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BOOK REVIEWS

Investment Policy and Investment Legislation in Under-Developed Countries. By Reinhard Kovary. Rangoon University Press, Rangoon. (Distributed in the United States by Taplinger Publishing Co., New York, N.Y.) 124 pages. 1960. \$2.00. *Agricultural Credit in Economically Underdeveloped Countries.* By Horace Belshaw. Food and Agriculture Organization of the United Nations, Rome. (Distributed in the United States by Columbia University Press, New York, N.Y.) 255 pages. 1959. \$3.50.

ESTABLISHING NEW INDUSTRY and strengthening agriculture are often prerequisites to economic growth and higher levels of living in underdeveloped countries of the world. These two reports discuss different aspects of capital investment as a key need in meeting these objectives. Reinhard Kovary is primarily concerned with accelerating foreign investment in new businesses through better legislation. Horace Belshaw deals with improving credit conditions within countries with the main objective to increase agricultural output and to raise living levels of rural people.

Mr. Kovary speaks from the background of his experience as a United Nations advisor to the government of Burma. He concludes that a statement of policy simply inviting foreign investment will not attract much capital. In recent years, nationalization has brought too heavy losses to investors. The author suggests the greater security of specific legislation, which can be amended only with the consent of proper constitutional authorities, not at the whim of the current executive.

He suggests that the proposed legislation should leave very little to the interpretation of administrators. Incentives and privileges offered investors, as well as conditions they must meet, should be spelled out in detail. Sound government procedures and qualified personnel to administer the legislation are important also.

The legislative and administrative proposals of Kovary may facilitate investment in those countries where governments are stable and public sentiment is favorable to foreign interests. But even stronger guarantees appear to be needed in many countries, particularly for major capital expenditures that will pay out only in the long run.

Many students of this problem believe that private capital could be attracted more readily were repayment promises strengthened by some international organization. The author's passing reference to an international convention for the protection of private property rights deserves further exploration. Some such way of reducing or spreading risks is needed before private investors can be expected to help materially in economic development. But there is a more serious omission. Mr. Kovary fails to discuss how the governments of more prosperous nations, either singly or through international cooperation, can assist in the capitalization problems of underdeveloped countries. The Export-Import Bank of the United States and the World Bank, for example, already have accumulated much experience in developmental credit programs.

Horace Belshaw, a New Zealand economist who was formerly with the Food and Agriculture Organization of the United Nations, has had a lifetime interest in agricultural credit. The main

focus in his book is on improved credit for agriculture, but he recognizes it as only one need in achieving increased farm output and higher incomes for rural people in underdeveloped countries. He speaks of supporting investments in "social overhead" such as in irrigation, highways, storage, marketing facilities, and the need for tax and land reforms and improved education. Success in agriculture also depends upon a favorable general climate, including development programs in other sectors of the economy.

Suggestions relative to credit include improvements in the supply of funds, in lending conditions, in lending institutions, and in how credit is used by farmers. The author's general thesis is that agricultural credit in most underdeveloped countries needs to be made more "dynamic" so as to contribute to a net increase in output, income, and assets. At present, too much credit is "static." The amounts available and the way in which credit is used do not permit any increase in productive capacity or efficiency.

Belshaw places considerable emphasis on changing the reluctance of peasant farmers to adopt new lines or methods of production and to borrow for capital investment. He believes that farm investments designed to utilize labor more fully should have first priority and that technology should be kept simple and within the competence of the farmer. Assistance in applying new techniques and improving farm management should often be integrated with credit. These considerations are as important as increasing the supply of credit, lowering its costs, and improving credit terms and conditions.

In recommending supervised credit, he cites the pioneering experience of the Farmers Home Administration in the United States. Success of less well-educated, undercapitalized peasants depends upon combining farm and home education with credit. Belshaw suggests that lenders might be reimbursed by the government for costs of supervision, because this is a social responsibility similar to extension education in the United States. Interest charges might reflect direct loan costs only. A limited number of families could be helped at any one time, but as their conditions improved, the program would be transferred to others.

Belshaw admits that many cooperative ventures in underdeveloped countries have failed, but he

believes that they have potential social and economic advantages as instruments in implementing agricultural credit programs. Not only can they encourage thrift and build up savings in farm communities, but they also constitute a means of dealing with credit, marketing, and supply problems in combination. He recommends providing a stronger foundation for cooperatives as a way of promoting mutual help among farmers.

He points out that a central banking system promotes economic growth in all segments of an economy. It helps to establish and strengthen commercial banking facilities and agricultural credit institutions. It supervises financial agencies and provides technical help in banking principles and procedures. By developing better credit instruments and cheaper systems of remittances, it also can improve business and marketing transactions.

Little fault can be found with Belshaw's report. His philosophy with respect to functions and use of credit to achieve productivity in agriculture is in harmony with the thinking of recognized agricultural economists. He knows that governments, rather than private groups, must promote the major breakthrough and actively initiate programs. They must establish a favorable overall climate and participate in the advancement of farm production and marketing techniques. Governments must regulate the activities of merchants and moneylenders and establish new credit institutions. Governmental loans or other financial assistance also will need to be given to farmers or lending agencies. Methods for doing the job differ from those appropriate in more highly developed nations, but Belshaw shows how it can be done without straying from the basic principles of private enterprise.

These two books are valuable complementary references to those who seek remedies for the sick economies of underdeveloped countries. Kovary suggests better legislation as a way of attracting outside capital, especially for industrialization, to improve the overall health of countries. Belshaw discusses how nations can marshal internal resources for the main objective of developing sound agriculture and improving rural living conditions. Even countries with limited areas of backward farming, such as the United States, may have something to learn from these reports.

Lawrence A. Jones

Futures Trading Seminar—History and Development. Principal Papers by Henry H. Bakken, Roger W. Gray, Thomas A. Hieronymus, and Allen B. Paul. Mimir Publishers, Inc., Madison, Wisconsin. 283 pages. 1960.

WHO WILL BUILD the bridges to span the growing gap between theory and business practice? What will strengthen the thin lines of communication between the economist and the businessman? Here is one answer—and one bridge.

The Chicago Board of Trade, through its Educational Advisory Committee, planned and conducted the seminar reported in this volume. The program included four main speakers, 12 formal discussants, and 25 other seminar participants. Each main paper was prepared by a competent professional economist in the field, and each was subjected to the crossfire of a team of three discussants consisting of a business representative and two economists.

The 25 other participants were about equally divided between the business and academic worlds. In terms of printed pages, the main papers took 50 percent, formal discussions 30 percent, and general discussion 20 percent of the total time.

The seminar was designed to assess the role and function of the futures markets and to focus on extending the boundaries of knowledge and opening up areas of pioneering research. The four main papers are addressed to four areas of study: (1) A historical evaluation of the role and function of futures trading. (2) The importance and effectiveness of hedging. (3) The effects of futures trading on prices. (4) The future of futures trading.

Henry Bakken's engaging prose traces the development of futures trading from its medieval origins when "the tempo of trade was geared to the cadence of the camel and the speed of the sail," through the fairs of Champagne, down to modern times and the intriguing conception of a universal contract that may some day disengage futures trading from its ties to specific commodities. The right of delivery of a particular commodity is seen as "a vestigial remnant of an age-old custom, a slender strand of gossamer that is easily severed . . ." A universal contract would take the place of many commodity contracts tied to specific commodities. Under this concept, one

would really engage in trading on the basis of index numbers.

Roger Gray brings new insight to the old subject of hedging, both in his analytical review of conventional evidence of the importance of hedging and in his pioneering statistical attempt to appraise futures markets in terms of their effectiveness for hedging purposes. He concludes that futures trading depends upon hedging and is impaired by any outside factor that reduces the need for hedging. A further chronic threat to futures trading is lack of understanding of the more subtle point that effectiveness for hedging depends upon speculation.

Professor Hieronymus diligently pursues the ancient dragon of speculation through a descriptive analysis of its pricing functions, a general theory of the influence of speculation on prices, and a system for the empirical analysis of the speculative influence. His general conclusion is that both theoretical and empirical considerations suggest that variation in prices is reduced by an active futures market. His empirical analysis of onion futures is of special interest.

Allen B. Paul and William T. Wesson's careful analysis of the future of futures is divided roughly into three parts—the nature of futures trading, basic tendencies in market organization, and the bearing of structural changes on futures trading. The most illuminating part is that dealing with the nature of futures trading. The theoretical concept involved may well prove to be one of the most fruitful to be advanced since Henry C. Emery's classic statement of 1896, which centered mainly around the elimination of price risks.

This new alternative concept was first developed several years ago in a Brookings Institution study under the leadership of Harold B. Rowe. The general idea is that futures trading is one of the many financial institutions in a well developed exchange economy. It facilitates equity investment in commodities. The speculator is seen as an important financier who commits his assets to commodity futures and influences the cost of carrying. A futures contract is a forward commitment, and any forward commitment results in a

genuine investment of capital in commodities, even though no funds pass directly from the forward buyer into the commodity business. This view does not say that the older theories are wrong; it says only that the former angle of vision did not place the whole complex in the best perspective.

The Futures Trading Seminar is a model for a well-planned and well-conducted seminar involv-

ing competent economists and businessmen in the right proportions for stimulating discussion. If it solves few problems, it does bring new vision and new hope to guide the weary traveler on the frontiers of knowledge. It will be especially useful to researchers, teachers, and people in the trade who are interested in exploring new analytical paths.

Ronald L. Miggell

Modern Elementary Statistics. Second Edition. Wood Cliffs, New Jersey.

By John E. Freund. Prentice-Hall, Inc., Englewood Cliffs, New Jersey. 413 pages. 1960. \$9.00.

WRITTEN FOR BEGINNING students in the natural and social sciences, this book's approach to elementary statistics is based on the precept that "statistical concepts and statistical methods are nothing but a refinement of everyday thinking." Some statisticians may decry this description of their field as a gross oversimplification, but it is a good approach to use for students with nonmathematical backgrounds.

This second edition of Freund's nontechnical elementary statistics text has been considerably revised, updated, and expanded. For instance, there is increased emphasis on statistical inference, with three chapters on tests of hypotheses, including one on nonparametric tests. Also, the symbolism has been changed to correspond with that now in generally accepted usage.

Starting with descriptive methods, such as frequency distributions, measures of location, and variation, the book continues with probability, estimation and tests of hypotheses, and concludes with a section on regression, correlation and time series. The treatment of these subjects is adequate but not rigorous.

The author aims at imparting an understanding of statistical concepts rather than the rote memorization and manipulation of formulas, so derivations and proofs are often omitted. Annotated bibliographies at the end of chapters provide the student with sources for proofs and greater detail on the subjects covered in the text. A good knowledge of high school algebra is all the mathematics needed to understand the text and to work the exercises. The problems supplement the text without requiring a greater knowledge of statistics than what has been covered previously, and they are widely drawn from the various fields of application.

This is an excellent text for use in an introductory course in statistics for students with limited mathematical training. A reader who has had some algebra and who wishes to become acquainted with statistical methods and concepts should gain considerable insight from it. Those fortunate enough to have a more extensive mathematical background would perhaps prefer a more rigorous derivation of formulas, though they too could profit from Freund's lucid presentation of statistical concepts.

Arthur A. Harlow

Wholesaling in Marketing Organization. By David A. Revzan. John Wiley & Sons, New York. 656 pages. 1961. \$10.50.

A BROAD GAUGED BOOK on wholesaling, Professor Revzan's work covers the marketing system, the place of wholesalers in it, and deals with internal operations of a wholesale firm as well as the problems and policy considerations involved in running it. In treatment, it is related to an earlier institutional approach to marketing developed by Revzan and Duddy. Little has been written on wholesaling in the United

States; this new work is designed to fill a real need. The importance of wholesaling functions as stressed by the author, is well taken. The material in this work, which is concerned with internal operations, includes comprehensive discussions on merchandising, buying and price policies, as well as management's tools for coordination and control.

Two chapters are devoted to a discussion and

critique of Government regulations as they affect marketing, with special emphasis on the Robinson-Patman Act. Though the general account of Government regulatory activities is orderly and comprehensive, it is also critical. Government as a countervailing power, capable of operating in the public interest against the power of big business operating in its self-interest, is ignored. Many of the shortcomings Professor Revzan notes are more a result of business seeking to circumvent the letter and the spirit of the law than of shortcomings in the legislation. He fails to place the regulatory activities in proper perspective against the broad spectrum of Government programs that affect marketing firms and the marketing process. Only one paragraph in the two chapters is devoted to "Government research activities."

The author's comments suggest that he is not so well grounded in agricultural marketing as in other fields. He fails to note research reports on operations of food wholesalers or on wholesale-

retail trade relations published by the U.S. Department of Agriculture during the last decade. Indeed, he seems not to be cognizant of the recent revolution in relations between food retailers and wholesale suppliers, and but vaguely aware of the implications for wholesaling organization and internal operations. The significance of this new approach to service wholesaling for industries other than food is overlooked.

The author is at his best in his systematic conceptualization of the overall marketing organization. His description of the forms and functions of wholesale institutions is excellent. But the book is not easy to read. It is unduly wordy in many parts; and it repeats referrals to points or considerations raised in earlier sections. Despite the pedestrian writing of the work, the countless bogs that slow down reading progress, a student of marketing who plods through the 600 pages will be rewarded with a comprehensive account of wholesaling.

Martin Kriesberg

Marketing in Latin America. By Frank Montgomery Dunbaugh. Printers' Ink Book Co., New York. 298 pages. 1960. \$7.50.

MARKETING IN LATIN AMERICA was written for executives and students seeking an insight into marketing in that part of the world. One finds insight in the vivid descriptions of the relevant Latin American culture, current trends in marketing, and such specific aspects of marketing as distribution, marketing research, advertising, public relations, business practices, legal aspects, and licensing (production of patented or trade-marked goods under license). Case histories of successful operations deal with marketing of capital goods, consumer goods, and services.

Agriculturally oriented subjects are referred to sporadically. In scanning the index, one sees the names of three farm-equipment firms and seven firms that market food products, soaps, and so on. Rolled oats, dried milk, soup, coffee, and beer are mentioned when companies handling them illustrate a point, or as some feature of the Latin American market is described.

A 55-page "economic picture of Latin America" is a useful feature of the book. It describes Latin America as a whole and each of the 20 countries. For each country, one finds such elementary facts as areas and populations; such data of marketing significance as names of newspapers, radio and TV stations, and shipping firms and airlines; and concise descriptions of economic activities.

The jacket warns that the book is "not directed toward academicians." Nor should one expect to learn here about the primary markets for agricultural commodities in Latin America. On the other hand, marketing in Latin America inevitably reflects agriculture's substantial contribution to gross national product, which makes the book more significant for agricultural readers than the author may have intended. And agricultural economists, like younger executives and students, may have some use for insight into the business of marketing south of the border.

Louis F. Herrmann

MECHANIZATION in agriculture, which has received much research attention in recent years, is discussed in this volume by nine authors, eight of whom are English or Dutch. One of a series on industrial economics, the book has as its stated purpose "to stimulate study and research in this part of economics, and to further an interchange of ideas and results on an international basis."

The nine authors vary widely in their approach and treatment. A Professor of Agrarian History from the Netherlands, for example, presents a wealth of historical facts on farm mechanization, going back to 2,000 B.C., although he fails to bring his history up to date—many of his statistics are no more recent than 1900 or 1910, leaving out the period since, during which advances in mechanization have been rapid. Along with the wealth of facts, the author presents interpretations, some of which seem inadequate. For example, in explaining the increase in mechanization over time, little emphasis is given to the effects of rising farm wages. The chapter contains a bibliography of 101 references on the history of farm mechanization, nearly all from Western Europe and the United States.

Chapter 2, written by an English agricultural engineer, and chapter 3, by an American agricultural economist, deal with the development of farm mechanization in Europe and the United States. These are rather good treatments, bringing out basic principles and the problem of fitting machinery into the farm business. Chapters 4 and 5, written by an English engineer and an English economist, deal mainly with the farm management aspects of mechanization and duplicate in considerable degree the material in chapters 2 and 3. Another chapter, concerned with financing mechanization, is a fairly comprehensive treatise on the general problem of farm finance. It is an adequate treatment, but most of it applies to general

farm finance rather than to machinery as such.

Mechanization of the small farm is the subject of another chapter. Here the analysis is entirely in terms of conditions in Western Europe, particularly the Netherlands, where farms are typically small. The results do not seem to apply widely to the numerous areas in which farms are much larger and where, frequently, there is a pronounced upward trend in size of farm.

Other chapters deal with mechanization and marketing organizations and with comparisons between industrial and agricultural mechanization. These are high-caliber general treatments and widely applicable. The chapter on mechanization and marketing is much broader than its title indicates. It deals with production as well as marketing, and, at times, with the whole field of technology in agriculture rather than mechanization alone. The comparison of industrial and agricultural mechanization is nicely done, with pertinent data from many countries, including Canada, the United States, and Russia.

Several chapters are real contributions and would stand well as individual articles. But the book as a whole suffers from lack of central purpose and coordination. Some of the material applies only to specific area situations, such as Western Europe, though this is not always obvious. The statistics in some tables do not have adequate headings; others are presented in terms that will not be easily understood by most readers in this country. A few of the chapter headings are not consistent with the material in the chapters. To younger readers, and those who have only a general interest in the subject, the book could be confusing. More mature readers, however, are likely to find certain chapters of real value, particularly if they are interested in such problems as the mechanization of small farms in Western Europe.

Merton S. Parsons

Free Grass to Fences; The Montana Cattle Range Story. By Robert H. Fletcher. Published for the History Society of Montana by University Publishers, New York. 235 pages. 1960. \$12.00.

OVER THE YEARS, the range cattle industry has had as great a romantic appeal to the American people as anything in our history. The author of this volume, assisted by the Montana Stockgrowers Association and the Historical Society of Montana, brings to life the individual stockmen of early Montana. Many of the sketches done by the great cowboy artist, Charles M. Russell, are reproduced. These add to the attractiveness of the book.

An economic study of the Montana range cattle industry was made in the 1920's by Robert S. Fletcher of the Bureau of Agricultural Economics. The results of the study were published as articles and as a bulletin by Montana State College. The present book, by Robert H. Fletcher, provides, in contrast, a narrative account of the growth of the industry and of the development of the Montana Stockgrowers Association.

The first cattle were probably brought into Montana by fur traders, but it was not until migration began over the Oregon Trail and other roads that a cash market for livestock developed. The local market increased tremendously with the discovery of gold and the movement of miners into the area.

Many of Montana's early ranchers entered the

territory with their herds in the 1860's and 1870's. During the next few years, the open-range industry, based on free use of the grass on the public domain, spread over most of the State. The Montana Stockgrowers Association was organized in 1885. In the winter of 1886-87, the industry was hard hit. Raging blizzards struck the overstocked range, and many ranchers suffered losses of more than 50 percent of their stock.

As homesteaders moved in, some of the ranchers began to acquire title to land. Gradually, the open-range industry gave way to the ranch-cattle industry, even though many ranchers still depend on publicly owned land for grazing. Throughout this period of change, the Montana Stockgrowers Association was active in protecting and advancing the interests of its members and stockgrowers generally.

This reviewer, who grew up on a cattle ranch in central Montana, would have welcomed more information on the 79 Ranch and John T. Murphy, as well as mention of Dan Slayton and Dave Pratt. However, no book can cover all details, and this one has enough to appeal to everyone who has had experience in the State or has an interest in the western livestock industry.

Wayne D. Rasmussen

Agriculture and Urban Growth. By G. P. Wibberley. Michael Joseph, London. (International Publications Service, 18 East 33d Street, New York.) 229 pages. 1959. \$5.85.

IN *Agriculture and Urban Growth*, Professor Wibberley leads his reader gently, and almost unconsciously, through the various processes of economic analysis required to establish bases for regional land use planning. His writing style is simple and his examples represent practical problems. Conclusions and recommendations follow logically.

While most of his discussion is oriented specifically to situations in England, Scotland, and Wales, the experiences of other countries are drawn into his analyses. For example, "When the pressures from nonagricultural uses increase in a country, it behooves that country to look more and more carefully and critically at its remaining areas of rural land and to work out techniques for meas-

uring and deciding what to do with that land." (Page 25.) . . . "It is the largest cities that are growing at prodigious speed whether they are in highly or poorly developed countries. The only major difference between cities in the richer economies and those in the poorer is that the former are spilling out at a faster pace and the density of new development is generally much looser." (Page 217.)

Professor Wibberley discusses the economics of the firm, competition for the services of land, methodology for benefit-cost analyses, land values, interest rates on investment, social costs, transfer accounts, and other items that affect the acceptance of decisions on regional land use planning by the public. He believes that choices of sites for future urban growth must be based on logic and knowledge of alternatives if public antipathy to planning is to be overcome.

The chapter titles show the scope of the book: "The Desire for Land;" "The Measurement of Land Uses;" "The National Land-Use Pattern;" "The Physical Effects of Town Growth on Agriculture;" "The Siting of Urban Development on Agricultural Land;" "Food Replacement—At Home or Abroad?" "Food Replacement—In the Domestic Garden;" "New Land—From the Hills?" "New Land—From the Lowlands?" "Agriculture and Sites for New Towns;" "Conclusion: A Comparison with the U.S.A.—The Need for New Methods of Evaluation."

This book helps to explain why the rising number of public land use controls proposed for the

United States fails to cure the ills caused by urban growth. Exclusive agricultural zones, lot size limitations, public purchase of development rights, conservation easements, real property tax moratoria in various forms, and numerous other proposals generally have one common weakness—each ignores basic principles of economics. Most require decisions without benefit of factual analysis.

The author, who is head of the Department of Economics at Wye College, University of London, has known intimately the eras of prewar British dependence on imported foods, the wartime struggle to overcome critical shortages, and the postwar economic adjustments in domestic and international affairs. He has observed irresistible urban pressures at work. The old molds of bombed-out cities were no longer acceptable to British urban dwellers. They demanded more space. Social, political, and economic forces clashed head-on in the Town and Country legislation established to guide urban growth. What is the "best" use for a property when land resources are in critically short supply?

Professor Wibberley does not claim that his analysis presents a cure-all. What he tries to do, he asserts, is "to concentrate on those aspects that are still somewhat neglected in land use planning in order to show that by emphasizing the importance of alternatives in land and food policies and the need for cost-benefit analyses, a more rational welding of different interests into a balanced use of the country's land resources can be made." (Page 239.)

Hugh A. Johnson

Economics of Watershed Planning. Edited by George S. Tolley and Fletcher E. Riggs. The Iowa State University Press, Ames. 339 pages. 1961. \$3.95.

THE THEORY and practice of resources planning have long interested agricultural economists and public administrators, mainly as areas for learned discussion in numerous books and journals and eventual disagreement. This is disappointing but understandable, for an inclination to agree is not a hallmark of the economic profession. In arranging a Symposium on the Economics of Watershed Planning in Knoxville, Tenn., in 1959, Dr. Tolley and Dr. Riggs recognized that a way out of the methodological wilderness of opposing views was to air them in an open forum, thus reducing polemics to polite questions and thereby to solutions.

In presenting the proceedings of the symposium in book form, the editors demonstrate that complex problems of economic appraisal and institutional organization involved in resource development are solvable with the present "technology" of economic science and the legal arts. But by abstracting at the small watershed level, they have perhaps done more than was hoped.

Economics of Watershed Planning should be regarded as the first useful handbook for comprehensive resources planning, in which it is shown how hydrologic or agronomic data can be interpreted in an input-output context; how marginal analysis can be utilized to formulate optimum

programs for flood control and other water-management purposes in tributary watersheds; and how optimum programs must in turn be interpreted and perhaps modified in the light of legal and organizational restraints.

A full-circle treatment of economic planning problems on a small watershed basis demonstrates that a common conceptual distinction between small watershed and river basin planning is merely a fiction, because river basin planning can be regarded simply as the case where optimum development programs for contained watersheds must be derived simultaneously. This justifies the suggestion by the editors that this volume may be used as a handbook for field technicians, agency specialists, resource administrators, and even academic theorists.

As to its specific value for instructional purposes, *Economics of Watershed Planning* merits serious consideration in both land economics courses at the senior undergraduate level and graduate offerings in research methodology and applied resource economics. Undergraduate students of economics would most clearly benefit from the first four chapters. These chapters set forth the philosophy and objectives of watershed planning; the role of tributary watershed development in the Nation's total resource-development effort; the potential benefits of a concentrated small watershed approach to conservation and water management; and the implications of selecting small watersheds as geographic planning units.

Because of its adequate treatment of the procedural and the data problems actually encountered at the project planning stage, this volume should have considerable appeal to the many physical as well as social scientists involved in watershed planning. Agronomy and engineering majors, of course, will find the introductory chapters useful in perceiving how economists view resource-development problems. More importantly, however, they will recognize in the succeeding sections on data adequacy and interdisciplinary activities that the most crucial aspects of watershed

planning involve the form, availability, and reliability of basic hydrologic, soils, or production data.

Following the introductory chapters are contributions that deal with economic appraisal in the more formal sense; these range from budgetary studies of the on-farm aspects of watershed programs to elementary watershed applications of mathematical programming. The discussion then advances to programming methods that consider simultaneously the dynamic aspects of alternative development plans involving the joint influence of land use systems and structural measures in yielding watershed-development benefits. These are clearly the sections most applicable to graduate courses in economics, especially if they are evaluated on a seminar basis.

Despite the most careful collection of basic input-output data and the most rigorous formulation of optimum watershed-development programs, the results of careful economic planning can be negated entirely if the institutional environment within which programs must be implemented is overlooked until plans are complete. Institutional facets of watershed planning are indeed complex; they involve such diverse subjects as cost sharing, financing, organizational problems, and basic water rights. Views of leading authorities on these topics round out the volume and indicate that the editors are not remiss in casting the appraisal and institutional aspects of watershed planning in their proper economic perspective.

The most singular criticism that might be directed toward this compendium is an implied thesis that its value derives chiefly from the urgency of watershed planning problems in the humid East. While it is true that water resources problems are not indigenous to the West, it is unfortunate and unnecessary to attach a regional flavor to a volume that deals so adequately with the conceptual and procedural aspects of watershed planning important in all areas of the country.

George A. Pavelis

World Demand for Paper to 1975. Food and Agriculture Organization of the United Nations. Columbia University Press, New York. 159 pages. 1960. \$1.50.

THE STUDY presents a tentative forecast of paper and pulp demand in the various parts

of the world and examines possibilities of satisfying needs. The forecast covers the period to 1975.