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BOOK REVIEWS AND NOTES

Von Thunen's Isolated State, Translated by Carta M. Warhenberg.
Edited by Peter Hall. Oxford: Pergamon Press, 1966. Pp. iv, 304,
£Stg.5.

Since its first publication in 1826, Johann Heinrich von Thunen's *Der Isolierte Staat* has become a classic of location theory. However the main body of this work has not previously been translated into English. This edition contains an almost complete translation of his location theory and a summary only of his wage theory.

Von Thunen, in his location theory, is interested in the influence of an isolated factor, distance, on the location and form of agricultural production. In order to separate the influence of distance on the location of agricultural production, von Thunen makes a number of simplifying assumptions which he relaxes in the latter stages of his analysis to introduce reality into his model. Von Thunen's initial model consists of a large fertile plain, isolated from the outside world. In the centre of the plain is situated a town which must supply the rural areas with all manufactured products and, in return, obtains all its requirements from the surrounding country. The plain is assumed to be uniform in all respects. Von Thunen considers transport costs as a measure of distance, the factor influencing the location and form of production.

Under these assumptions, von Thunen poses two distinct but related avenues of inquiry: how will the farming system of the different districts be affected by their distance from the Town and what pattern of cultivation will take shape in these conditions? Regarding the first of the above questions, von Thunen is interested in how the intensity of production will change with changing distance from the sole market. In developing his Intensity Theory, von Thunen considers a single grain crop which can be produced under a number of farming systems which differ in their intensity of production. A system of concentric rings will be formed around the Town each with a particular farming system. The boundaries to these rings are determined when land rent is zero. As well as considering the effect of distance, other things being equal, on the location of a particular farming system, von Thunen considers also how changing grain prices and crop yields influence his results and, in doing so, brings his analysis closer to reality.

The second avenue of von Thunen's inquiry concerns the type of crop to be grown. The plain has to provide the Town with all its needs, food, timber and others; on which section of the plain will these products be produced? Von Thunen asks how will the decision of what crop to grow at a particular location be related to distance from the sole market. Under the conditions imposed on his model, von Thunen concludes that "fairly sharply differentiated concentric rings or belts will form around the Town, each with its own particular staple product. From ring to ring the staple product, and with it the entire farming system will, change; and in the various rings we shall find completely different farming systems". (page 8.)

Throughout his analysis von Thunen implicitly uses the marginal concept in developing the boundaries to the rings. He develops this concept more fully in chapter 19 where he considers the marginal productivity of units of labour applied to land.

Throughout his book von Thunen uses mathematical formulae to express his analysis, and, furthermore, fits to these formulae empirical data gained from his own farming experience. The complete work is an outstanding achievement; and while this particular edition has been prepared especially for economists and economic geographers interested in location theory, all who study this work will reap some benefit.

The introduction prepared by Peter Hall presents a brief biography of von Thunen together with a guide to the main lines of the theory in *The Isolated State*.

The final section of the introduction attempts to set von Thunen in the context of his age and of the age which followed him.

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The Principles and Practice of Farm Management Accounting, C. A. Mallyon. Sydney: The Law Book Company Limited, 1966. Pp. viii, 463, \$7.50.

Since the first edition of Mallyon's *The Principles and Practice of Farm Management Accounting* was published in 1961, accounting for the primary producer has become a topic of considerable importance throughout Australia. In the preface to this the second edition, the author is able to cite no less than seven examples of different organisations now working to promote the investigation and adoption of sound management accounting processes. The organisations range from the research committees of the several professional bodies of accountants, to the State Departments of Agriculture who "have taken vigorous action to push the benefits of good farming recording. In Queensland, for example, the Economics Section of the Department of Primary Industries has gained the co-operation of groups of farmers and accountants to supply data in a form suitable for analysis. In New South Wales, a pilot study group of farmers are keeping records under the guidance of an officer of the Department of Agriculture."

Among the changes and improvements made for this edition, probably the most significant is the addition of a commentary on the latest ideas for farm planning and budgeting control. Relatively few alterations have been made to the original text except where "in view of some of the positive criticism of earlier reviewers, certain aspects were amended. However, on the whole, it has been found in practice that the structure of the book well served its purpose."

As in the previous edition, the first four parts of the book describe the installation and operation of "the accounting system necessary under present conditions to aid the farmer or grazier in his management."

There is an outline of the mechanics of preparing management accounts using double entry book-keeping, and a most interesting *Report to X. Y. Zest Esq. for the Year Ended 30th June, 1976*, which presents an analysis of a farm business from management statements of financial and technical results.

Part Five, again by far the largest, contains a detailed consideration of budgeting procedures and the basic computational essentials for every well known technique from partial budgeting to linear programming. Gross margins analysis, linear programming, "short cut mathematical programming", programme planning, Swedish method, creep budgeting, capital budgeting and break-even analysis are all mentioned, with programme planning, Swedish method and creep budgeting being considered in a separate chapter.

In what is a quite natural sequence, Part Six deals with what is known in accounting circles as project, enterprise or cost accounting, and then with a newer but related topic called variable costing. Mallyon views enterprise accounting as simply an extension of the general farm management accounting system, though he admits that "the full treatment accorded to cost accounting in secondary industry would in all probability be neither feasible nor economic in primary industry." The reason is given that ". . . the level of gross income in relation to capital employed . . . (widely fluctuating) . . . selling prices for rural products . . . (and) . . . time elapses between the decision to raise a particular crop and the sale of it . . ." militate against ". . . applying such refined measures as standard costing to farms, even though such measures could well have an important bearing on efficiency." There is also the more important point that among the "certain technical difficulties involved in the use of an enterprise accounting system" not least is that, ". . . always something of a bane to producers, extra records undoubtedly have to be maintained regularly for an enterprise accounting system to function properly." The unfortunate thing is that no real contribution is made towards overcoming the bane. The whole chapter headed "Enterprise Accounting Records" only discusses the general types of records and extra information required rather than how and with what the farmer is to collect the vast array of data which is apparently required. One cannot help but feel that it is a case of the farmer being expected to undertake the relatively difficult task of collecting and summarizing physical data to round out a system of collecting, summarizing and interpreting financial data which he is not considered fit to operate.

The formal treatment of farm management accounting ends with the chapter on variable costing though the book itself has an explicit conclusion in Part Seven of two brief chapters dealing in turn with the various forms of ownership encountered in agriculture and then, finally, with the future of farm management accounting. These are followed by an interesting bibliography and an adequate index.

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Struggle for the North, J. H. Kelly, Sydney: Australian Book Society, 1966. Pp. xxii, 218, \$4.25.

This book has already been subjected to a number of reviews and the subject matter has been fairly well discussed and written about in newspapers. It only remains for this reviewer, uninitiated in the struggle for the North, to remark on a few items of special interest to himself.

I think that Jack Kelly's particular contribution to discussions on the North, apart from his balanced treatment of the whole subject of economic development, based on long and intimate association with the area, is the emphasis he places on the need for justice for the aboriginal employees there. He points out that the whole economy of the pastoral industry there is dependent on the pool of indigenous skilled labour, typified by the experienced aboriginal stockman. Kelly rightly points out the need for putting an end to wage and other discrimination against aboriginal labour as an important step towards developing the pastoral industry of the North.

As far as water supplies in the North are concerned Kelly emphasises that the development of stock water supplies will be needed for the adequate utilisation and management of dry-season pastures and eventually for improved pastures. He points out that there is scope, albeit limited, for development of irrigation on some of the river systems of the North. He recognises the need for more hydrologic, agronomic and economic investigations before irrigation can be developed on a rational basis.

Kelly's optimistic but realistic approach to the development of the North is based on long experience with conditions there and is supported by progressive proposals for labour and land tenure reforms and the need for sound investigational work. For the person who is interested professionally, politically, or for whatever motive, in the development of Australia, this book will prove very worthwhile.

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Roots of The Farm Problem, E. O. Heady, E. O. Haroldsen, L. V. Mayer, L. G. Tweeten. Iowa State University Press, 1965. Pp. ix, 224, \$U.S.4.95.

The authors of this book look critically at overproduction as being the commonly accepted cause of the farm problem of low farm incomes. They submit that over production is not the cause but rather the result. The root of the farm problem they claim, lies in the dynamic nature of economic development: technological advance, the resultant change of input mix in farming and the immobility of resources.

In the author's words, "a fundamental objective of this book is to explain how the supply and demand conditions surrounding agriculture relate to returns to each of the several inputs and to farm income. From this point of view, we are also interested in adjustments which must be made in agriculture if farm income is to be improved, or if agriculture's input mix is to be made more consistent with the nation's stage of economic development." In a generally descriptive manner this objective is achieved.

The major part of the book is used to present figures and arguments to show how economic development has affected the input mix in agriculture over several decades. Over and over the theme is repeated that capital is substituting for labour and farms are becoming larger but fewer in number.

The reasons for this are many and varied. Education has led to research which brings about new machines, fertilizers, pest controls, seed varieties and the like. Education of the farmer has shown him the advantage in using this capital which substitutes for labour and land. Some labour moves into the manufacturing and tertiary sectors with the result that more advanced capital inputs are developed at lower prices so that the input mix on the farm changes still further.

The movement of the now excess labour away from agriculture is slow because of human values (*i.e.*, high value placed on rural living), specialized training and other reasons, thus the returns to farm labour fall and remain low. Production is greatly increased to offset the effect of the low farm income keeping land in production rather than substituting it for capital which has increased productivity substantially.

Although the real gains from the change in the forms, mixes and structure of inputs used in agriculture have been great for society as a whole, the gains and losses of progress are not distributed equally among all input suppliers or producer groups. The social and adjustment problems of States relying entirely upon agriculture with their reducing populations are mentioned.

The farm industry in aggregate has developed in a situation where the supply and demand for some inputs is highly elastic and for other inputs is quite inelastic. This has depressed farm prices and income in relation to other sectors of the economy.

An interesting comment is made with regard to inconsistent Government policies in respect to the input mix of agriculture and the consequent farm problem. Different Government programmes affect the demand for inputs and the demand for output in different ways. On the one hand policies encourage the expansion of output by encouraging research, education, extension, public investments and the imposing of price supports and subsidies. On the other hand several programmes are aimed at controlling the supply of agricultural output.

Chapters 5 through 11 examine in some detail the demand for different farm inputs over several years past. The causes for the shifts in demand are discussed and short-run projections are made on a straight line basis corrected for value judgements on the part of the authors. Although the demand analyses are far from sophisticated, it is historically informative to see the trends in demand for the different inputs.

The final chapter is devoted to projecting the input mix in 1980. Although the projections are questionable, they do serve to show that much though could be given to the changes coming with further development. The changes in the organization of farm resources depicted in this book suggest major shifts in the political and sociological as well as the economic aspects of farm life.

Although the concepts presented in this book are not new, they are accurate and well expressed. The book is quite readable and possibly of greatest use to the layman and the undergraduate. It could also be of use to policy makers, particularly in Australia where the effects of economic development upon agriculture are the same as described in the book.

To the esoteric the first half of the book may seem long winded and tedious; forever labouring the point that capital is substituting for labour. The second half of the book may appear to suffer from naive research techniques. Even for the esoteric, however, this volume has something to offer, if not in the figures and demand analyses, then merely in the new expression of old ideas.

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