agricultural Economics*, March, 1968, pp. 28-36.

² Dixon, J., 'Uncertainty and Information in Agriculture', *The Farm Economist*, December, 1967, pp. 147-161.

factors associated inevitably with the High Court's constitutional cases.

The Commonwealth Constitution is a 'political instrument' (in the words of Dixon J. quoted by Sawyer). Sawyer argues that the logical style of the High Court is formal and apolitical, tending to the exclusion of socially relevant factors (except in the war-time interpretation of the Defence power). He observes that of the seven High Court chief justices only two (Gavan Duffy and Dixon) were 'predominantly non-political men without active party connections'. No chief justice has been a member of the A.L.P.

One interesting theme that emerges from the book is the 'see-saw' or balancing of judicial and central governmental forces which has occurred in the development of Australian Federalism. This theme, which Sawyer calls 'the dialectic relations between the structure of the Constitution and the structure of politics' is discussed in Chapter 6. It recurs in Chapters 10 and 11. For example, broadly until the *Engineers'* case (1920) the High Court was more conservative and States-Rights-inclined than were Commonwealth governments. From 1920 the Court was more 'progressive' but the Bruce-Page administration was reluctant to seize the opportunities which the 'new-look' judicial interpretation (e.g. of section 92) provided.

In reading this account of Australian constitutional law one is led to reflect on how patterns in federal relations tend to recur. The early High Court had to decide whether Commonwealth public servants were required to pay Victorian State income tax on their federal salaries (shades of Premier Bolte's 1968 'receipt duty'). The marketing and transport cases are illustrative of continuing problems of public policy involving some conflict of collective and individual rights and duties (perhaps immortalized by the redoubtable Mr James and his dried fruit). Professor Sawyer's discussion of the legal and political aspects of the *Noarlunga Case* (1954) and his remarks on margarine quotas (p. 191) would appear to be of particular interest to readers of this journal.

The book has some interesting illustrations of how the Court and the individual justices have endeavoured to reconcile consistency and change, e.g. how the Court has over-ruled its own prior decisions. We are given a glimpse in the account of the *Engineers' Case* of the young R. G. Menzies appearing for the Amalgamated Society of Engineers while the young H. V. Evatt appears for the States to oppose federal jurisdiction over government instrumentalities of a trading nature. Other background comments on the justices help us to understand some of the emphases in their opinions.

Sawyer points out that the High Court (unlike the U.S. Supreme Court) is a court of appeal on all types of cases. This general appellate jurisdiction accounts for nearly 60 per cent of its cases. Constitutional cases decided by the High Court or the Privy Council amounted to some 650 by the end of 1965 (but only some 24 were decided by the Privy Council). The author notes that issues such as electoral equality never come before the High Court in a constitutional setting. At the time of writing this review the A.L.P. Federal Executive was expected in the near future to raise the issue of 'equal representation for equal numbers of people' in the High Court. If the action proceeds Professor Sawyer

may have an interesting amendment to make when the present book is revised.

A few minor errors and misprints were noted. On p. 133 the reference to 'S. 52 (XXXV)', should read 'S. 51 (XXXV)'; p. 137 the 'Department of Migration' should read 'Immigration'; line 11 on p. 168 the addition of 'U.S.' before 'Constitution' would make the meaning clearer; on p. 40 the footnote reference should be to 'Cowen' (as correctly shown on p. 160); on p. 64 it is stated that the A.L.P. adopted its socialist policy in 1922, whereas it appears it was adopted at the 1921 Federal Conference in Brisbane.

Professor Sawyer's book includes two useful appendices: the Commonwealth Constitution and 'Notes on Some Principal Holdings Concerning Affirmative Powers'.

This is an excellent work of scholarship. It is provocative also because it is an interpretation. Sawyer, particularly in his final Chapter, declares his values and makes his evaluation. Lawyers, legal students and general readers alike may find plenty of room for healthy discussion in one of Sawyer's general conclusions at p. 208:

'... it is likely that more than ever the constructive development of Australian federalism depends on the politicians and civil servants, exercising the instruments of federal persuasion of coercion and the techniques of co-operative federalism'.

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An Interindustry Study of the Western Australian Economy. By M. L. PARKER. (University of Western Australia Press, 1967.) Pp. 68, \$2.70.

The basic purpose of this study is to present an input-output matrix for the 1958-59 Western Australian economy in which the pastoral and agricultural sectors are given detailed treatment. Considerable emphasis is given to the specification of the sources of the data and to the practical and statistical problems associated with the construction of the matrix.

The first chapter contains a brief outline of the basic assumptions and principles underlying the construction and application of a Leontief input-output model. Particular reference is paid to regional applications of which this is the first for Australia.

The technical details of the compilation of data relating to the final demands and the cost structure of the various industries are contained in the following three chapters. For the purposes of the study the economy was divided into 54 industries of which 27 were manufacturing, 13 were primary industries, and 14 were building and servicing industries. Tables for a 30-industry breakdown (17 manufacturing, 7 primary and 6 building and services) were also constructed. While the author describes his methodological discussion as brief the casual reader will probably wish to skip these chapters. However, for those who wish to use the results of this study or undertake similar research elsewhere and for those interested in the adequacy or otherwise of official statistics for this type of work this discussion will prove extremely useful. The

availability of a more detailed discussion of these problems of compilation elsewhere is indicated.

Of most interest to economists is the presentation of the input-output matrices and their analyses. The structure of the economy is summarized in actual value terms as an input-output matrix for the 54 industry classification. The input-output matrix in unit terms, indicating direct input requirements, and the inverse matrix, indicating direct and indirect input requirements, are presented for both the 54 industry and the 30 industry classification. All tables are contained in a pocket inside the back cover for easy reference.

The matrices were applied to the analysis of the structural interdependency in the Western Australian economy and in the projection of sales and exports for 1970. Topics included in the first application were the industrial structure of final demands, both direct and indirect, for fuels; the direct and indirect components of inputs into the primary industries; the wage, non-wage and import component of final demands; and the factor content of exports, consumption and investment. One small point is that the distinction between the contents of Tables 9 and 10 could have been made clearer by indicating in the text that the contents of Table 9 correspond to the rows of the inverse matrix while the contents of Table 10 correspond to the columns of the inverse matrix.

One of the more important conclusions is that the primary sector has a fairly large influence on the remainder of the economy in terms of direct and indirect input requirements. Practically, one disconcerting, but perhaps not surprising, outcome of the study was the disparity between results generated by the 30 and 54 industry matrices. The aggregation problem remains uncomfortably close in input-output studies.

Input-output models provide a convenient first approximation method for analysing the structural interdependence of the various sectors of the economy. As such the valuable results contained in this report will be welcomed by those economists who believe that input-output models can and will be of considerable use in the planning of Australian economic development. It is to be hoped that this first attempt to construct an input-output matrix at the regional level in Australia will be followed by similar work in other states and that they will be used by economists and policy makers to the fullest extent.

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Agricultural Development of African Nations. By S. C. JAIN. (Bombay: Vora & Co. Pub. Pty. Ltd., 1967.) Pp. 269, \$U.S.6.00.

The need to harness their limited resources to generate the capital required for promoting rapid economic advancement continues to be one of the greatest problems currently facing many of the less developed countries. Agriculture absorbs the greater part of the population in these countries and constitutes one of the greatest contributors to foreign exchange, but paradoxically, agriculture continues to lag behind the other sectors of the economy.

Dr Jain in his book attempts to trace some of the causes of this

apparent stagnation and depicts in broad outlines the important and outstanding aspects of the agricultural economies of twenty African states. Among the countries included in the study are, Tunisia, Somalia, Senegal, Togo, Ethiopia, Ivory Coast, Niger, Dahomey, Sierra Leone and Liberia.

Those who are familiar with the writings of Dr S. C. Jain will be certain to find in this volume the same thorough treatment of this subject as is evident in his previous books. The discussion mainly evolves around such topics as: the economic characteristics of agriculture, the physio-graphical influences on agriculture, social and technological factors contributing to the production pattern, and policies relating to domestic food consumption and exports.

The book, however, falls short in one important respect. It does not seem to reflect adequately some of the classical models and current theories developed by such prominent writers as W. Arthur Lewis and T. W. Schultz, to explain processes of economic growth in traditional economies. Students of economic development would have been interested to know whether the agricultural situations in these developing countries posed any special problems which call for a revision of existing theories. Perhaps there could have arisen from such a discussion some fruitful lines of enquiry which could be more gainfully pursued to clarify the often confused thinking in this field.

The statistical data from which most of the inferences were drawn appear to be rather fragmentary, and some of them are out of date. In some instances the discussion is so shallow and brief as to be almost useless. Notwithstanding these remarks one can accord the book the usual compliment that it may prove an additional asset to policy makers in developing countries in particular, and agricultural extension workers in general.

Indeed what is really brought out in the study is the essential inter-connection and interdependence of measures which could be adopted to improve the lot of the farmer.

W. AGGREY-MENSAH

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Economic Historicism. The Historical School in Economics. By GHALIB MOHAMMED ALI BAQIR. (New Delhi: New Book Society of India, 1968.) Pp. 192, \$U.S.4.50.

This book published in India and written by an Iranian economist now teaching in the United States is concerned with a controversy that was to a large extent methodological in nature. This controversy was stimulated by the so-called Historical School of Economists in Germany, later by writers on economic history in the nineteenth century in the United Kingdom, and later still by institutional economists in the United States. Generally, these writers were inclined to attack the deductive nature of Classical Economics and what were taken to be its policy implications, to take the view that truth in Economics was relative and that generalizations should be based on historical and established data, to stress the importance of social and cultural factors in determining man's economic as well as his other activities, to deprecate the use of

mathematics and mathematical models in Economics, and to favour active government intervention.

The introduction and Part I of the book outlines the nature and point of view of the Historical School in Economics. Part II discusses the main figures in the school: Roscher, Hildebrand, Knies, Schmoller and others in Germany; Leslie, Bagehot, Ingram, Toynbee, Ashley, Rogers, Cunningham and the Webbs in the United Kingdom; and Veblen, Commons, Mitchell and Copeland in the United States. Part III is concerned with more recent writings in the same area. In particular, it discusses the work of such writers as Sombart, J. M. Clark, Spiethoff and, in particular, the theory of stages in economic growth associated with the name of Rostow. Some conclusions follow in the last two chapters.

The author is an ardent advocate of the historical approach, but it is doubtful if the controversy is, in any real sense, still a live one. Even the Historical School of Economists in Germany, while they wrote extensively on economic history, were often very good Classical Economists. Some of the Classical Economists, like Smith and Malthus had, in fact, a sense of history and of the importance of social and cultural factors, while the Ricardian model arose, in fact, out of particular historical circumstances. Since modern economists engage in empirical, institutional, and historical studies it is no longer necessary to oppose induction and deduction as absolutes. A great deal of modern work on economic development stresses the importance of social and cultural factors. Still, it might be a fair criticism that many economists tend to take the social and cultural climate as given in their work, especially those who work in mathematical models. Nor is it any longer true that economists are opposed to government intervention for social purposes: this is far from being the case.

There is a bibliography but it is by no means complete. The book is not well written, but it provides a handy reference to various authors in the historical and institutional schools.

JAMES P. BELSHAW

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An Australian Bibliography of Agricultural Economics 1788-1960.
Compiled by J. L. DILLON and G. C. MCFARLANE. (Sydney:
Government Printer for Department of Agriculture, New South
Wales.) Pp. 433, \$6.00.

The compilers of this mammoth bibliography have performed a valuable service for the profession of agricultural economics in Australasia and in other lands.

The heart of the publication is the 237 page Part 4 presenting references classified by subject, and the 151 page Part 7 presenting the references classified by authors. The remaining Parts are by way of explanation, except Part 5 which lists major statistical sources. Part 8 is a most valuable Topical Index leading the searcher through the maze of the detailed subject classification.

The coverage of sources is most complete, ranging from professional journals to government reports and rural industry journals to conference papers and newspaper articles. The compilers report that their two

criteria for inclusion were that items should relate to the agricultural economy of Australia and New Zealand and that they be judged relevant for research and teaching in Australasian agricultural economics. They identify the work as a lucubration, which besides meaning a nocturnal study or meditation (which they meant) also means a literary work especially of pedantic or elaborate character (which no doubt they did not mean!)

The bibliography stands as a useful starting point for studies of the historical development of rural industries in Australia and New Zealand. It will be invaluable in research projects which require analysis of the evolution of concepts in agricultural economics and of the effects of past attitudes and events on the conventional wisdom of the present. It may also enable the useful lost ideas of past ages to be retrieved and given another run in more modern guise. For overseas workers it would seem to have particular value as a means of identifying the contributions and assessing the significance of events in Australia and New Zealand. The bibliography may help to reinforce the widely held view in other lands that Australia and New Zealand are the same country, but perhaps there is enough in common in terms of environment, history and development of the profession of agricultural economics in the two countries to justify inclusion of both.

Even granting that some omissions may have occurred one can reasonably assume that the listed references will lead the diligent searcher to any other relevant publications of the time. Rather than pursue the pointless task of setting out to identify errors of omission, one may observe that apart from reports of research studies which have been included because of their relevance for research and teaching, some of the listings are a measure of the temper of the times ('relate to the agricultural economy'), and range into the fields of public administration and political science. But we should not quarrel with their inclusion in this bibliography of agricultural economics. Even so the compilers have rattled a few skeletons in cupboards which at least one bygone author would be content to let rest!

D. B. WILLIAMS

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Drought: Causes, Effects, Solutions. By D. CAMPBELL. (Melbourne: F. W. Cheshire, 1968.) Pp. 135, \$3.75.

Drought can be classified in that class of phenomena popularly known as spells of weather; a drought in this context is a spell of dry weather. At least this much is common knowledge to all but a few individuals. However, there are many for whom this concept has never been extended. One reason for this can be found in the dearth of non-academic literature on drought in Australia. Don Campbell has gone some of the way to filling this gap in his book. *Drought: Causes, Effects, Solutions* is a non-academic treatise, written in straightforward prose, and designed to appeal to all sectors of the community. In fact, to enhance the general appeal of the book the author has concluded each chapter with extracts of real life stories of drought tragedies written by Douglas Denham, agricultural journalist on the *Sydney Morning Herald*. Moreover the

book, although not heavily illustrated, has sufficient photographic content, to stir, if only momentarily, the most apathetic of individuals.

The book touches on most aspects of drought in Australia, and this broad approach makes it interesting reading. However, its greatest contribution must be in its attempts to stimulate discussion, through the author's policies for activating change.

The author has put forward thirteen proposals in an overall scheme towards lessening the effects of drought. These are summarized in the final chapter, but the reasons behind them form the basis of the remaining thirteen chapters in the book.

There is no denying that much research is needed into drought in Australia and the author's proposals on weather prediction, weather education in schools, stock shelter policies, distillation of brackish water, stock transport, farm irrigation and research into desert plants, would probably find general acceptance. However, there will be some who could not agree with his ideas on finance, or with his basic premise of establishing the National Drought Research Institute through which he envisaged the implementation of many of his schemes (viz. farm water supplies, fodder stocks and fodder conservation). These in themselves would need to be subjected to some empirical analysis to assess their acceptability.

There is no doubt that research in the foreseeable future will improve techniques, management, etc., and thus continue to reduce losses associated with droughts. However, there seems no likely respite to the fact that drought will continue to cause economic loss. In view of this the vital question becomes: *on whom should the burden fall?* There are many conflicting arguments all viable in their context but all motivated by partisan points of interest. It should always be borne in mind that the agricultural sector is but one segment of the Australian economy, and a decision which may be in the best interests to one segment may be adverse to the economy as a whole.

While Mr Campbell is to be congratulated for stimulating interest in drought *per se*, together with trying to improve the plight of people on the land during periods of drought, he is at a loss to demonstrate the worth of his proposals other than to appeal to the reader's common sense. There is a parallel to be drawn on this point with J. H. Kelly's book *The Struggle for the North*, and it seems fitting to conclude this review by echoing the words of D. W. G. Treloar who said in his review of Kelly's book '... the one suggestion that is indubitably correct is that research is needed in many points so that those issues aired in this most readable book may be resolved'.

K. J. DOWN

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The Analysis of Response in Crop and Livestock Production. By J. L. DILLON. (Oxford: Pergamon, 1968.) Pp. 135, \$2.00. (Also published as *Análisis Económico de Respuesta en Cultivos y Pecuarios*. (Santiago: Universidad Católica de Chile, 1962.) Pp. 126, \$U.S.2.00.

This book is based on lecture courses presented at the Catholic University of Chile and the University of New England. In it, Professor

Dillon outlines 'the analytical principles involved in appraising the efficiency of crop-fertilizer and livestock-feed response'. He achieves his aim succinctly in four chapters.

In Chapter 1, the author presents a basic model of crop and livestock response, and develops the physical concepts which he uses in later chapters. The analysis is based on (i) continuously smooth production relationships, (ii) diminishing returns to variable inputs, and (iii) decreasing returns to scale. (Diminishing returns are taken to imply decreasing returns to scale. The situation where response only commences at a positive level of input, which is not irrelevant in the case of livestock production, is hence not considered.) The subsequent analysis is also developed essentially on the basis of single valued response coefficients.

Chapter 2 deals with efficiency criteria for non-dated statics analysis. Unconstrained maximization is first dealt with, followed by constrained minimization and constrained maximization. The principles developed in these two chapters are those which are dealt with in most treatments of response analysis, but many of the algebraic and geometric representations are imaginative and add finesse, if not major substance, to other treatments.

The role of time is discussed in Chapter 3. The effect of time on response is seen in a number of ways, (i) through the contribution which fixed inputs are permitted to make, (ii) through the capacity of the system to absorb variable inputs, (iii) through the effects on yields of various sequences of injections of inputs and harvests of outputs, and (iv) through the effects of carryovers. Objective functions are also seen to be time-dependent, principally through opportunity costs varying with time, and interest rates reflecting time preferences. Dillon deals with unconstrained and constrained maximization over time, without and with time preference. His analysis leads to principles which are more usually dealt with in replacement analysis, but which are appropriate in this context. Problems are classified by their time-input and time-response characteristics, and three models are examined which are time-dependent in particular ways.

Chapter 4 raises some particular difficulties of agricultural response research. It deals with design and estimation problems, response variability in time and space, and with relationships between farm and experimental response.

We gain no insights from this book about the significance of response analysis in the overall economic problems of agricultural planning and control. For these the student must continue to search elsewhere. Despite excellent example material, throughout most of the book one feels that we are dealing with situations which call for more production and market control than is feasible for most agricultural production. The real problems of time in most of agriculture are concerned with variability and uncertainty. These, and other particular problems of agriculture, are dealt with in only a cursory manner in the last chapter.

Yet *The Analysis of Response in Crop and Livestock Production* will undoubtedly fulfill a valuable role in the training of students in agricultural economics. Its mathematics are simple and its prose is clear. Dillon brings to our attention a variety of material which until now has tended to remain untapped in the more difficult treatments of

production theory. One of the most pleasing features of the book is the excellent annotated bibliographic material at the end of Chapters 1, 2, and 3, and throughout Chapter 4. The level of presentation is well suited to the background of most current students of agricultural economics, and there are few who, having worked their way through the book, could not tackle most allocation problems posed in terms of the types of production response with which Dillon deals.

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