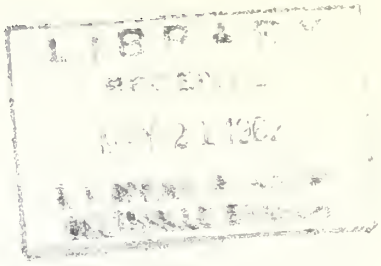

Agricultural Rents

IN THEORY AND PRACTICE

An Annotated Bibliography

Miscellaneous Publication 901

U.S. DEPARTMENT OF AGRICULTURE
Economic Research Service
Farm Economics Division

SOURCES CONSULTED

Agricultural Index, 1950-61

Applied Science and Technology Index, 1960

Bercaw, L. O. Farm Tenancy in the United States, 1918-1936. A Selected List of References. U. S. Bur. Agr. Econ. Bibliog. 70, 1937. 302 p.

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Davis, E. G., Johnson, H. A., and Haren, C. C. Urbanization and Changing Land Uses. A Bibliography of Selected References, 1950-58. U. S. Dept. Agr. Misc. Pub. 825, 1960. 212 p.

Denman, D. R., Switzer, J. F. Q., and Sawyer, O. H. M. Bibliography of Rural Land Economy and Landownership, 1900-1957 (see 287).

Hannay, A. M. Farm Tenancy in the United States, 1940-1945. A List of References. U. S. Dept. Agr. Libr. List 2, rev., 1946. 84 p.

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Index of Economic Journals, 3 v., 1886-1924, 1925-1939 and 1940-1949. Amer. Econ. Assoc., Homewood, Ill., 1961.

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Olcott, M. T., and Hennefrund, H. E. Valuation of Real Estate, with Special Reference to Farm Real Estate. U. S. Bur. Agr. Econ. Bibliog. 60, 1935. 350 p.

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PREFACE

This report is a compilation of selected references concerning agricultural rents in the United States and Great Britain. A list of sources consulted is supplied. However, it is realized that references may have been omitted either because the publications were not available or because their titles did not suggest that they contained information on the subject. Descriptive studies of prevailing rental practices are cited in the section, "Empirical Studies on Rent at the Firm Level."

The primary intent of the bibliography is to serve as a reservoir of information for those who may have use for material pertaining to rent in theory and in practice. Such information may provide a valuable guide for further research on rent, and facilitate the exchange of ideas among researchers. It should also provide a basis for appraising the contributions to rent theory and analysis in specific areas of study that have been made over the last two centuries. No other such bibliography was found to exist.

The bibliography is arranged by specific areas of rent analysis. Attention is focused on areas that have had the least development.

This investigation was directed toward rent analyses and is only indirectly concerned with analyses of leases, land tenure, and land use.

The author gratefully acknowledges the valuable counsel and assistance received from W. H. Scofield, Farm Economics Division, and Elizabeth Gould Davis, Division of Bibliography, U. S. Department of Agriculture Library.

CONTENTS

Some abbreviations used:
B. = bulletin; C. = circular; Col. = college; J. = journal; n. s. = new series; pt. = part; pub. = publication; Q. = quarterly; Ser. = series; Serv. = service; U. = university; U.S.D.A. = U. S. Department of Agriculture; v. = volume.

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AGRICULTURAL RENTS IN THEORY AND PRACTICE

AN ANNOTATED BIBLIOGRAPHY

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INTRODUCTION

Background

Rent means different things to different people. The subject of rent has piqued economists for generations, particularly since the advent of the Ricardian Doctrine. Ricardo (327, p. 33)[1] defined rent as:

> ...that portion of the produce of the earth which is paid to the landlord for the use of the original and indestructible powers of the soil. It is often, however, confounded with the interest and profit of capital, and, in popular language, the term is applied to whatever is annually paid by a farmer to his landlord. If, of two adjoining farms of the same extent, and of the same natural fertility, one had all the conveniences of farming buildings, and besides, were properly drained and manured, and advantageously divided by hedges, fences, and walls, while the other had none of these advantages, more remuneration would naturally be paid for the use of one than for the use of the other; yet in both cases this remuneration would be called rent. But it is evident that a portion only of the money annually to be paid for the improved farm would be given for the original and indestructible powers of the soil; the other portion would be paid for the use of capital which had been employed in ameliorating the quality of the land, and in erecting such buildings as were necessary to secure and preserve the produce.

Today, the definition of rent is more or less a semantic nightmare to economists. The concept of rent has been a puzzling and at times a thoroughly disturbing idea and doctrine in economic thought for almost two centuries. Land, the core of the Ricardian model and the basis of Henry George's reform program, has been all but abandoned by present-day rent theorists. In the many twists and turns of economic thought, the term "land rent" was gradually supplanted by a more generalized notion of economic rent which can appear at times in any and all income payments. In everyday usage, rent means money paid out at a specified interval for the use of physical property of all kinds--apartments, office buildings, land, machines, automobiles, trailers, boats, clothing, and so on. The result has been a departure from the theoretical rent approach based primarily on land toward a concept of rent in which land has become a less significant factor of production. Even the Internal Revenue Service has been called upon to make a ruling concerning the definition of rent. The Service held that farm rents do not cover income derived by a landowner under an agreement to share crops and costs with tenants. It reasoned that the income came from actual farm operations and was not a passive return on an investment.[2] Thus if income is a passive return on an investment, it is rent; if income is received from actual entrepreneurial operations, it is income but not rent.

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[1] Underscored numbers in parentheses refer to items in the Bibliography.

[2] Wall Street Journal. June 21, 1961, p. 1.

The term "economic rent" as used by economists today describes an "unearned increment"; that is, a surplus or a reward in excess of that required to bring forth a desired effect or return.

Ely (22, p. 441) states:

> The rent of any piece of land is measured by the difference between the money value of the products obtained from it by the use of the most advantageous amounts of labor and capital and the money value of the products which could be obtained by the use of the same amounts of labor and capital on marginal land, or at the intensive margin of cultivation.

Rent has been looked upon by some economists as a "producer's surplus"; that is, a differential surplus obtained by producers who have an advantage over marginal producers. R. T. Bye (12, p. 404) applies this concept to land rent in the following statement:

> The rent yielded by a piece of land is equal to the value of the surplus product yielded by the labor and instrumental capital applied to that land, over the yield of an equal amount of labor and instrumental capital applied at the intensive or extensive margins of cultivation.

Carlton (113) views rent as a monopoly income:

> Land is in a sense produced, but it differs from a tool in that it occupies of necessity a certain fixed space, in that it stands in certain peculiar relations to markets, which relations cannot be duplicated. This peculiarity, which is in a sense a monopoly privilege, is a factor entering into the price of that piece of land.... If all land areas were equally desirable in location as regards markets, pure land rent would... probably be an unknown phenomenon. All franchises, rights of way, patents, monopoly privileges, and business advantages, as well as land, stand in peculiar relations to markets. Their value is due to the exclusive and peculiar position which they occupy. The conditions and relations which they bear to particular or to all markets cannot be duplicated or reproduced. This monopoly power has come into being because of the existence of a complexly organized society (p. 55).
>
> Land rent in its restricted sense is only one form of 'rent.' Rent is an income received because of the existence of some economic privilege or desirable market opportunity which is not susceptible of depreciation in the sense of physical wear and tear (p. 61).

Marshall (325) distinguished rent in its pure form from land rent. He indicates that:

> ...the rent of land is no unique fact, but simply the chief species of a large genus of economic phenomena; and that the theory of the rent of land is no isolated economic doctrine, but merely one of the chief applications of a particular corollary from the general theory of demand and supply; that there is a continuous gradation from the true rent of those free gifts which have been appropriated by man, through the income derived from permanent improvements of the soil, to those yielded by farm and factory buildings, steam engines and less durable goods (p. 629).

Concerning quasi rents, Marshall states:

> That which is rightly regarded as interest on 'free' or 'floating' capital, or on new investments of capital, is more properly treated as a sort of rent--a quasi-rent--on old investments of capital. And there is no sharp line of

division between floating capital and that which has been 'sunk' for a special branch of production, nor between new and old investments of capital; each group shades into the other gradually. And thus even the rent of land is seen, not as a thing by itself, but as the leading species of a large genus; though indeed it has peculiarities of its own which are of vital importance from the point of view of theory as well as of practice (p. 412).

Taylor (186, p. 111-112) states that selected forces have a bearing upon the quantity of rent:

The amount of rent tends to vary directly with the number and capacity of those engaged in agriculture and of the equipments employed, directly with the amount of capital seeking investment in farming operations, directly with the opportunities for continuous, remunerative employment through the year for the labor and equipments, directly with the social advantages of the locality, and directly with the prices of farm products. The rent tends to vary inversely with the efficiency of the managers, workmen, and equipments in the competing region as a whole, inversely with the prices of farm equipments, wages, and other operating costs, and inversely with the abundance of good land.

Fetter[3] approaches rent from the marginal utility viewpoint. Rent is the difference between the value of better grades of land and the value of the free goods. According to Fetter:

The essential thought in rent... is that it is the value of the usufruct as distinguished from the value of the use-bearer or thing itself. The meaning of usufruct is the use of the fruits, or in legal phrase: 'the right of using and enjoying the income of an estate or other thing belonging to another without impairing the substance....' Before the usufruct is estimated, allowance must be made for repairs, depreciation, and for various expenses which absorb a good portion of the gross product. When this allowance has been made, the income may be considered as a net sum not due to the sale, or to the using up of any part of the thing rented. This is the essential thought in typical rent--that it is the value of the surplus, or net product, of an economic agent leaving the agent itself unimpaired in efficiency. The total product is sometimes called the 'gross rent,' but economic rent is 'net rent.'[4]

The evolutionary trend in the concept of rent has resulted in expansion of the meaning of rent. One of the first approaches to land rent was to view it as a price. To Ricardo, the difference between the market price of commodities and the cost of producing them was rent. Rent arose on land that was better than the poorest land in cultivation. Ricardo (327, p. 38-39) states that rent is the result, not the cause, of price:

The reason, then, why raw produce rises in comparative value [as population increases] is because more labour is employed in the production of the last portion obtained, and not because a rent is paid to the landlord. The value of corn is regulated by the quantity of labor bestowed on its production on that quality of land, or with that portion of capital, which pays no rent. Corn is not high because a rent is paid, but a rent is paid because corn is high; and it has been justly observed that no reduction would take place in the price of corn although landlords should forego the whole of their rent. Such a measure

[3] F. A. Fetter. The Principles of Economics, with Applications to Practical Problems. P. 61. New York, Century, 1904.

[4] F. A. Fetter. P. 55-56. (See footnote 3.)

would only enable some farmers to live like gentlemen, but would not diminish the quantity of labour necessary to raise raw produce on the least productive land in cultivation.

The modern concept of rent has been extended to include the income from permanent and inseparable capital improvements of land, as well as the return from the natural qualities of land and the advantages of location. The second meaning of rent has been a broader concept that encompasses income received from durable goods. This is the aggregate lump sum earned by capital goods. All forms of land and capital, subject to lease at contract prices, yield contract rent. The concept of rent has been extended in scope to encompass a considerable part of the income obtained from artificial wealth, which is in addition to that derived solely from natural resources. C. R. Bye (75, p. 97) states that in agriculture:

...the best land, or any other land, in a given use may be marginal. For instance, if any grade or plot of wheat land will be shifted to the raising of corn with a slight decline in the price of wheat, or with a small rise in the price of corn, that land is on a margin of transference. The rent which it can command for the raising of corn is an opportunity cost of raising wheat.

Among the recent concepts of rent are the following: (1) The returns from all distributive shares of income; (2) all "unearned" incomes from whatever source they may be derived; (3) income from differential rents of land, labor, capital, and enterprise; (4) income from all scarcity returns which rests upon temporary or enduring limitations of supply. These recent developments in the theory of rent have expanded the theoretical system of distribution. Rent is everybody's business--it has both ephemeral and permanent characteristics--it is a matter of importance to all.

Literature on farm rents in the United States has been directed primarily toward an analysis and measurement of share rents at the firm level rather than from a national aggregative viewpoint. Farm rents are chiefly a function of crop yield, commodity prices, and entrepreneurial ability, rather than a function of land per se. One of the problems that arises in research on farm rents is the allocation of rents among such other factors as buildings, nonland inputs, and landlord's management. The result has been a shift in emphasis from the theoretical rent framework based primarily on land to a broader concept of rent which embraces a complex of many factors. Rent is not paid solely for the original and indestructible powers of the soil; it is paid for manifold services.

British literature dealing with farm rent is directed specifically toward analysis and measurement of cash rent, whereas United States literature is concerned primarily with share rent. Recent British contributions to the measurement of farm rents have been directed toward analysis of average cash rents per acre at the regional and national level and toward correlation of farm rent with value and farm size. Analysis of variance has been applied to statistical data. Much of their recent literature seeks to evaluate the implications and consequences of the various legislative acts pertaining to landlords and tenants. With cash rents held low in relation to farm income by such legislation, there is increasing need for legislative changes that will restore a level of rents that is more nearly in line with changing economic conditions.

Recent contributions to rent theory

(1) Keiper, J. S., Kurnow, E., Clark, C. D., and Segal, H. H. Theory and measurement of rent (94). A major contribution to rent study and analysis. Traces the origin and development of land rent theory, reappraises the conclusions of contemporary economics, and tests the current assumptions and analyses of economic rent with a present day

estimate of land rent. This is a major contribution to rent methodology in its attempt to measure land rent.

(2) Hawtrey, R. Production functions and land--A new approach (346). Discusses the role of the production function concept as applied to rent theory. The author's major contribution is a production function formula which embraces only two factors of production--labor and capital. This formula disregards land as a factor of production. The author states that "the price of a piece of land under static conditions is its rental value, its total cost-saving efficacy," p. 116.

(3) Denman, D. R. and Stewart, V. F. Farm rents (337). A significant contribution to the measurement of rents in which the authors attempt to ascertain the British national average rent per acre and to correlate rent to value and farm size by applying analysis of variance to statistical data.

(4) Keirstead, B. S. Capital, interest and profits (361). Examines the theory of capital and delineates profit, interest, and rent. Presents an eclectic theory of interest and rent. Refutes the marginal productivity theory of distribution and the time-preference theory of interest.

(5) Ward, J. T. Farm rents and tenure (307). Examines the past and present farm rent situation in Great Britain by explaining the tripartite system of land tenure existing among the landowner, farmer, and farm laborer.

(6) Wibberly, G. P. Agriculture and urban growth--A study of the competition for rural land (351). Analyzes farm rents in England from the point of view of net income per farm. This is a contribution to the firm theory of rent.

(7) Samuelson, P. A. A modern treatment of the Ricardian economy (179, 180). Attempts to relate systematically input-output methodology to Ricardian analyses. This study represents a possible breakthrough in present rent theory methodology.

(8) Denman, D. R., Switzer, J. F. Q., and Sawyer, O. H. M. Bibliography of rural land economy and landownership, 1900-1957 (287). A major contribution to rent and land tenure study. The authors present a comprehensive compilation of relevant material.

(9) El Tonbary, A. A. Rent as a criterion of land quality (358). Views rent as a theoretical rationale used to measure differences in the productive qualities of land.

(10) Tostlebe, A. S. Capital in agriculture (63). Develops measures of the value and growth of farm assets since 1870. Relates the growth of farm assets to the farm labor force and agricultural output.

(11) Henderson, J. P. A reinterpretation of Ricardo's theory of value (146). Attempts to provide a systematic explanation of Ricardo's labor theory of value based upon the premise that the rate of profit is dependent upon the facility of producing wage goods, which is in turn contingent upon the fact that changes in the prices of all goods cannot overcome the adverse effects of a rise in wages.

(12) Heurlin, L. O. The economic theory of agricultural production (360). A scholarly contribution to the theory of rent. Systematizes the treatment of land as an economic resource and attempts to build a theory of agricultural production around a "two-dimensional quality of land." These two dimensions are inherent fertility and exploitability.

(13) Bye, C. R. Developments and issues in the theory of rent (75). A historical study in which the author examines the significant developments which have appeared within the field of rent theory during the last half century.

General

1. ALLEN, C. L., BUCHANAN, J. M., AND COLBERG, M. R. Prices, income and public policy. Ed. 2. New York, McGraw-Hill, 1959. 501 p.

Partial contents: Ch. 4, Competitive price; Ch. 11, Rent, capital, and interest; Ch. 23, Supply and short-run cost; Ch. 24, Long-run supply and competitive price; Ch. 25, The competitive model; Ch. 28, Location of economic activity.

2. ANDERSON, B. M. The weakest point in the farmer's financial policy. Chase Econ. 4(5): 3-32. Oct. 23, 1924.

"The value of the land is the 'present worth' of the future income from the land, or more precisely the capital value of the land is the sum of the series of the 'present worths' of the future income installments. The first $100, payable at the end of a year, bulks large in this computation, the twentieth, payable twenty years hence, is much less important and the 999th $100 is so remote in time that its omission could scarcely be noticed in the formula, while any income to be derived when the lease expires is too remote to enter into the calculation except as a mathematical infinitesimal," p. 25.

3. BABCOCK, F. M. Real estate valuation--A statement of the appraisal problem and a discussion of the principles involved in the development of valuation methods. Ann Arbor, Mich. U. Press, 1932. 80 p. (Mich. Business Studies, Vol. 4, No. 1).

Outlines valuation principles and treats the derivation of the principles rather than their use in connection with practical valuation. Attempts to present certain fundamental lines of thought that deal specifically with the methodology of valuation.

"The theoretical method of valuation commences by studying the future utility of the property, that is, by forecasting the returns to be expected from the entire productive unit. The method then proceeds, by the process of discounting, to a calculation of the present value of the net returns. Rates are determined in the market," p. 34.

4. BARLOWE, R. Land resource economics. Englewood Cliffs, N. J., Prentice-Hall, 1958. 585 p.

Partial contents: Ch. 5, Input-output relationships affecting land use; Ch. 6, Economic returns to land resources; Ch. 7, Property values and the real estate market; Ch. 14, Leasing arrangements.

5. BLACK, J. D. Division of income between landlord and tenant. Proc. Amer. Assoc. Agr. Leg. B. 6: 136-151. Apr. 1920.

Presents the proposition that the landlord and tenant should share in the products of the farm in the proportion that they share in the cost of production.

The author suggests that the tenant and landlord agree in advance as to a value to be placed on rent, wages of family labor, wages of labor and management of the tenant, wages of the landlord's management, value of living obtained from the farm, and interest on working capital and depreciation.

6. BLACK J. D., ed. Research in farm real estate values. Soc. Sci. Res. Council B. 19, 78 p. June 1933.

Discusses methodology in terms of specific research projects that have been undertaken or might be undertaken in rent and farmland values. Partial contents: Group B, projects relating primarily to the collection of data on farm real estate prices and related items; Group C, projects primarily concerned with describing and explaining the movement of farm real estate prices and related items in the past; Group D, projects relating primarily to geographical variations in values; Group F, projects relating primarily to appraisal policies and practice.

Presents a basis for intelligent decisions as to procedures and methods that lend to valid and usable results. Illustrates devices in technique and details of procedure. Outlines various aspects of rent and farm real estate values instead of analyzing methods and procedures to be used.

7. BOULDING, K. E. Economic analysis. Ed. 2, New York, Harper, 1948. 884 p.

Partial contents: Ch. 2, Price determination in perfectly competitive markets; Ch. 12, Some further applications--Tax falls on economic rent; Mobility and elasticity; Ch. 24, The construction of cost curves--Rent in the individual enterprise; Changes in the price of variable inputs, the demand for input; Marginal productivity analysis; Ch. 25, The elementary theory of monopoly--Rent under monopoly; Ch. 35, Time, production, and valuation--Rent in an investment; The theory of valuation.

8. BROWN, H. G. Economic rent: In what sense a surplus? Amer. Econ. Rev. 31(4): 833-835. Dec. 1941.

Presents the following questions concerning economic rent:

"Is the expression 'economic rent' now to do duty for every sense in which we may say that there is a 'surplus'? If so, what can the economist who believes the distinction between income from land ownership and other income to be important do about the matter? Will he, for long, be permitted the use of any term to express his meaning?" p. 835.

9. BROWN, H. G. Land rent as a function of population growth. J. Polit. Econ. 34(3): 274-288. June 1926.

Analyzes the problem of the relation of land rent to population and the impact of this relationship on the justification of special taxation on land values. States that rent results from lowering the marginal productivity of labor or capital and is accompanied by a reduced per capita output.

"The rent of land is a consequence of increasing population operating in a world handicapped by a law of diminishing returns. It is supposed that the better land tends to be used by preference as population increases, the greater crowding of this land lowers the marginal product of labor--or of labor and capital--to such a point that it becomes worthwhile to bring into use poorer land. Thereupon the better land, since there is not enough to go around except by undesirable crowding, comes to have a scarcity value, i.e., comes to yield rent," p. 274.

10. BROWN, H. G. Taxing rental versus taxing salable value of land. J. Polit. Econ. 36(1): 164-168. Feb. 1928.

Discusses whether a tax on the rental value of land is the exact equivalent of a tax on the salable value, and, if not, whether there is any significant difference in effect between such taxes.

The author concludes that: "To tax salable value instead of rental value cannot discourage the use of land which is expected to yield higher rent in the future and which is therefore assessable at a higher value than its present rental yield would justify. It cannot so discourage the use of such land for, first, it discourages speculation in the land (holding it unused) even more than would a tax on rental value; second, it cannot enable owners to charge more rent to tenants; and, third, prospective purchasers can buy it at a sufficiently lower price, because of the capitalization of the higher tax, to offset the burden of such increased tax," p. 167.

11. BULLOCK, C. J. The variation of productive forces. Q. J. Econ. 16(4): 473-513. Aug. 1902.

Sets forth hypotheses or models outlining the principles of the variation of productive forces: land, labor, and capital.

The three problems discussed concern a given area of land and the effect of the law of diminishing returns, a single farm firm and the law of economy in organization, and the entire industry under static and/or dynamic conditions that entail an examination of the laws of increasing or decreasing cost.

12. BYE, R. T. Principles of economics. New York, Knopf, 1924. 508 p.

Describes rent as a surplus that may be measured from the margins, that is, a differential which is secured by producers who have advantages over the marginal producer. This differential is called a producers' surplus. The author applies the concept of rent as a surplus to land rent.

"The rent yielded by a piece of land is equal to the value of the surplus product yielded by the labor and instrumental capital applied to that land over the yield of an equal amount of labor and instrumental capital applied at the intensive or extensive margins of cultivation," p. 404.

13. CARLTON, F. T. Price and rent. Q. J. Econ. 26(3): 523-527. May 1912.

Defines farm rent as an income or return received due to the existence and control of some economic privilege or desirable market opportunity which is not susceptible of depreciation in the sense of physical wear and tear or deterioration. According to this definition, land rent is only one form of rent.

The author states: "Rents are due to the ownership of market opportunities of various sorts, to the ownership of some unique and special privilege. Rent is never a return received because of the use of tangible capital which is subject to physical wear and tear and deterioration; such a return is interest," p. 523.

14. CASE, H. C. M., AND CUNNINGHAM, J. B. Better farm leases. Ill. U. Dept. Agr. Econ., Ill. Farm Econ. 144: 486-503. May 1947.

By and large the amount of farm rent paid, whether a share of the income or cash rent, depends upon the productivity of the land and the desirability of the farm.

"Ninety percent of all share-rented farms in the northern two-thirds of the State (Illinois) pay half of the grain crop as rent. One-third of the grain crop is the usual rent given in the southern part of the State although hay is divided on a 50-50 basis. Between the two areas there is considerable share rent paid on the basis of two-fifths of the grain crops. Even in the area where half of the grain crop is normally given as rent, there are a considerable number of farms where

the landlord receives only two-fifths of the small grain including soybeans as rent, but frequently the tenant pays the cost of seed and harvesting when the smaller rental is paid," p. 493.

15. CHAMBERS, C. R. Agricultural land values and income. Natl. Real Estate J. 24(16): 19-21. July 30, 1923.

On present valuations, incomes are less than the mortgage rate of interest and at the present rate of income further declines may be looked for in land valuation. Includes table of land values, cash rents, and related factors, and a map showing "Ratio of cash rent to farm land value, Jan. 1, 1920."

16. CHAMBERS, C. R. Relation of farm land income to farm land value. Amer. Econ. Rev. 14(4): 673-698. Dec. 1924.

Analyzes the relation of market rents to land value, the factors determining relation of land income to current value, the long-time tendency in the ratio of land income to land value, the rate of capitalization, and the actual rate of return on investments in farm lands. Tables and charts are included.

17. CHRYST, W. E., AND TIMMONS, J. F. Adjusting farm rents to changes in prices, costs and production. Iowa Agr. Expt. Sta. Spec. Rpt. 9, 44 p. Apr. 1955.

The objectives of this study are threefold: (1) To analyze the division of net income between landlord and tenant over a period of years in order to determine the extent to which and the rapidity with which it reflects cost, price, and production changes; (2) to determine possible reasons for rent inflexibilities and to analyze these reasons in terms of effects upon landlord-tenant relations; and (3) to develop and analyze several rent adjustment alternatives in terms of their weaknesses and strengths.

18. CLARK, J. B. The distribution of wealth. New York, Macmillan, 1920. 445 p.

Discusses the concept of no-rent or non-interest instruments of capital.

"Working near to the man who tills a waste piece of land in an independent way, there may be another man who works on similar land for the owner of it, and gets as wages the value of what he raises. This man is as free from a master's exactions as is the squatter.... There are mills and furnaces so antiquated, so nearly worn out or so badly located their owners get nothing from them; and yet they run, so long as superintendents can earn their salaries and ordinary workers their natural wages. There are machines that have outlived their usefulness to their owners, but still do their work and give the entire product that they help to create to the men who operate them. There are railroads and steamship lines that pay operating expenses only. There are stocks of merchandise so full of remnants and unstylish goods that it barely pays salesmen to handle them. Everywhere, in indefinite variety and extent, are no-rent instruments; and, if labor uses them, it gets the entire product of the operation. Let the general rate of wages rise, and many of these instruments will be thrown out of use. Let the rate then fall, and the utilizing of them will be resumed. Let a migration relieve the pressure of population in one country, and overcrowd another; and in the former country no-rent instruments of every sort will be abandoned, while the latter such as are idle will be put into active use. That no-rent instruments are not few in number is made clear by the fact that every tool, machine, building, vehicle or other auxiliary of labor that wears out by use must, in the course of its deterioration, necessarily reach a point at which it yields no net gain to its owner," p. 95.

19. CLARKE, S. B. The single tax and the impot unique. Q. J. Econ. 5(3): 357-359. Apr. 1891.

"Mr. George's single tax... is an ad valorem tax. It would not touch any land, however large the net product might be, unless and until such land (apart from improvements) had an exchange value.... Its central idea, from the economic standpoint, is economic rent, which was not discovered and made generally known till long after the time of the Physiocrats," p. 359.

20. CONKLIN, H. A critical discussion of the net rent approach in evaluation of competing land uses. [Unpublished BAE Staff Seminar Paper.] U. S. Bur. Agr. Econ., April 25, 1941. 5 p.

Discusses the role that land rent or land values can play in a process of land classification.

21. ELY, R. T., AND MOREHOUSE, E. W. Elements of land economics. New York, Macmillan, 1924. 363 p.

"The income of land is the basis for the determination of its capital value.... Capitalization of land income is done by getting the present worth of all the expected future incomes discounted at the current rate of interest. Market values of land often differ from the figures obtained by capitalizing the income. One reason for this in new and rapidly developing countries is because a higher present valuation is put on the land, owing to an expected future increment in value. Another reason is that land income is not constant but changing; its rate and amount of change are affected by the economic forces of custom, competition, monopoly, and public authority. Forecasting of land values for long periods of time must concern itself with those factors which increase or decrease the supply of or the demand for land. The growth of population is the chief factor in creating a demand for the services of land.... The purchasing power of the people and their standard of living also greatly affect the demand for land. The supply of land in general is not less than the demand for it, but there is scarcity in the supply of particular grades of land in relation to the demand for those grades of land. This scarcity is due (1) to gradations in fertility and in advantage of location, (2) to the immobility of the land. Area, however, is not a measure of the economic supply of land, since with the same area the economic supply of the services of land can be increased by improving the efficiency of utilization. Other factors also influence the value of land, such as the quantity and efficiency of labor, rates of wages, taxes, and public improvements," p. 267-268.

22. ELY, R. T., AND OTHERS. Outlines of economics. Ed. 5. New York, Macmillan, 1930. 868 p.
T. S. Adams, M. C. Lorenz, and A. A. Young, joint authors.

Describes economic rent in the context of a differential surplus--an unearned increment in excess of what may be required to bring forth a desired effect or return. The author states that income from land is a return which must be earned just as the return from any other factor of production must be earned.

23. FETTER, F. A. Economics. New York, Century, 1915-16. 2 v.

States that land differs in no essentials from instruments made by man; that it is not fixed in supply; and that it is subject to waste and deterioration like any other part of the apparatus of production. There is no such thing as the "original and indestructible powers of the soil" which Ricardo mentions in the opening paragraphs of his chapter on rent; and for this reason, among others, there is need for radical reconstruction of the entire theory of rent and interest.

24. FRENCH, B. L. Farm rental practices and problems--North central states; methodological report of study. U. S. Agr. Res. Serv. ARS 43-8, 53 p. March 1955.

Objectives of this study were: (1) To ascertain existing rental practices by type of lease--cash lease, livestock-share lease, labor-share lease, and special or other lease; (2) to provide adjustments in leasing practices to facilitate removal of limitations on production; (3) to indicate problems existing in farm rental arrangements which prevent achievement of maximum agricultural production; and (4) to delimit geographic areas in which rental practices are relatively homogeneous.

25. GIUSEPPE, M. Principles of appraisal. Ames, Iowa State Col. Press, 1953. 254 p.

Partial contents: Ch. 2, The method of appraisal; Ch. 3, The various economic aspects of an object of wealth; Ch. 5, How to determine rental value; Ch 6, Ascertainment of the rental value of lands planted to fruit trees and bushes; Ch. 7, The rate of capitalization; Ch. 9, Farm real estate as an investment.

26. GRAY, L. C., AND OTHERS. Farm ownership and tenancy. U.S.D.A. Ybk. Agr. 1923: 507-600.
C. L. Stewart, H. A. Turner, J. T. Sanders, and W. J. Spillman, joint authors.

Discusses the extent and relative importance of the different classes of land tenure in the United States. Traces briefly the past trends with reference to land ownership and tenancy: Geographic distribution of the various classes of tenure, causes of the development of tenant farming, relation of tenancy to the valuation of farm real estate, ratio of cash rent to farm estate value, and the relation of types of tenure to efficiency in farm operation.

27. HEADY, E. O. Economics of agricultural production and resource use. New York, Prentice-Hall, 1952. 850 p.

Evaluates agricultural production and resource use problems from the standpoint of both the individual farmer and society.

Partial contents: Ch. 13, Time, factor rewards, and resource valuation, p. 403-04; Ch. 14, Firm-household interrelationships and efficiency within the farm, p. 413-14; Ch. 18, Tractability, capital use, and farm size, p. 556-57; Ch. 19, Factor pricing and ownership under uncertainty, p. 576-77, p. 579-80; Ch. 20, Leasing and tenure systems and farming efficiency; and Ch. 21, Levels and flexibility of rent and tenure systems.

28. HEADY, E. O. Fundamentals of resource ownership policy. Land Econ. 29(1): 44-56. Feb. 1953.

Sets forth in this paper an analysis in production economics. Main interest is centered around the idea of outlining a framework of analysis which is relevant to the problem of allocating income among the factors of production in agriculture.

"This analysis sticks closely to purely fundamental economics and touches only lightly upon sociological and related aspects of farm ownership. We are aware, of course, that sociological, legal and economic aspects are all involved in ownership," p. 44.

29. HEADY, E. O., DEAN, G. W., AND EGBERT, A. C. Analysis of the efficiencies of alternative farm leasing arrangments. Iowa Agr. Expt. Sta. Res. B. 445, 25 p. Nov. 1956.

Investigates various types of leases for leasing efficiency under specific farm resource situations. An efficient rental arrangement can be recognized as one under which the same farm plan is optimum for both the landlord and tenant and for the farm as a whole.

The analysis of this study is directed toward answering some of the following questions: (1) Do "typical" share leases lead to allocative efficiency? (2) What type of rental arrangement allows an efficient use of resources under various resource situations for tenants and landlords? (3) What adjustments in rental terms are needed for the common leases to bring about leasing efficiency? (4) Does the optimum rental arrangement depend on resources controlled by each part, that is, the tenant and landlord? (5) Does substitution of a cash lease or a livestock-share lease for a crop-share lease automatically lead to an optimum allocative arrangement?

30. HOLMES, G. K. Local conditions as affecting farm values, 1900-1905. U. S. D. A. Bur. Statis. B. 44, 88 p. 1906.

Reviews causes that affect farm land values and net returns to land in various geographic regions of the U. S. Presents a detailed analysis describing the impact of local conditions that affect land values.

31. HORTON, D. C. Patterns of farm financial structure. Princeton, N. J., Princeton U. Press, 1957. 185 p.

Shows how the physical and economic features of farms are related to the way in which farms are financed. States that there is a tendency for different supplies of farm funds to focus on certain types of farms, whereas Federal agencies serve a cross-section of agriculture.

Table 1. Operator, landlord, and creditor interests in farm real estate, 1940, and deflation in value of farm real estate assets, 1930-1940, for states grouped by region.

Table 4. Economic and financial characteristics: Averages for 108 county sample and for the United States.

32. HURLBURT, V. L. Farm rental prices and problems in the Midwest. Iowa Agr. Expt. Sta. Res. B. 416: 78-120. Oct. 1954.

Analyzes farm rental practices from the following aspects: (1) An appraisal of their economic significance; (2) the nature of the economic problems involved in renting farm land; and (3) suggestions as to some of the adjustments required to solve the problems of renting.

Recognizes farm tenancy as a method of obtaining the use of farm lands, buildings, and equipment by operators who otherwise might not be able to do so and as a method by which farm owners obtain the services of operators.

33. HURLBURT, V. L. Technology and farmland values. Amer. Soc. Farm Mgrs. & Rur. Appraisers J. 24(2): 75-83. Oct. 1960.

Describes the impact of changes in inputs in agriculture on output. This is a problem of allocating returns to factors, within a particular production period, and between periods. A change of one or more inputs in a combination of factors results in a change in output within the period of the input, and possibly over a

number of years. Attempts to find the answer to the question of what part of the additional (or the smaller) output can be defined as a change in the contribution of land to the value of production.

34. ISE, J. Economics. New York, Harper, 1946. 731 p.

Partial contents: Ch. 2, The laws of production; Ch. 3, Land; Ch. 30, Rent; Ch. 31, Some land problems.

35. KELSEY, M. P. Economic effects of field renting on resource use on central Indiana farms. Diss. Abs. 20(5): 1615. 1959.
Dissertation abstract (Ph. D.) Purdue University, 1959. 165 p.

The objectives of this study are to determine (1) what differences exist between the operation of owned tracts and field-rented tracts of the same farm unit; (2) what differences exist between the operation of field-rented tracts and full-rented farm units; and (3) what provisions of leases cause operators to farm field-rented tracts in a manner different from the owned tracts or full-rented farms.

The hypotheses were tested by comparing resource inputs and outputs on owned and rented tracts of the part-owner farm and field-rented tracts and full-rented farms. Several analyses of variance and other tests of comparison were employed to determine if the amount of land owned or rented or several other factors had any relation to the inputs and outputs of the rented tracts.

Major differences in the use of resources under presently used leasing arrangements arise from tenure oriented factors and not lease oriented factors.

36. KELSO, M. M. A philosophical framework for land tenure theory. Madison, Wis., 1933. 129 p.
Thesis (Ph. D.) University of Wisconsin, 1933.

Outlines and evaluates the problems and forces which must be considered in any analysis of land tenure and farm rental patterns: (1) The external, objective, environmental factors; (2) the cultural background of the individuals whose behavior constitutes the pattern; (3) the personal-social conditionings to which the individuals have been subjected; and (4) the original nature or heredity of the persons concerned.

States that: "Contemporary land tenure theory and the research analyses out of which it grows are deficient in three regards: (1) The implicit mechanistic philosophy which underlies the theory; (2) the inconclusiveness of the manner by which research workers have attempted to reformulate their research setup in order to correct for this mechanistic premise; and (3) the 'static' approach to the problem with its implication of one-way causation and its consequent confusion as to the relationships of cause and effect," p. 2. An extensive bibliography appears in the Appendix.

37. LEFTWICH, R. H. The price system and resource allocation. New York, Rinehart, 1955. 372 p.

Partial contents: Ch. 9, Pricing and output under price competition; Ch. 13, Pricing and employment of resources; Pure competition; Ch. 15, Resource allocation; Ch. 16, Product distribution; Ch. 17, Equilibrium.

38. LINDSEY, A. H. The nature and causes of the growth of Iowa land values. Ames, Iowa State Col., 1929. 232 p.
Thesis (Ph. D.) Iowa State College of Agric. and Mech. Arts. 1929.

The problem is stated under four hypotheses: (1) If proper utilization of the land were made, land value per acre would increase; (2) if a better grade of land is brought into cultivation than that cultivated in the past, the price of the better land will increase and the poorer decrease; (3) in sections where full economic development is reached, the trend of land prices will tend to approximate the trend of agricultural product prices more closely than land prices approximate the trend of product prices in a less well developed area; (4) Iowa land having reached the stage of full economic development, its price will tend to follow the price of products produced thereon, or the net rental income received from the sale of the annual service of the land.

39. MISHAN, E. J. Rent as a measure of welfare change. Amer. Econ. Rev. 49(3): 386-395. June 1959.

"The definitions of economic rent in current use fall easily into two categories: (1) A payment in excess of that necessary to maintain a resource in its current occupation; and (2) the difference between the current earnings of a resource and its transfer earnings--the latter term signifying its earnings in the next best alternative use," p. 386.

"Little further reflection is required to recognize that consumer's surplus and economic rent are both measures of the change in the individual's welfare when the set of prices facing him are changed or the constraints imposed on him are altered. Any distinction between them is one of convenience only: consumer's surpluses have reference to demand prices, economic rent to supply prices. Furthermore, no consideration of logic precludes our measuring the individual's gain from, say, a simultaneous fall in the price of a good bought and a rise in the price of a service provided," p. 394.

In conclusion, the author states that, in general, if any one, several, or even all prices change for the individual, some demand prices and some supply prices rising, others falling, the resulting change in the individual's welfare can, in principle, be measured by either of the definitions noted above.

40. MISSOURI AGRICULTURAL EXPERIMENT STATION. Land valuation. Mo. Agr. Expt. Sta. B. 255, 79 p. Aug. 1927.

A series of papers dealing with land valuation, net returns to land, allocation of farm resources, the correlation of land productivity to value, the relation of soil type to land values, and types of rental payments in relation to land values.

41. MURRAY, W. G., ENGLEHORN, A. J., AND GRIFFIN, R. A. Yield tests and land valuation. Iowa Agr. Expt. Sta. Res. B. 252: 53-76. Mar. 1939.

Illustrates that the collection of actual yield data according to depth, slope and soil type presents a basis that will provide for better land use, improved returns from land, and land appraisal.

42. NORTH CENTRAL LAND TENURE RESEARCH COMMITTEE. The farm real estate market--Proceedings of a seminar, July 23, 1959. Minn. U. Inst. Agr., Dept. Agr. Econ. Rpt. 516, 60 p. Aug. 1959.

Answers the following questions: What is the demand and what is the supply of land? How does price affect the quantity offered or taken? What is land?

Is land nonreproducible or indestructible? How well does the farm real estate market function? What affects the price of land? How do you measure the returns to land--the productivity of land? What is the relationship between earnings and value of land?

43. PECK, M. A plan for adjusting cash rent to changes in the prices of farm products. Iowa Agr. Expt. Sta. B. 295, 27 p. Oct. 1932.

Describes the sliding-scale cash rent plan designed to secure for landlords the benefits of any rise in the prices of farm products that may occur and, at the same time, assure tenants that the rents they may be required to pay will not be far out of line with the market value of their year's efforts.

This plan was intended to make the relationship between landlord and tenant more harmonious than it would be under a system of fixed rents.

44. PECK, M. The trend of land values and cash rentals in Iowa, 1912-1934. (Prelim.) Ames, Iowa Agr. Expt. Sta., 37 p. May 1934.

The purposes of this bulletin are: (1) To show the trends of cash rentals and land values in Iowa between 1912-1934; and (2) to describe a statistical procedure devised for deriving reliable estimates of cash rentals and land values for each county in Iowa.

45. PINE, W. H. Measuring the productivity of land. J. Farm Econ. 30(4): 777-783. Nov. 1948.

Estimates net rent from land by means of a farm budget approach in which physical inputs and outputs are extrapolated. By using market prices the net return to land is obtained, and the present value of land is a sum of the discounted future net incomes.

46. POWERS, W. L. Soil fertility in relation to productive land value. Oreg. Agr. Expt. Sta. C. 113, 9 p. Oct. 1935.

Investigates the impact of irrigation, crop rotation and fertilizers on land values and net rent.

47. REGAN, M. W., AND CLARENBACH, F. A. Postwar farm land values? J. Land & Public Utility Econ. 21(3): 236-242. Aug. 1945.

Forecasts postwar land values, farm income, and net rent under various combinations of assumptions. Utilizes 27 different hypotheses to obtain indexes of land values for 1950. Net rents were capitalized at the 1912-45 average ratio of net rent to value in order to obtain total values of farm real estate.

48. RENNE, R. R. Land Economics--Principles, problems, and policies in utilizing land resources. Ed. 2. New York, Harper, 1958. 599 p.

Analyzes the major land use problems of tenure, tenancy, land rent, and land values. Partial contents: Ch. 10, Land rent and income distribution: The nature of rent; capitalized rent and income distribution; Ch. 11, Land values and appraisal: Determination of the value of land; factors influencing land values; trends in land values; land appraisal.

49. SAMUELSON, P. A. Economics--An introductory analysis. New York, McGraw-Hill, 1958. 810 p.

Partial contents: Ch. 21, Supply and demand as applied to agriculture; Ch. 26, Theory of production and marginal products; Ch. 27, Pricing of factors of production: Rents of land and other resources; Ch. 30, Profits and incentives.

50. SAMUELSON, P. A., BISHOP, R. L., AND COLEMAN, J. R., eds. Readings in economics. Ed. 3. New York, McGraw-Hill, 1958. 474 p.

Partial contents: Ch. 30, On rent; Ch. 31, Progress and poverty.

51. SANDWELL, B. K. Rent. Amer. Econ. Rev. 18(4): 702-703. Dec. 1928.

"The economic rent of land is its net productivity under the crop which will give the largest net return. A piece of land which is marginal between wheat and barley, with wheat at twice the price of barley, will produce, let us say, 100 bushels of wheat net; by hypothesis, therefore, it will also produce 200 bushels of barley; both have the same value, and both are its economic rent. But let wheat rise to 2.01 times the value of barley, and the economic rent of this land is still 100 bushels of wheat but is now 201 bushels of barley; since the land will not produce 201 bushels of barley, that crop ceases to be of any interest. Somewhere else there may (or may not) be a piece of land which can alternatively produce 100 bushels of wheat or 201 bushels of barley; this was obviously barley land in the first period, and is non-marginal between wheat and barley," p. 702.

52. SCHNITTKER, J. A. Application of input-output analysis to a regional model stressing agriculture. Ames, Iowa State Col. 1956. 168 p.
Thesis (Ph. D.) Iowa State College, 1956.

Investigates problems associated with construction of an input-output model for agriculture. Objectives were: (1) To formulate a structural model of the economy adaptable to the mathematical techniques of the Leontief System, and stressing regional agricultural production; (2) to investigate problems inherent in collecting data for input-output models; (3) to provide empirical estimates of static input-output models for one or more time periods including estimates of interdependence between agricultural regions.

53. SCOFIELD, W. H. How do you put a value on land? U.S.D.A. Ybk. Agr. 1958; Land: 183-189.

Explores the bases of determining agricultural land values by examining the following factors: Expected income, amenity factors, prices, the land market, past sales, improvements, and mineral rights.

54. SCOFIELD, W. H., AND CASE, H. C. M. Farm leasing practices in Illinois. Ill. Agr. Expt. Sta., 25 p. Oct. 1942.

Describes variations in rental practices followed in the different lease-type areas of Illinois. Share and cash rental rates are discussed, as well as the customary manner in which landlords and tenants divide expenses for seed and harvesting. Data on rental shares were obtained from 1938 work sheets of 112,000 farmers participating in the Agricultural Conservation Program.

55. SCOFIELD, W. H., AND DAVIDSON, R. D. The farm real estate situation, 1947-48 and 1948-49. U. S. Bur. Agr. Econ. U.S.D.A. C. 823, 40 p. Sept. 1949.

Calculates farm rents for both cash-rented and share-rented lands. "Neither gross nor net farm income is satisfactory for analyzing income-value relationships as both include returns to operating capital and to management in addition to returns to land alone. Net rents paid for the use of rented lands more nearly approximate what is needed to understand trends in land values.... In those areas in which cash renting is common, net cash rents provide a measure of net land returns that is easily calculated and understood. Estimates of net rents on leased lands have been used as a basis for computing a series to show net land earnings for all lands," p. 31.

56. SHERMAN, C. B. Economic basis of land values. U. S. Banker 4(1): 25-27. Jan. 1930.

Author considers how, at any given time, net current incomes, future expected incomes, and the rate of capitalization are put together to determine land value. Analyzes the economic basis of value and its relation to net rent.

57. STAUBER, B. R. Capitalization of farm realty income as a basis of valuation. In Research in farm real estate values. John D. Black, ed. Soc. Sci. Res. Council B. 19: 73-78. June 1933.

Examines the capitalization formula and the relationship between net farm income and farm real estate values. Includes the problem of ascertaining the proper rate or rates of interest, and an examination of each of the factors in the capitalization formula.

58. STEWART, C. L. Cash tenancy in the United States. Internatl. Rev. Agr. Econ. (n. s.) 3(2): 165-211. Apr.-June 1925.

Analyzes the relationship of farm rents to property valuations, rent-valuation ratios on cash and share tenant basis, limitations of cash rent-valuation ratios, net rents in relation to gross rents, historical trends in cash-rent-valuation ratios, and geographic variations in cash rent-valuation ratios in relation to interest rates.

59. STEWART, C. L. Tenancy in relation to valuations of farm land, size of farm and color of farmers, 1920. U. S. Bur. Agr. Econ., 9 p. Oct. 1924.

Classifies United States into geographic divisions in which tenant farming is prevalent apart from others in which tenant farming is less characteristic. Shows correlation between high percentages of farms rented and high land prices, and small percentages of farms rented and low land prices. Illustrates geographic relationships between tenancy and economic conditions in agriculture. Tables appear in the appendix.

60. TAUSSIG, F. W. Principles of economics. New York, Macmillan, 1921. Vol. 2. 576 p.

Evaluates the theoretical question of whether land rent is earned or unearned. States that it is a question of definition and from a pragmatic point of view it is one of segregation. If the term rent is applied only to the net income from the land--the amount in excess of all labor, capital, and management costs incurred by the rent receiver in developing and utilizing the land--the issue is settled; land rent, as an abstract concept, does not represent human costs, and, in that sense, cannot qualify as earned income.

"Rent is a surplus over and above what is necessary to induce investment, an unearned increment, tending to rise as growing population leads to greater demands on the soil. . . . Rent does not arise spontaneously. It is not earmarked as a separate return. Its emergence is inextricably intermixed with the complex processes of tilling the soil and of maintaining its fertility," p. 80.

61. TAYLOR, C. C., AND OTHERS. Suggested procedures for the assessment of farm real estate [of rural property] in South Carolina. S. C. Agr. Expt. Sta. AE 188, 20 p. Jan. 1960.
G. W. Aull, C. E. Woodall, and W. H. Faver, joint authors.

Discusses the feasibility of the comparison and capitalization methods of land valuation. In the comparison method the assessor evaluates properties of unknown value with similar properties of known value. The capitalization method is based

on the theory that the market value of a property should be equal to the present value of its future income. Implementing this procedure involves three basic actions: (1) Computing gross value of production or cropland; (2) estimating returns to land; and (3) selecting the proper capitalization rate.

62. TIMMONS, J. F. Improving farm rental arrangements in Iowa. Iowa Agr. Expt. Sta. B. 393, 139 p. Jan. 1953.

Purposes of this study are: (1) To discover and develop ideas and information which would be helpful in remedying rental problems; (2) to provide a better understanding of the legal framework within which rental arrangements are worked out; and (3) to develop some guidelines for determining the kind and amount of rent to be paid.

63. TOSTLEBE, A. S. Capital in agriculture. Princeton, N. J., Princeton U. Press, 1957. 232 p.

Measures the value and growth of farm assets since 1870. Relates the growth of farm assets to farm labor force and agricultural output.

Appendix A, Methods of computing constant-price values of farm real estate; Appendix C, Methods of estimating the value of farm implements and machinery, 1935 and 1950; Appendix G, Value of physical farm assets; Appendix H, Methods used in estimating gross farm income in constant prices by regions for precensus years, 1869-1949.

64. TUCKER, G. M. The value of land and its assessment. Amer. J. Econ. & Sociol. 12(4): 373-378. July 1953.

"Rental price and sales price are mutually inter-related, but sometimes there is little direct connection between the rent which a piece of land commands and the price asked at sale. One might say that land which will rent for $100 a year is worth $2000 if money is worth 5 percent, but this is not always a correct assumption.... If there is expectation of growth and progress no landlord will give a long-term lease on the basis of today's rents. Generally the rent will be based as much on future expectations as on present values, or provision will be made for periodic adjustment in rent to conform to changed conditions," p. 373.

65. TURNER, H. A. The ownership of tenant farms in the North Central States. U.S.D.A. B. 1433, 40 p. Sept. 1926.

Attempts to answer the following questions: To what extent is land ownership concentrated and has the degree of concentration been increasing or decreasing? Where do the landlords live? Are they sufficiently near their farms to be able to give them their personal interest and attention, or are they distant absentees? What are the personal characteristics of these landlords? How old are they? How are they occupied? What previous farming experience have they had? To what extent are they related by blood or marriage to their tenants? How did they acquire their farms? To what extent do they contribute personal supervision and advice? To what extent, in the opinion of the landlords, are the rented farms decreasing in fertility?

66. TURNER, H. A. The ownership of tenant farms in the United States. U.S.D.A. B. 1432, 48 p. Sept. 1926.

This study of ownership of rented farms is based on conditions in 1920 in 184 selected counties where tenancy was important.

"The degree of concentration in the ownership of rented farms was similar in 1920 to that existing in 1900. In 1900 the rented farms of the country were

owned by landlords whose holdings averaged 1.54 rented farms, representing 147 rented acres for each owner. In 1920 the ownership of 256,175 rented farms in selected parts of the country was in the hands of landlords who had an average of 1.65 of these rented farms each, or an average of 169 rented acres each," p. 46.

"This study attempts to answer the following: Who owns the rented farms? What part of them is in the possession of the largest holders? To what extent are owners of rented farm property distant absentees? How did present owners acquire their land? What are their occupations, their ages, their farm experience? To what extent are farm tenants related by blood or marriage to farm landlords?" p. 2.

67. U. S. BUR. OF AGRICULTURAL ECONOMICS. Long-range price factors in farm land policy. Washington, 58 p. May 1951.

Tests projected prices on net farm income and farm land value appraisals. Three major types of analysis were undertaken: (1) Projecting the relation of land values to net rents with rents based on the projected prices; (2) projecting the net income of selected farms representative of selected types of farming; and (3) selecting nearly 300 farm land appraisal reports for recalculation on the basis of the projected prices.

68. WEHRWEIN, G. S. Farm land values and farm income. Natl. Assoc. Real Estate Bds. Annu. 1930: 705-715.

Discusses the mathematical relationship between land earnings, net income, land value, the reasons for land being valued at twenty times the rent, and the theory and method of capitalization.

69. WENDT, C. L. Dr. C. L. Wendt's diversified farm rental plan, or the 50-50 plan. [Canton, S. Dak., 1926.] 46 p.

A series of articles concerning farm rents, rental problems, and landlord-tenant relationships. Author uses the question-answer technique between the tenant and landlord as a method of exposition.

"The renting of land cannot remain as it has been, for modern incomes are required, and they cannot be made by antiquated methods....In renting land the first consideration should be the farm. But renting land has been but a process of bidding it off for one year's use to the highest bidder. This man must bid high, for he has considerable competition. The condition of the farm's fertility after the year is over is largely lost track of, when in reality, that is the most important point to be considered," p. 31.

70. WIECKING, E. H. Farm real estate values and farm income. Amer. Acad. Polit. & Soc. Sci. Ann. 148 (237): 233-243. Mar. 1930.

Evaluates the usefulness of the capitalization formula in arriving at land values. Reviews trends in net farm incomes and farm real estate values, the realignment of values in relation to income, income and value in theory, and earning power and valuation in practice.

71. WIECKING, E. H. Land economics research in retrospect and prospect. J. Farm Econ. 32(4, part 2): 1064-1075. Nov. 1950.

"Looking ahead, I suggest: (1) Renewed emphasis on the current developments in the farm real estate market; (2) careful examination of the bases for appraisal; (3) study of alternative ways and means for land boom control; (4) better current data on rental returns; and (5) a thorough study, in both theory and application, of land income and its relation to land values and interest rates," p. 1070.

72. WILCOX, W. W., AND COCHRANE, W. W. Economics of American agriculture. Ed. 2. Englewood Cliffs, Prentice-Hall, 1960. 538 p.

Discusses the role of the full owner, part owner, and tenant, the functions of tenancy, farm leases, and fair farm rental rates.

Partial contents: Ch. 20, Farm tenancy, farm transfers, and credit.

"The rent paid for the use of real estate is a price, comparable, in most respects, to prices paid for other resources. If we ask the fair price of a dairy cow or a used tractor, we are told immediately that it depends on supply and demand. In the case of farms for rent, the supply of farms for rent varies with the economic advantage of owning farms for rental. Thus, if rental rates are high, relative to real estate prices, landowners rent their farms, rather than sell them and vice versa. Demand varies both with the profitableness of farming and with the number of tenants wanting to rent farms....

"Share-rental rates change far more slowly than cash-rental rates. Within any community the rental share of the crops or livestock products tends to be the same regardless of the productivity of the farm. And this share continues on the same basis from year to year, with very little change due to changes in the demand for farms to rent.... What we find in the share rental market is competition among tenants for the best farm at the established share rental rate. ... It is only when demand gets badly out of adjustment with the supply that changes are made in prevailing rental shares....

"There is a tendency for rental rates to lag on both the upswing and the downturn of economic activity. But if one views rental rates as the competitive price for the use of these resources, he will avoid the futility of trying to determine 'fair rates' in an ever-changing market," p. 385-386.

History

73. BELL, J. F. A history of economic thought. New York, Ronald Press, 1953. 696 p.

Partial contents: Ch. 9, Adam Smith and the beginning of classical tradition; Ch. 11, Thomas Robert Malthus; Ch. 12, David Ricardo, the developer of classical tradition; Ch. 13, The disciples of classical economics: N. W. Senior, J. S. Mill, and J. E. Cairnes; Ch. 14, The influence of classical economics in France and Germany; Ch. 15, The rationalist and the optimist criticism.

74. BLAUGH, M. The evolution of Ricardian economics in England: A study in discipleship. Diss. Abs. 16(4): 685. 1955.
Dissertation abstract (Ph. D.) Columbia University, 1955. 417 p.

The purpose of this study is to assess the nature and significance of Ricardo's influence on British economic thought in the generation after his death. The discussion is limited to an analysis of value, rent, and distribution theory.

Chapter I attempts to define the heart of Ricardian system: The proposition that the production function in agriculture governs the general rate of return on investment and (in terms of units of "real value") secular changes in the distribution of income.

75. BYE, C. R. Developments and issues in the theory of rent. New York, Columbia U. Press, 1940. 133 p.

Examines the significant developments which have appeared within the field of rent theory during the last half century, evaluations of different concepts in rent theory, and evaluation of rent theory issues and possible bases for agreement or disagreement. A bibliography on rent theories appears in the Appendix.

76. GEORGE, H. Social problems. New York, Robert Schalkenbach Foundation, 1939. 256 p.

Partial contents: Ch. 9, First principles; Ch. 10, The rights of man; Ch. 20, The American farmer.

77. GRAY, L. C. Introduction to agricultural economics. New York, Macmillan, 1924. 556 p.

In Chapter 14, under the heading "Value of land," the author discusses the annual use value or economic rent, the conditions that make the economic rent high or low, the distinction between economic rent and contract rent, and the capital value of land.

78. HARRIS, M. Origin of the land tenure system in the United States. Ames, Iowa State Col. Press, 1953. 445 p.

Relevant sections of this book are devoted to the development and decay of quit rents and the emergence of property taxes, the breakdown of primogeniture and entails under the impact of the basic concept of equality, and the growth of the right of almost unrestricted alienation and freedom of transfer, opening the way to land speculation and concentration. Traces the evolution of laws, regulations, and practices regarding inheritance, and the recording of deeds and mortgages, surveying, and leasing.

79. ROCHESTER, A. On the nature of rent. Science & Society 4(1): 57-69. Winter 1940.

Discusses the evolution of the concept of rent under different types of economic systems from mercantilism to democratic capitalism.

"Rent is derived from the labor of cultivating the soil. It is the underlying basis of land 'value.' Rent is actually measured only when the land is used by a tenant who pays rent to the landlord. It may be lost to sight when the farm operator is also the owner, but in that case he is merely pocketing the rent as part of his total return. And the price paid for land--its 'value'--is based on the rent formed upon it," p. 60.

80. TURNER, H. A. The share renting of farms in the United States. Internatl. Rev. Agr. Econ. (n. s.) 1: 500-542. Oct. 1923.

"Share rents vary greatly, and much more widely than cash rents. In a study concerning the percentages landlords realize on investments there are certain to be questions as to the value of the property on which the rate of income is figured. In computing farm income from a monetary point of view it is exceedingly difficult to include all items of income and expenses. Trusting to averages shown by studies of income...landlords who rent on shares make...twice as much interest on their investments as landlords renting for cash," p. 540.

81. TURNER, J. R. Henry C. Carey's attitude toward the Ricardian theory of rent. Q. J. Econ. 26(4): 644-672. Aug. 1912.

Purpose of this paper is to present briefly Carey's theory of rent and to contrast the views of Ricardo and Carey on the theory of diminishing returns in the context of rent theory.

82. WALKER, F. A. Land and its rent. London, Macmillan, 1883. 232 p.

An exposition of the Ricardian theory of rent and its influence upon the distribution of wealth, the origin and purpose of rent theory, the economic laws of rent, the qualifications of rent doctrine and the assumptions which underlie the economic doctrine of rent.

States that rent does not form a part of the price of agricultural products, nor is it deducted from wages. The economic doctrine of rent relates only to cooperation for the natural advantages of land productivity, being such as are derived from fertility, from accessibility for the purposes of cultivation, or from nearness to the market where the produce is to be sold. From this point of view land is contemplated as unimproved.

Makes a distinction between rent proper and the remuneration for the original and indestructible powers of the soil, and fictitious rent, which is interest upon capital invested.

83. WALKER, F. A. Political economy. New York, Holt, 1888. 537 p.

Discusses agricultural rents as follows: "The consideration of greatest importance in computing the cost of 'producing' farms, is that, in general, agricultural improvements are compensated, and are expected to be compensated, upon the principle of those annuities in which a certain number of annual payments both yield due interest on the purchase money and extinguish the capital itself, as when a man for $1,000 (on which the normal interest would be $50 or $60) purchases the right to receive $120 a year for a certain term, with no claim on the principal thereafter.

"Now, is this so, or is it not? Let us satisfy our minds on this point; for if the proposition just now stated is correct, it disposes effectually of the argument against the economic doctrine of rent derived from the fact of expenditures in 'producing' farms.

"That this proposition is correct, is, I think, proved conclusively by the fact, abundantly established by English experience, that there are few classes of improvements known to agriculture which a tenant for 33 years will not make at his own expense, notwithstanding the certainty that he will cease to enjoy the benefit of them at the expiry of his lease," p. 398-399.

84. WHITTAKER, E. A history of economic ideas. New York, Lognmans, Green, 1950. 766 p.

Evaluates the evolution of rent theory and the contributions by the various schools of economic thought.

Partial contents: Ch. 4, Property and distribution of wealth; Ch. 8, Production: Factors of production; The laws of returns; Ch. 9, Value: Regulated value; The problem of value in a collectivist economy; Ch. 10, Rent: Land and rent to the modern period; Modern theories of rent; Rent regulation in recent times; Summary. Bibliography, p. 747-754.

Aggregate Theory

85. BACHMAN, K. Theories and techniques in aggregative analysis in farm management. J. Farm Econ. 34 (5): 787-795. Dec. 1952.

"Aggregative analysis enables us to group under a few simple headings an extremely wide range of economic phenomena. It is useful to farm management workers from two standpoints: (1) It provides a means of appraising the common features in the production situation for a particular group of farms and the broad differences in the production situation as between one group and other parts of agriculture or the economy. Such analysis complements individual farm research in analyses of farm policy alternatives and of individual farm adjustments. (2) It enables study of the implications of production changes in a particular part of agriculture on their production costs and values and the effects of such change in other parts of agriculture, or in the general economy, on particular segments of agriculture," p. 787.

"While some new theories and techniques are involved, the research complements rather than replaces analysis at the level of the firm," p. 795.

86. BELSHAW, H. The profit cycle in agriculture; some notes on factors which affect its intensity. Econ. J. 36(141): 29-49. Mar. 1926.

"The value of land is determined by (a) the rate of interest on farm mortgages, (b) the farm rental of the land at the time as determined by its value as an agent of production, (c) anticipated increases or decreases in the net income of agriculturists," p. 39-40.

It is an observed fact that land values do not rise to the same extent in all localities, or in regions devoted to different crops. Other things being equal the rise will be greater, (a) the greater the rise in... net income; (b) the smaller the rise in the rate of interest on farm mortgages, and the greater the ease with which credit can be obtained; (c) the fewer the customary or legal restrictions on land transfer; (d) largely dependent on these factors, the degree of speculative activity in land," p. 42.

87. BUECHEL, F. A. Agricultural rent in relation to land value in theory and in practice. Sowest. Polit. & Soc. Sci. Assoc. Proc. 5: 207-218. 1924.

Land value is determined not only by the expectation of future rents but also by other factors such as the comforts of a home, community development, social relations, education for children, proximity to nature, speculative returns, amount of tax, and prospective ease or difficulty in amortizing farm mortgage. The relative importance of these factors will vary in different geographic sections of the country.

Stresses the urgent need for a scientific method of farmland appraisal to supplement experience and judgment in appraising techniques.

88. CARTER, H. O., AND HEADY, E. O. An input-output analysis emphasizing regional and community sectors of agriculture. Iowa Agr. & Home Econ. Expt. Sta. Res. B. 469, 35 p. Sept. 1959.

The overall purpose of this study is to qualify the interrelationships and degree of interdependence among various regional and commodity sectors of agriculture, as well as between these sectors and statistical sectors of the economy. Illustrates regional patterns of production and consumption of agricultural products. Knowledge of these descriptive interrelationships is important in determining how one sector of agriculture might be affected by economic changes or agricultural policies which cause changes in other sectors of the economy.

89. CHAMBERS, C. R. Relation of land income to land value. U.S.D.A. B. 1224, 130 p. June 1924.

"Data collected in the census of 1920 constitute the basis of this study. In 1920 for the first time the Census Bureau obtained data on the amount of cash rent paid on farms which were leased on the cash basis. This cash-rent figure is used here as a measure of all land income... the value of farm real estate was likewise obtained from the census.... In order... to get a check on the census values, data on the average sale price of farm land were obtained from a considerable number of counties. All the average values based on sale prices are based on the considerations stated in deck.... This study is based on 154,653 cash-rented farms in 567 counties.... In order to study the long-time relationship between land income and land value further, data were obtained from a questionnaire sent to cash-renting landlords. From this questionnaire, data were obtained on cash rents for a period of years in several important areas. Data on land values to compare with rent series were then obtained, in part from recorded deeds, and in part from estimates of the Crop Reporting Board of the Bureau of Agricultural Economics," p. 5-6.

The author uses cash rents as a statistical tool to measure the relationship of land income to land value by selected counties in 48 areas in the U. S. Numerous tables, maps, and charts are used in this study.

90. DAVIDSON, P. A study of theories of relative shares. Philadelphia, U. of Pennsylvania, 1959. 221 p.
Thesis (Ph. D.) University of Pennsylvania. 1959.

Study entails a systematic analysis of the macro-distribution theories relating (1) labor value, (2) marginal productivity, (3) monopoly, (4) aggregate demand, and (5) aggregate supply to relative shares.

The emphasis throughout this study is on the concepts and analytical procedures which, in different theoretical systems, are germane to a theory of relative shares.

91. DRAKE, L. S. Comparative productivity of share- and cash-rent systems of tenure. J. Farm Econ. 34(4): 535-550. Nov. 1952.

Compares the economics of two classes of rent systems, share and cash. Each system is considered as a typical absolute, stripped of modifications common in practice. Consideration of the systems in this way makes possible a comparison of share- and cash-renting in essence.

"Results of the comparison show that in its entirety a share-rent agricultural economy cannot be more productive than a system based on cash-rent, but it can be considerably less productive. In this paper product and productivity refer to the physical quantity of output of the agricultural system as a whole," p. 535.

92. GROVE, E. W. Quarterly estimates of realized gross and net farm income. Agr. Econ. Res. 6(3): 65-86. July 1954.

Realized net income of farm operators reached a post-war high of $16.8 billion in 1947 and declined to a post-war low of $12.4 billion in 1950. Farmers' net income declined 35 percent during a period of a little more than 3 years. It is evident that the annual estimates do not measure the full swing from high to low. To overcome this handicap in the historical record of farm income, and to provide a foundation for more frequent and more up-to-date appraisal of the farm income situation in the future, this paper presents a new quarterly series on gross and net realized income of farm operators in terms of seasonally adjusted annual rates for 1929-53.

Methods developed provide a fairly reliable measure of quarterly changes in net farm income with seasonal influences eliminated. The firt method describes estimating production expenses; and the second method estimates each major component of gross farm income.

93. JOHNSON, D. G. The nature of the supply function for agricultural products. Amer. Econ. Rev. 40(4): 539-564. Sept. 1950.

Attempts to analyze the reaction of aggregate output in agriculture: (1) To falling relative prices under depression conditions; and (2) to changing relative prices when resources are fully employed in the economy.

Evaluates changes in gross income, net farm operator income, and production expenses from 1929 to 1932.

"Most of the changes in expenditure are due to changes in price rather than quantities. Net operator income represents the returns to all resources owned or controlled by the operator, including labor, land, and capital. Of the total production expenses, only taxes and farm mortgage interests would have continued to be claims on current income even if no output had been planned," p. 542.

"The theory presented in this article to explain the output behavior of agriculture rests on two major assumptions: (1) That farmers are profit-maximizing entrepreneurs and (2) that the supply functions of factors to agriculture have certain characteristics. These characteristics are: (a) The labor supply function shifts with changes in the general level of business activity and unemployment (reflecting the alternatives to farm employment) and for any level of business activity, unemployment and nonfarm wage rate, the price elasticity with respect to labor returns in agriculture is small enough to lead to essentially full employment of labor; (b) the land supply function has a very low price elasticity in the short run in part due to the lack of alternative uses outside of agriculture and due to small changes that can be made in the quantity of land through investment and disinvestment and (c) the supply function of capital assets has a very small price elasticity for downward movements in prices since the quantity of such assets existing at any one time can achieve higher returns in agriculture than elsewhere; in response to upward movements in prices, the price elasticity is higher as new investments become profitable to farmers," p. 563.

94. KEIPER, J. S., AND OTHERS. Theory and measurement of rent. Philadelphia, Chilton, 1961. 194 p.
E. Kurnow, C. D. Clark, and H. H. Segal, joint authors.

Traces the origin and development of land rent theory, reappraises contemporary economic rent theory and tests current assumptions and analyses of economic rent with an up-to-date estimate of land rent. The empirical estimate of land rent is designed to approximate the value of the services of land alone.

Presents a major breakthrough in methodology in its attempt at measuring the theoretical concept of land rent, and is also concerned with the policy implications of economic rent.

95. LARSEN, H. C. Relationship of land values to warranted values, 1910-48. J. Farm Econ. 30(3): 579-588. Aug. 1948.

States some of the problems involved in capitalizing net returns to land in the short run and in the long run. Capitalizes current net rent at a constant rate of 6.5 percent which is the assumed average interest rate on farm mortgages for the entire period, 1910-48.

96. PACKMAN, D. J. Adjusting cash land rents to changes in price levels. Econ. Annal. 25(2): 39-41. Apr. 1955.

Recommends adjustments in cash rents to changes in price levels. Suggests using the current net prices of farm commodities as a basis for determining the size of the cash rent. Rental adjustments should be made annually in line with the upward or downward changes in agricultural commodity prices. If only one product is produced on the rented land, it may be necessary to agree that the rental rate should increase or decrease by a percentage equal to the percentage change in the seasonal average price of the product. Annual cash rents should represent the current value of the amount of produce which was required to pay the rent the year the lease was made. In other words, average prices over a period of years should be used as a basis for year-to-year adjustments.

97. RUTTAN, V. W., AND STOUT, T. T. Regional differences in factor shares in American agriculture. J. Farm Econ. 42(1): 52-68. Feb. 1960.

In this monograph, factor share data on both a net and a gross basis are presented for five major agricultural regions of the United States from 1925-1955. These factor share data were developed as part of a research effort designed to identify the impact of technological change on resource requirements at both the national and regional levels.

In the past, most discussion of factor shares has been confined to national or industry aggregates with little or no attention to regional differences.

"Differences in the functional distribution of income, both over time and between sectors or regions, are of considerable theoretical and empirical interest. For example, in a situation characterized by competitive equilibrium and homogeneous production functions, the relative share of total income allocated to the several factors of production can be interpreted as productivity coefficients," p. 52.

98. SCOFIELD, W. H. Returns to productive capital in agriculture. U. S. Agr. Res. Ser. ARS 43-118, 44 p. Feb. 1960.

Views agriculture as one large business in which the various types of productive assets of all firms are aggregated, analyzed, and observed over time. The rate of return to farm real estate is based on its current market value each year and is compared with the rate of return on common stocks calculated in a similar manner.

99. U. S. AGRICULTURAL RESEARCH SERV., FARM ECONOMICS RESEARCH DIVISION. Land ownership in the Great Plains--A preliminary report. ARS 43-93, 31 p. June 1959.

"Full-owner-operators constitute about two-fifths of all owners, making up the largest group, and landlords are second with about a fourth of the owners... Full-owner and part-owner operators each own about one-fourth of the farm and ranch land in the Plains, while landlords own about one-fifth of the land. The remaining land is divided almost eqully between part-owner-operator-landlords and full-owner-operator-landlords.

"Owners of land not only use their own land in their farm and ranch operations but rent out land to one or several people, or to complicate the situation even more, they rent land from others.... Of all the owners in the Great Plains, 77 percent have their land operated as all or part of a single farm or ranch--that is, the owner either farms all his land himself or rents it all to one tenant. The land of each of 15 percent of the owners is farmed by 2 operators--either by an owner and a tenant or by 2 tenants. The land of 8 percent of the owners is similarly operated in 3 or more farms," p. 14.

100. VERMEER, J. Effects of changes in price, inputs and efficiency on farm incomes (1937-39 to 1948-50). J. Farm Econ. 36(4): 590-599. Nov. 1954.

This article attempts to segregate the effects on net incomes of (1) changes in the price level, (2) changes in the quantity of inputs, and (3) changes in efficiency.

"These changes have occurred simultaneously. As a result, the effects of any one of them on farm incomes are obscured by the presence of the other two," p. 599.

Firm Theory

101. ANDERSON, M. D. Marginal productivity vs. classical rent. South. Econ. J. 4(1): 38-53. July 1937.

"The purpose of this paper is to demonstrate that the classical rent doctrine and the marginal productivity theory of pricing are mutually incompatible. In order to prove this thesis a concise mathematical statement of both doctrines will be given, and it will be shown that when the values given by one theory are substituted in the formulae of the other theory the results obtained are absurd.

"It is assumed, furthermore, that each producer tries to maximize his profits by minimizing his costs for a given output or maximizing his output for a given total cost," p. 38.

102. ANDERSON, T. J. Competition and monopoly in land markets. Amer. Econ. Rev. 31(2): 341-343. June 1941.

Discusses rent theory from the following different points of view:

"(1) That land rent is the result of monopoly; (2) that such rent is, with infrequent exceptions, a competitive return; (3) that the rent of agricultural land is a purely competitive return and the rent of urban (retail) sites is purely monopolistic; and (4) that the rent of both agricultural and urban lands is determined in an imperfectly competitive market," p. 341.

103. BAKER, J. A. Toward a theory of land income. J. Land & Pub. Util. Econ. 21(1): 160-166. Feb. 1945.

Views land income as a complex return composed of four operational elements, only one of which is rent. States that land income is composed entirely of rent only in the specific where the whole body of the land is both indestructible and a free gift of nature. In other words, the author states that land rarely, if ever, exists as a pure rent factor.

104. BERINGER, C. A method of estimating marginal value productivities of input and investment categories on multiple enterprise farms. Diss. Abs. 16(1): 1. 1955.
Dissertation abstract (Ph. D.) Michigan State College, 1955. 139 p.

The purpose of this analysis is to modify presently used methods of productivity estimation so that they can be applied to the analysis of individual enterprises on multiple enterprise farms.

The conclusion was reached that generally products which are produced jointly can be grouped into one output category while products competing for resources should be analyzed separately.

A statistical analysis of the resulting enterprise function was carried out by testing the MVP of each production factor in each function against a minimum or reservation MVP which should have been earned by these factors.

A statistical comparison of the individual enterprise functions with the aggregate function indicated that the method of fitting individual enterprise furnishes more reliable information regarding individual enterprises than does the method of fitting one aggregate function to data from the entire farm business.

105. BLACK, J. D. The extensive vs. the intensive margin. J. Farm Econ. 11(2): 331-333. April 1929.

"The extensive margin concept has reference to the grade of the land upon which the combination is made; and the intensive margin concept to the amounts of the other productive factors used with this same land.

"As a matter of fact, every crop, every combination of crops, every system of livestock farming, has its extensive margin--its grade of land beyond which it does not pay to use poorer land in that particular way. Combinations of enterprises are not discrete, but are almost infinite in degree. Any crop or livestock product or combination of these may exist in an infinite number of proportions to the land factor. For each of these infinite number of enterprise or production-factor combinations, there is a grade of land beyond which any poorer land would not repay its use; and that grade of land represents the extensive margin for that combination. Thus it may be said that the extensive margin is only a way of looking at a combination, from the point of view of the grade of land in it. The intensive margin, on the other hand, has reference to that increment of the other factors of production beyond which further increments will not pay for themselves, when used on any grade of land," p. 332.

106. BOYNTON, A. J. A discussion of ground rent. Q. J. Econ. 17(2): 339-344. Feb. 1903.

Attempts to answer the following questions concerning ground rent: What is its nature, operation, and office? What causes it? What maintains it? How much is there of it?

107. BREWSTER, J. M., AND PARSONS, H. L. Can prices allocate resources in American agriculture? J. Farm Econ. 28(4): 938-960. Nov. 1946.

Examines whether the price structure can be regarded as a significant and effective tool toward achieving a proper allocation of farm resources.

"Rent may not even be considered as a cost on most farms. It probably is looked upon as a share of the farm income that belongs to the landlord. If so, it would in effect just reduce the size of the farm (farm income), which the tenant has," p. 950.

108. BROWN, H. G. The theory of earned and unearned incomes. Columbia, Mo., Missouri Book Co., 1918. 258 p.

Partial contents: Ch. 6, Part 1, Land rent as a marginal product of land; Part 2, Land rent versus capital interest; Part 3, Land rent as an unearned income; Part 4, Improvements by special assessments and the right of landowners to a rental return.

109. BROWN, W. G., AND ARSCOTT, G. H. A method of dealing with time in determining optimum factor inputs. J. Farm Econ. 40(3): 666-673. Aug. 1958.

Analyzes basic procedures in production economics designed to provide answers to related questions: (a) What is the cheapest combination of factor inputs for obtaining a given output; and (b) what is the optimum level of output?

"One limitation of the application of traditional production theory to many problems involving optimum factor combinations arises from the static (timeless) framework of the theory. Ordinary static procedures for finding optimum factor combinations are appropriate where there is no essential difference in the time required to assimilate or 'feed in' varying quantities of factors. As an illustration, static procedures are appropriate for specifying optimum fertilizer nutrient inputs since fertilizer can be applied in practically any desired amount. But for production situations where time is required for additional inputs of factors, time does need to be integrated into the analysis," p. 666.

"Although the pure theory of production economics may be inadequate in its simplest, most abstract form for many complex situations, there is often opportunity to use statistical and mathematical techniques and adaptations to improve results. It is believed that the preceding research illustrates some of the possibilities of improved methodological procedures," p. 673.

110. BYE, R. T. Some recent developments of economic theory. The Trend of Economics, ed. by R. G. Tugwell. N. Y. 1924. 556 p.

"Alternative demands (or opportunity costs) and scarcity are thus the fundamental causes of costs. According to this explanation anything making for scarcity gives rise to a cost.... Thus where disutility does give rise to scarcity, as in the case of saving necessary to the accumulation of capital, or the danger of particularly hazardous kinds of work, it is recognized in the theory; in addition, such causes of scarcity as the limitation of land area, the restrictive policies of trade unions and similar factors are also recognized as sources of costs," p. 279.

"Although this method of capitalizing income is generally considered to be sound for computing the value of agents which have been in use for some time, there is some dissent in the case of new instruments, the value of which may be influenced by the production costs.... By comparing the income yield with this cost (cost of production) we can derive the rate of interest. Hence the value (cost) of new artificial capital helps to determine the rate of interest and is not determined by it," p. 409.

111. CAMP, W. R. Limitations of the Ricardian theory of rent, II. Polit. Sci. O. 33(4): 519-548. Dec. 1918.

"The problem is to explain the factors which have been effective in bringing about a centralization of control and ownership of wealth in the hands of capitalists and not of the owners of agricultural lands. The tendency which the Ricardian theory was intended to show is contrary to the subsequent course of events. It therefore falls short of being a working hypothesis for the explanation of present business enterprise," p. 530.

112. CARLTON, F. T. Relation of marginal rents to price. O. J. Econ. 20(4): 596-607. Aug. 1906.

Assuming labor and capital to be mobile and land a fixed factor of production, then: (1) Land specialized and abundant--differential, but not marginal rents arise, (2) land specialized and scarce--differential and many absolute extensive marginal

rents arise, (3) land mobile and abundant--differential, but no absolute marginal rents arise, (4) land mobile and scarce--differential and absolute extensive marginal rents arise.

113. CARLTON, F. T. The rent concept, narrowed and broadened. Q. J. Econ. 22(1): 48-61. Nov. 1907.

Draws a sharp line of demarcation between interest and rent. States that agriculture and manufacture may be reduced to a common denominator; manufacture is merely a more highly intensive form of utilizing the forces and products of nature, while land plays the same role in each form of industry. Rent depends upon absolute relative position as to a market, and is sharply differentiated from interest. Land rent is, however, only one kind of rent; the various forms of economic privilege also give rise to rents.

Compares and contrasts two concepts of rent: (1) The concept of rent as applied to a return received from land is narrowed down to include only that portion of the total return which is due to a situation in respect to a particular market, or, in other words, to that which is due to land considered as an area upon which to carry on entrepreneurial operations and services which are demanded by society; (2) the concept of rent, from a broadened point of view to include all returns which are due to special privileges, that is, to market opportunities of all kinds. Land rent in its restricted sense is only one form of rent. Rent is an income received because of the existence of some economic privilege or desirable market opportunity which is not susceptible to depreciation in the sense of physical wear and tear.

114. CASTLE, E. Some aspects of the crop-share lease. Land Econ. 28(2): 177-179. May 1952.

Discusses a theoretical model concerning the farm firm operating under a crop-share rental arrangement. This model attempts to find the optimum output and profitability point of a farm firm operating on a crop-share lease.

115. CHAMBERLIN, E. H. The theory of monopolistic competition. Cambridge, Harvard University Press, 1933. 213 p.

Rent is defined as a differential and not as the difference between the total return and the cost of land utilization.

"Each site tends to be put to the use whereby it will yield the maximum total return over the costs involved in utilizing it. These costs include, among other things, such returns in the form of profits as are necessary to attract business ability. The differential remaining, which is due to the superiority of the profit-making opportunities afforded by one site as compared to another, is rent, and is put into the hands of the landlords by the competition of entrepreneurs for the best opportunities," p. 203.

116. CHEN, NAI-RUENN. Theories of investment determination with reference to the individual firm. Diss. Abs. 20(12): 4563. 1960.
Dissertation abstract (Ph. D.) University of Illinois, 1960. 254 p.

The objective of this study is to explore primary factors determining investment in capital formation of the individual firm. This objective was achieved by reviewing existing theoretical and empirical studies, and then formulating a new theory on the basis of the ideas and findings surveyed.

117. CLARK, J. B. Distribution as determined by a law of rent. Q. J. Econ. 5(3):289-318. Apr. 1891.

"The law of rent has become an obstacle to scientific progress: it has retarded the attainment of a true theory of distribution. The principle that has been made to govern the income derived from land actually governs those derived from capital and labor. Interest as a whole is rent; and even wages as a whole are so. Both of these incomes are 'differential gains,' and are gauged in amount by the Ricardian formula," p. 289.

"The principle of rent in its profounder applications furnishes an ultimate basis for the measurement of all values," p. 316.

118. CLARK, J. B. The distribution of wealth; A theory of wages, interest, and profits. London, Macmillan, 1920. 445 p.

Partial contents: Ch. 13, The product of labor and capital, as measured by the formula of rent; Ch. 16, How the marginal efficiency of consumers' wealth is measured; Ch. 22, The law of economic causation applied to the product of concrete instruments; Ch. 23, The relation of all rents to value and thus to group distribution.

119. COCHRANE, W. W., AND BUTZ, W. T. Output responses of farm firms. J. Farm Econ. 33(4, pt. 1): 445-469. Nov. 1951.

Analyzes the farm firm from a threefold point of view: the formulation of an internally consistent theory of the firm in agriculture; an empirical investigation of the price-output behavior of a synthesized, representative farm firm; and, a brief appraisal of the theory of the firm in agriculture in the light of the limited empirical investigation.

"The aggregate output function of a representative commercial, family farm, whether a single or multiple enterprise unit, is perfectly inelastic or approximately so; but this inelastic aggregate output function shifts to the right as technological developments are adopted on farms," p. 469.

120. COOPER, W. W. A proposal for extending the theory of the firm. O. J. Econ. 65(1): 87-109. Feb. 1951.

"Study of behavior within the firm would seem to be an appropriate domain for economic analysis, and recent developments--decision theory, programming, etc.--give promise of fruitful results. But some reorientation of standard tools of analysis will undoubtedly be required. Whether such orientation will weaken or strengthen traditional domains of analysis, that is, welfare economics, cannot be determined until the attempt is made.

Even within the firm, much work needs to be done before an adequate theory can emerge. Following the control lines of standard costs through the budgets of the agent inferior and superior to the top echelons it may be possible to move into the equity and profit-and-loss accounts for the analysis of overall firm behavior. Once this level is achieved, broader economic implications may also be explored at the industry and economy level," p. 109.

121. CORNICK, P. H. Land prices in a commodity price system. J. Land & Public Utility Econ. 10(3): 217-231. Aug. 1934.

Discusses the classic theory of prices, the conventional modification of the theory of land prices, the functions of the marginal producer, and the nature of margins of production.

Analyzes the role of land prices in the commodity price system in order to ascertain whether the price mechanism brings the supply of commodities into equilibrium with demand. Traces the disruptive effects of land prices on commodity prices throughout that part of the major commodity price cycle which began in 1897. Current land rent is a controlled by-product of the cost of producing the last unit of a commodity necessary to bring supply and demand into equilibrium. That element in land prices is therefore subject to almost automatic and immediate economic controls by the commodity price mechanism itself.

122. CUNYNGHAME, H. Exchange value, monopoly, and rent. Econ. J. 2: 35-52. Mar. 1892.

Evaluates and analyzes demand and supply schedules, exchange value, monopoly, and rent from a mathematical and geometrical point of view. The author's aim has been to correct accepted geometric diagrams and endeavors to fit graphic economics to a wider field of usefulness in order to assist in the understanding of economic phenomena.

"Rent is the price paid for the use of some material which has either been appropriated, or else is the result of the investment of sunk capital, or else a compound of the two, and it has this peculiarity, that whereas a manufacturer whose capital is free will not produce unless the price he can get is remunerative, and therefore can to some extent regulate prices by influencing the amount produced, yet a rent receiver who is depending on a payment for things which he has either appropriated, or else in respect of which he has sunk his capital, must perforce be content with what he can get. In this sense rent is therefore a sort of residuum, and the amount of it does not fix prices, but is fixed by price; it is an effect of price, not a cause of it," p. 46.

123. DOLL, J. P., JEBE, E. H., AND MUNSON, R. D. Computation of variance estimates for marginal physical products and marginal rates of substitution. J. Farm Econ. 42(3): 596-607. Aug. 1960.

Presents procedures that can be used to derive variance estimates for marginal physical products and illustrates their use in setting confidence limits or carrying out tests of significance. The derivation of variance estimates for marginal rates of substitution, which are ratios of marginal products, are also illustrated. The empirical example involves crop response to commercial fertilizer, but the method presented is generally applicable to any study involving least squares regression methods.

Estimated variances of marginal products and marginal rates of substitution were small for the example presented. And, although the two variances are not strictly comparable, the estimated variances for marginal products appeared small compared to the estimated variances for total products.

124. ELY, R. T., AND WEHRWEIN, G. S. Land economics. New York, MacMillan, 1940. 512 p.

"Gradations in land due to differences in fertility or location are not the cause of rent; they merely explain why one tract produces more income than another. To make this clear let us assume a hypothetical zone of definitely limited area around a city with land having uniform physical qualities and with differences in location eliminated completely. Rent would not arise as long as any part of the area was not used. The price of the products could not rise above the expense of production, represented by the labor-capital costs, say, 25 cents per bushel for wheat. However if the demand continues to increase after the entire area is in use the scarcity of wheat will cause the price to rise above 25 cents, and rent will arise simultaneously over the entire area. The demand will

be met by a more intensive use of the limited zone, since no new land is available under our hypothesis. Rent arises as soon as land becomes scarce, whether this is absolute scarcity or whether the scarcity is caused by costs of transportation, or by the fact that the operator has to cultivate land where inputs are rewarded with less productivity than on the better land," p. 119.

125. FETTER, F. A. The passing of the old rent concept. Q. J. Econ. 15(3): 416-455. May 1901.

Compares, contrasts, and evaluates the Ricardian concept of rent vis a vis the Marshallian concept of rent. The author elaborates on five central ideas in his contemporary discussion on rent: The land concept, the extension or space relation, the time or long period, the exchanger's surplus, and the no-cost concept.

"The use of the term 'rent' for any surplus above 'real' cost is out of harmony with the conception of rent as a regularly accruing income, and with the practical needs of a money economy in which the concept must be employed.

"The doctrine of quasi-rents, involving the idea that no income, or share, enters into market prices in short periods, cannot stand. On the other hand, the recognition that there is no difference in short periods between land and other wealth in relation to market values is a great advance," p. 455.

126. FETTER, F. A. The "roundabout process" in the interest theory. Q. J. Econ. 17(1): 163-180. Nov. 1902.

"Rent has to do with production or scarce and desirable uses of things.... Interest theory begins with the valuation of different rents or incomes, distributed through different periods of time. The productiveness of a material agent is merely its quality of giving a scarce and desirable service to men. To explain this service of goods is the essence of the theory of rent," p. 179-180.

127. FINLEY, R. M. Determination of optimal resource allocation for farms in the claypan region of Illinois. Diss. Abs. 17(10): 2110. 1957.
Dissertation abstract (Ph. D.) University of Illinois, 1957. 173 p.

Major objective of this study is to ascertain and analyze optimal resource allocation under changes in resource assumptions for representative farms in the claypan regions of Illinois.

Another facet of the study is to examine the relative efficiency of a farm operating under a crop-share tenant tenure system as compared with an owner-operator system.

Author states that when capital is scarce relative to other resources, the most efficient tenure system is that which supplies the most capital to the firm.

128. FLUX, A. W. Improvements and Rentability. Econ. J. 15: 276-282. June 1905.

Describes the phenomenon of rent by a diagrammatic method and introduces a new technique in geometric presentation known as the "integral" type of geometrical diagram to explain rent theory.

Concludes by stating, "Where the relation of the total produce to the consumption is such that no effect on price is likely to be consequent on the increase of supplies generally resultant on improved methods of cultivation, an absolute and relative increase of rent results. Where a fall in price must be taken as consequent on increase of supplies from the land under consideration, the relative

increase of rent will be partly, and may be wholly, neutralized, or even turned into a decrease," p. 282.

129. FRANKLIN, F. Economic theory and economic criticism--Cassel on rent and on interest. Polit. Sci. Q. 41(2): 240-270. June 1926.

The author discusses and evaluates Cassel's theory of rent, and theory of interest.

Cassel states that: "The ground rent of land of a certain quality is in its innermost nature a scarcity price, referring primarily to this land and determined by the supply of and demand for it. The simultaneous existence of worse land that may enter into competition with the better may, it is true, bring down a little the scarcity-price, but it cannot give the ground rent an entirely different nature. The one-sided stress on the differential element is apt to give the idea that the existence of inferior land is somehow essential to the ground rent of the better. As a matter of fact, this ground rent by no means depends for its existence on the presence of the inferior land; on the contrary, it is merely reduced on that account! If in any country the last quality of land used were scarce relatively to the demand, it would have to bear a rent, and this would clearly be a scarcity rent.... For the real nature of ground rent is not an essential matter that there shall be rent-free land on the margin of cultivation," p. 245.

"The worst land on which wheat is grown has a rent because it could be used for growing other things, such as potatoes.... The land is better than land on which potatoes only can be grown; therefore, it must yield a rent. It does not seem to occur to Cassel that the land may be so remote from the market that potatoes could be grown on it only at a loss; he forgets the idea of the margin altogether," p. 254-255.

130. GEORGE, J. P. Correlation analysis of farm land values. J. Farm Econ. 23(3): 668-671. Aug. 1941.

An empirical analysis of the relationships and interrelationships existing between the per acre capitalized net rent value of farm real estate and a series of independent variable factors. Gives emphasis to geographic differences in the value of farm real estate in Illinois.

131. GRAY, L. C. Rent under the assumption of exhaustibility. Q. J. Econ. 28: 466-489. May 1914.

Reevaluates and synthesizes rent theory and attempts to show that indestructibility is not a characteristic which separates rent from other forms of income. Thus the author clears the way for a reconsideration of rent theory under the assumption of the exhaustibility quality of land.

"Why must rent be a payment for an original and indestructible property in order to be rent? The question is a part of the long continued dispute as to the desirability of distinguishing land from capital, and rent from other forms of income," p. 467.

Also discusses modifications of rent theory according to the possibility of preventing exhaustion, effect of the assumption of exhaustion upon the economic intensity of utilization, and the determination of the extensive margin in rent theory.

132. HAMMAR, C. H. Intensity and land rent: An overlooked aspect of rent theory. J. Farm Econ. 20(4): 776-791. Nov. 1938.

Illustrates by geometrical diagrams the premise that rent reflects the intensity of land use. Presents the scheme of the relationship of land rent to land use intensity by geometric figures that show a symmetrical rise (or fall) in the intensity of the application of labor and capital to varying grades of land-- the highest grade being in all instances that which is most intensively used.

"It is correct to assume that as demand rises additional labor and capital are used at both intensive and extensive margins. Thus it is easy to understand why authors have so uniformly proceeded to the questionable conclusion that good lands are all used more intensively than poor lands. They have persistently reasoned as though the behavior of land in the production process was much more uniform and simple than it is in actual practice.

"Most authors are in agreement regarding the meaning they wish the term intensity to have. The more intensively used lands are those upon which the greater amounts of labor and capital are used or applied. Such a connotation is clearly in harmony with the customary discussion which links intensity with the law of diminishing returns and the two margins of cultivation; the intensive and the extensive," p. 777.

133. HAMMAR, C. H. Reconsideration of rent theory as it applies to agricultural land. J. Farm Econ. 23(1): 145-160. Feb. 1941.

"All the net earnings of land will be regarded as rent.... Furthermore, I shall regard intensity as referring strictly to the intensity of land use, or to the application of labor and capital to land. That is, for the purposes at hand, labor and capital will be regarded as being relatively easily variable in contrast to a relatively fixed or inelastic supply of land. Intensity so employed is an input concept and is not to be thought of as synonymous with land productivity as some have used it. Land productivity is governed quite as much by the efficiency of the land in use as by the intensity of the use and there is no necessary relationship between degrees of intensity of use and land quality or rent. That is, rents and intensities of two grades of land are proportional only when their efficiencies are proportional as well," p. 145.

134. HAYES, H. G. Land rent and the prices of commodities. Amer. Econ. Rev. 17(1): 219-229. Mar. 1927.

"The conclusion seems to be amply warranted that the year to year changes in the acreage of the different crops comes about because of the transference of land from one use to another, rather than from the additions to or the subtractions from the amount of land in use as a result of extending cultivation at the no-rent margin or abandoning no-rent land that has been in use. If this is true, the price of product is not 'determined by the marginal units at the extensive, no-rent, margin,'" p. 225-226.

135. HEADY, E. O. Application of recent economic theory in agricultural production economics. J. Farm Econ. 32(4, pt. 2): 1125-1139. Nov. 1950.

"A study of land apart from other resources necessarily becomes one in the geographical aspects of soil and legal institutions. Production is forthcoming and economic problems arise only in the sense of the combination of two or more factors of production.... Greater recognition of the fact that the principles of production relate to all factors and levels of production would do much to systematize and increase the productivity of applied analysis," p. 1126.

136. HEADY, E. O. Marginal productivity of resources and imputation of shares for cash and share rented farms. Iowa Agr. Expt. Sta. Res. B. 433: 600-612. Oct. 1955.

This study has three major objectives: (1) To derive production functions for farms operated under different rental and tenure arrangements; (2) to compare the marginal productivity of resources used under these various situations; and (3) to explore the use of computed marginal productivities as a basis of allocating income shares to tenants and landlord.

137. HEADY, E. O. Production functions from a random sample of farms. J. Farm Econ. 28(4): 989-1004. Nov. 1946.

Examines the role of methodology in marginal productivity analysis, and evaluates the application of the production function to agricultural data. Outlines the following conditions to be used as guides in grouping inputs into categories having a meaningful relationship with gross income: (1) Total value product, including the inventory changes, as the dependent variable; and (2) independent input variables--The value of land and buildings, the amount of labor used, the value of machinery and equipment including maintenance and operation costs, the value of livestock on hand and purchased, feed and livestock expense, and cash operating expenses including fertilizer, twine, custom work, and miscellaneous operating expenses.

138. HEADY, E. O. Resource productivity and returns on 160-acre farms in north-central Iowa. Iowa Agr. Expt. Sta. Res. B. 412: 1067-1096. July 1954.

"This study is one in which production functions have been derived for a sample of 160-acre farms; a few statistics also are included for 240-acre farms. The elasticities or regression coefficients are acceptable at conventional probability levels for both a crop function and a livestock function. For crops, marginal returns have the following values for mean use of resources; labor, $78 per month; crop capital, $1.08 per $1 used; machinery expense, $0.93 per $1 used. For livestock, the marginal returns are: labor, $218 per month; capital expenses, $1.04 per $1 used," p. 1067.

139. HEADY, E. O. Uncertainty in market relationships and resource allocation in the short-run. J. Farm Econ. 32(2): 240-257. May 1950.

Applies the resource cost concept to the firm and society growing out of market price instability by using examples drawn from agriculture.

"The problems which revolve around diversification and multiple-products units are more numerous in this than in many other industries because of the seasonal and biological characteristics of production and because of the extent of capital-rationing; the major portion of agricultural products are forthcoming from firms which combine two or more products. However, our analysis is generalized and it is equally applicable to other areas of production wherein two or more enterprises compete for scarce resources," p. 240.

140. HEADY, E. O., AND CARTER, H. O. Input-output models as techniques of analysis for interregional completion. J. Farm Econ. 41(5): 978-991. Dec. 1959.

Analyzes the differences in marginal productivities of land in various areas of Iowa and under different uses. Delineates land areas in order to examine the rates of return to land, and specific resources used on land, in varying productivity groups and for areas with varying combinations of land, labor, and capital.

141. HEADY, E. O., HILDRETH, R. J., AND DEAN, G. W. Uncertainty, expectations and investment decisions for a sample of central Iowa farmers. Iowa Agr. Expt. Sta. Res. B. 447, 19 p. Jan. 1957.

Investigates why farmers make investment and production decisions under uncertain expectations, that is, decision-making procedures in land purchases including methods used by farmers in making past and future decisions to buy land. The study revolves around the amount and form of capital investment.

"If the principle of increasing risk is in question, the required percent return should increase as the amount of borrowed capital increases.... Farmers were asked simply to indicate whether: (1) An increasing rate of return; (2) a decreasing rate of return; or (3) a constant rate of return would cause them to borrow more," p. 1006-1007.

142. HEADY, E. O., JOHNSON, G. L., AND HARDIN, L. S. eds. Resource productivity, returns to scale, and farm size. Ames, Iowa State Col. Press, 1956. 208 p.

Partial contents: Ch. 1, Technical consideration in estimating production functions; Ch. 2, Problems in studying resource productivity and size of business arising from managerial processes; Ch. 7, Budgeting and linear programming in estimating resource productivity and cost relationship; Ch. 8, Relationship of scale analysis to productivity analysis; Ch. 10, Simultaneous economic relationships and derivation of the production function; Ch. 11, Problems in finding a method to estimate marginal value productivities for input and investment categories on multiple-enterprise farms; Ch. 14, Significance tests in production function research; Ch. 16, Economic interpretation of production function estimates; Ch. 22, Institutional tenure approach to "size of farm" research.

143. HEADY, E. O., AND KEHRBERG, E. W. Relationship of crop-share and leasing systems to farming efficiency. Iowa Agr. Expt. Sta. B. 386, 48 p. May 1952.

Describes and predicts net farm income, rental practices, patterns of resource use, and similar efficiency characteristics which are attached to cash and share rents.

Analyzes landlord-tenant relationships and other factors which may be more important than the leasing method in encouraging efficient production and resource use.

144. HEADY, E. O., AND SHAW, R. Resource returns and productivity coefficients in selected farming areas. J. Farm Econ. 36(2): 243-257. May 1954.

This study deals with productivity coefficients for specified agricultural products. Its central objective is to measure the marginal value productivity of resources used in different farming regions and to predict, within limitations of the data and methods, the effect of different quantities of resources on the value of the product produced.

145. HEADY, E. O., AND SHAW, R. Resource returns and productivity coefficients in selected farming areas of Iowa, Montana and Alabama. Iowa Agr. Expt. Sta. Res. B. 425: 335-372. Apr. 1955.

Analyzes the returns from factors of production in four selected farming areas of the United States where the quantity and proportions of resources used and the commodities produced are quite different. Sample areas include the

Alabama Piedmont, northern Iowa, a dry-land wheat area of Montana, and southern Iowa. From farm samples in each area, production functions and marginal resource productivities were derived for different classes of inputs. Resource returns were extrapolated through empirical and residual techniques.

146. HENDERSON, J. P. A reinterpretation of Ricardo's theory of value. Diss. Abs. 16(12): 2340-2342. 1956.
Abstract of Dissertation (Ph. D.) University of Maryland, 1956. 273 p.

Presents a systematic explanation of the Ricardian theory of rent and the labor theory of value. Ricardo's labor theory of value was utilized to prove that the real exchange value of commodities was determined in the process of production, rather than in the process of circulation of commodities. In this context Ricardo was able to hypothesize that the real regulator of income distribution was the ratio of wage goods to total output, rather than the individual demand and supply ratios assigned to commodities in the market. Ricardo was not completely successful in bridging the gap between the labor theory of value, as a determinant of gross profit, and as a guide to the determination of individual prices in the market.

Ricardo postulated that the quantity of embodied labor contained in each commodity regulated its absolute value, while exchangeable value was influenced by variations in the capital composition of goods. This formulation indicates that Ricardo considered absolute value to be the regulator of exchangeable value.

147. HESSER, L. F., AND JANSSEN, M. R. Capital rationing among farmers. Ind. Agr. Expt. Sta. Res. B. 703, 16 p. Nov. 1960.

The objectives of this study were to determine: (1) The extent of internal and external capital rationing among farmers; (2) those factors associated with farmers' use and non-use of credit; (3) the returns from land, labor, capital, and management by using the least-cost combination analysis.

"Until the optimum investment is obtained by ownership, size of the farm may be increased to the optimum by renting additional resources, particularly land. Implicit in the normative model is the assumption that owned resources can be substituted for rented resources in infinitesimal quantities as the operators' investment increase," p. 4.

148. HOBSON, J. A. The element of monopoly in prices. Q. J. Econ. 6(1): 1-24. Oct. 1891.

"Assuming there is in a given piece of land a pasture use, a corn-land use, an orchard use, a market-garden use, the rent for each use will include the specific rent of the lower use, plus the individual rent of the lower use, plus the individual rent of the higher use, the two former figuring in the price of the produce of the higher use.

"What applies here to land applies precisely in the same manner to capital and labor. Starting from a minimum subsistence wage and interest, each higher special use brings a specific rent based on the lower specific rent plus the lower individual rent; and this higher specific rent will figure in price.

"Thus we reach a theory of price capable of clear statement. The foundation of price is cost of production, which measures the quality of common effort. To this are added a number of specific and subspecific rents of monopoly, paid for the use of various special qualities of land, labor, capital, at various points in the process of production. These specific and subspecific rents, added to the cost of production, make up what is called the expenses of production. The cost of production measures the quality of individual effort involved in production.

The cost of production measures the quality of individual effort involved in production. The specific and subspecific rents measure the effect of social forces in assigning special social values to special qualities or kinds of each requisite of production. The difference between cost of production and expenses of production, the element of specific rent, is a value due entirely to the action of society," p. 23-24.

149. HOBSON, J. A. The law of the three rents. Q. J. Econ. 5(3): 263-288. Apr. 1891.

Applies the law of rent, as a basis for a sound theory of distribution, to the three factors of production: Land, labor and capital.

"Different pieces of land may be graded in quality and rental by the amount of their respective superiority in fertility or convenience over the land at the margin of employment, the rental of each grade rising and falling with each rise and fall in the margin of employment," p. 267.

"The rent of a piece of land, capital, and labor is the excess of its produce over that of the land, labor, and capital which is employed to the least advantage and which pays no rent," p. 269.

150. HOLLANDER, J. H. The concept of marginal rent. Q. J. Econ. 9: 175-187. Jan. 1895.

Describes the concept of marginal rent in the orthodox framework and recommends that its generic reparation from differential rent rest upon the neglect of a fundamental element in the law of differential costs and also recommends the real influence of rent-paying marginal land upon normal cost; all rent is not differential.

"When the necessary supply of new land is shut off by its ability to command rent if devoted to some other use, the additional supply of product will be derived entirely from intensive cultivation. Recourse must be had to poorer and poorer uses of soils in cultivation, the intensive margin is depressed lower than before, and marginal and hence normal cost rises in consequence. The increase is incidentally consequent upon and in no sense directly resultant from the payment of a rent by marginal land," p. 187.

151. HOLLANDER, J. H. The residual claimant theory of distribution. Q. J. Econ. 17(2): 261-279. Feb. 1903.

Evaluates the rent-residual theory and suggests the inadequacy of any theory of residue in economic distribution.

"The theory of rent residual is defective in a dual sense. In common with all residual formulae, it undertakes to present an empirical process as a theoretical principle... it is vitiated by inherent fallacy. Rent is then described... as the surplus of product over wages and gross profit; but interest is defined in terms of rent," p. 263-264.

152. HURD, E. B. Allocation of net farm income. Agr. Econ. Res. 9(1): 10-19. Jan. 1957.

Presents an imputation method of allocating net farm income to the factors of production, that is, real estate (land and buildings), working capital (livestock, machinery, feeds, and seeds), and labor (unpaid family and operator labor and management).

153. HURLBURT, V. L. Distribution of income from farmland. U. S. D. A. Ybk. Agr., 1958; Land: 176-182.

An attempt to separate and distinguish the income from land and the income from other resources. Raises the following questions: What is land worth? What is income from farmland? Who gets it? What does the land earn? On answers to these questions depend changes in the use of the land, prices paid for land, the amount of land farmers use, the net amount that land can earn in any one use, etc.

154. HURLBURT, V. L. On the theory of evaluating farmland by the income approach. Washington, U. S. D. Agr. Res. Serv., 34 p. Apr. 1959.

Discusses the theory of land pricing at the firm level. Limits study to an analysis of land as a factor of production. Looks for guides to decision making, rather than an explanation of the operation of the land market.

"In the long run and under equilibrium, factor price (annual) = marginal value product = value of marginal product = return to the factor = economic rent of land," p. 34.

155. HURLBURT, V. L. Property taxes and insurance premiums as fixed costs in farm valuations and rental determinations. J. Farm Econ. 41(4): 821-829. Nov. 1959.

Examines methods of handling property taxes and insurance premiums in land valuation and rent-determination. Recommends that property taxes and insurance premiums be considered as fixed costs. Proposes a method of calculating rentals and handling taxes and insurance as an overhead firm cost that will result in improved rental arrangements whereby each party to the agreement would receive income from the resources he contributes to the farm business, thus farm rents would meet the test of economic efficiency.

156. HURLBURT, V. L. Theory of supply of farm land. Land Econ. 34(2): 161-167. May 1958.

Land is two-dimensional in its supply character in that it can be reassured both areally and quantitatively. It is not only the geographic area but also the intensity of use, net returns per acre, and productivity that determine the effective supply of land.

157. HYDE, A. M. The concept of price-determining rent. J. Polit. Econ. 6(3): 368-379. June 1898.

"When land at the margin of cultivation for a particular purpose is adapted to some other product, and for such use pays a rent, this marginal rent must be debited as cost to the marginal product referred to, and must enter into the price of such product, thus becoming 'price-determining,'" p. 369.

"Thus I am persuaded that the general acceptance of the concept of price-determining rent has been due not only to a failure to recognize that a no-rent margin of cultivation always exists in intensive, if not in extensive, cultivation, but also to a failure to apply the same fundamental principles of rent to land devoted to several productive uses that we do to land devoted to a single use," p. 378-379.

158. ISSAWI, C. Farm output under fixed rents and share tenancy. Land Econ. 33(1): 74-77. Feb. 1957.

Illustrates diagrammatically that a system of fixed rents whether in cash or in kind is more conclusive to better land use than one of share tenancy. Under cash rents the farmers has to plant at least part of his land to cash crops and sell part of his crops to raise cash.

Conclusions of this study indicate that fixed rates have more favorable effects on farm output and investment.

159. JANSSEN, M. R., ATKINSON, J. H., AND KELSEY, M. P. Is field renting good or bad? Amer. Soc. Farm Mgrs. & Rur. Appraisers J. 24(2): 84-91. Oct. 1960.

Attempts to determine whether differences in use and production of owned and rented tracts of land indicate that inefficiency was introduced by field renting land. Study also seeks to determine whether landowners and tenants could reach satisfactory agreements for efficient operation of part-owner farms. Information was obtained in 1957 from 373 tracts operated by 158 part owners and 72 full tenants in Boone, Cass, Delaware, Tippecanoe, and Tipton Counties in Indiana.

160. JOHNSON, D. G. Allocation of agricultural income. J. Farm Econ. 30(4): 724-729. Nov. 1948.

Attempts to obtain a functional distribution of farm income by estimating land returns from rents paid, capital returns from current valuation of inventories, and labor returns as the residual. The major limitation lies in the treatment of capital. Appendix, p. 746-749.

161. JOHNSON, D. G. Resource allocation under share contracts. J. Polit. Econ. 58(2): 111-123. Apr. 1950.

"If resources are to be allocated in an optimum manner, certain marginal conditions must be satisfied.... The stipulations of the crop-share lease create circumstances in which both the tenant and the landlord... consciously attempt to violate the marginal conditions required for maximum output. Under a crop-share lease, if the landlord's share of the crop is half, the tenant will apply his resources in the production of crops until the marginal cost of crop output is equal to half the value of the marginal output.... The landlord will not invest in land assets unless the value of the marginal product is twice the marginal cost," p. 111.

162. KITTRELL, E. R. Ricardo and the taxation of economic rents. Amer. J. Econ. and Sociol. 16(4): 379-390. July 1957.

"The differential theory of rent afforded Ricardo a tool for demonstrating the progressive redistribution of income in favor of the landlord in the process of economic development. This phenomenon he reviewed with alarm since the capitalistic class was considered the mainspring of economic progress. Concomitantly, Ricardo developed the now fundamental proposition that a tax on rent cannot be shifted. Yet he did not advocate such a tax. Instead he devoted his energies to repeal the Corn Laws which he considered as raising rents unduly," p. 379.

163. KLEENE, G. A. The income of capital. Q. J. Econ. 26(2): 313-340. Feb. 1912.

Investigates the problem of net returns from land, labor, capital; the problem of profits from capital and interest; and the historical origin of interest and rent.

"The method followed in this study, the method of theory, taking its premises from conditions now open to observation and not from the historical past, must of necessity submit to such limitations. It can reveal the forces at work in the present and the conditions of their continuance," p. 340.

164. KOTTKE, M. W. A study of decision sharing, tenure uncertainty and the choice of farm enterprise combinations under farm leasing systems in Minnesota. Diss. Abs. 15(12): 2369. 1955.
Dissertation abstract (Ph. D.) University of Minnesota, 1955. 155 p.

Census data indicate that livestock production was less intensive under crop share and crop-share-cash rental systems than it is under cash and livestock share rental systems. To the extent that particular rental provisions restrict the choice of farm enterprises, tenants may not obtain full utilization of their resources. In view of this possibility, the first objective of this study was to determine whether or not particular rental arrangements are responsible for differences in enterprise selections among tenants. The second objective was to appraise the tenure expectations of tenants. The third objective as to study the effects of tenure uncertaintly on tenant's selection of farm enterprises and use of resources.

165. LANHAM, F. B. Evaluation of farm buildings as a factor in agricultural production. Iowa State Col. J. Sci. 27(2): 207-208. Jan. 1953.
Dissertation abstract (Ph. D.) Iowa State College, 1952.

Attempts to delineate production theory as applied to farm structures and land. The farmer is assumed to be an entrepreneur with the primary motive of maximizing profit.

Analyzes pragmatic techniques of determining and keeping in balance the optimum division of total outlays between farm structure and farm land, and the relations between structure expenditures as fixed costs and unit costs at varying levels of farm output.

166. LISSNER, W. Land costs in farm accounts. Amer. J. Econ. & Sociol. 10(3): 235-236. April 1951.

The author uses as an example of land costs and rental payments the record of New York state potato land and applies this methodology to all land and different commodities.

"A rise in the cost of land use is associated with a fall in profit. The two are not connected here; potato land cost is too small an element of cost to produce the decline. What happened here is that the farmers had to pay exorbitant rent--in the form of monopoly exactions by equipment and fertilizers makers--in periods when the rise of rent in potato land was a pale reflection of general rise in rent.... By socializing the rent of land of all types and all natural resources, by abolishing monopoly exactions and taxes that burden labor and capital, all land and resources can be put to their most efficient use," p. 236.

167. MACFARLANE, D. L. Notes--Intensity and land rent--A reply. J. Farm Econ. 21(2): 489-494. May 1939.

States that "Net efficiency of a fixed factor of production has no correlation to the slope of the marginal productivity function measured by the slope of the tangent to the marginal curve at the point of highest profit combination. Moreover, mathematically or statistically derived marginal productivity functions appear so frequently to have such changing curvature as to make their measurement at any other point of little meaning," p. 492.

168. MILLER, W. G. Comparative efficiency of farm tenure classes in the combination of resources. Agr. Econ. Res. 11(1): 6-16. Jan. 1959.

Explores methods that might be used in analyzing the inefficiences that were due to tenure. American farmers are broadly classified as full owners, part owners, and tenants; tenants are subclassified according to the method of rental payment. Examines the usefulness of least squares estimating equations in ascertaining the use of farm resources under different farm tenure classifications.

"The central hypothesis in this analysis of farm tenure classes was that tenure classes are different populations; with different patterns of resource allocation and levels of efficiency. The analysis rests heavily upon estimating equations of the Cobb-Douglas type. These equations were fitted to cross-sectional data for the 1954 production year obtained from a sample of farms in Iowa and northern Illinois," p. 6.

169. MILLER, W. G., CHRYST, W. E., AND OTTOSON, H. W. Relative efficiencies of farm tenure classes in intrafarm resource allocation. Iowa Agr. & Home Econ. Expt. Sta. Res. B. 461, 22 p. Nov. 1958.

Reports the results of a pilot study concerning analyses of relationships among owner-operators, livestock share-renters, and crop-share-cash renters and the use and productivities of land, labor, and capital services employed in Iowa and northern Illinois in 1954.

"There was no clear evidence that tenure classes differed in efficiency achieved in resource combinations. The nature of the adjustments needed to approach an optimum combination of resources, however, varies between owners and tenants. Owner-operators should have used less of both land and labor and more capital. Tenants were most efficient in the use of labor services, but they were excessive in capital services and deficient in land," p. 95.

170. MILLS, E. S. Uncertainty and price theory. Q. J. Econ. 73(1): 116-130. Feb. 1959.

"Only when marginal cost is constant is it unambiguously clear that price will lower with uncertainty than without. When marginal cost is rising or falling the relation of price to its riskless level depends on the relation of output and expected demand to the riskless demand.... However, to the extent that the firm takes a long view of things (imputes a high cost of depletion and a high value to inventory) further generalization is possible.... When marginal cost is rising price may exceed its riskless level. Hence, roughly, the conclusion of this paper is that only when the firm is producing near capacity is uncertainty likely to induce it to raise price above the riskless level. At other times there is a presumption that uncertainty will mean prices lower than they would have been in the absence of uncertainty," p. 130.

171. MITCHELL, C. C. Is the theory of the firm misused in current land economics research? Land Econ. 31(2): 139-143. May 1955.

Examines the validity of the theory of the firm as applied to agricultural economics. States that the theory of the firm is intended to serve as a theory of the equilibrium of the firm within the context of a general theory of value, and not outside. If the theory of equilibrium of the firm is removed from its context of value theory, what remains is little more than a particular type of cost-accounting or budgeting.

172. MOSES, L. N. Location and the theory of production. Q. J. Econ. 73(2): 259-272. May 1958.

Deals with the theory of the firm in a spatial setting. The object is to place the theory of location within the main body of economic theory. More specifically, to make the theory of location an intregal part of the theory of production and to investigate the implications of factor substitution for the locational equilibrium of the firm. Toward this end, emphasis is placed on the inseparability of three problems: The optimum output, the optimum combination of inputs, and the optimum location. The approach developed in this monograph facilitates analysis of the spatial aspects of many problems traditionally considered in theory, that is, the implications for location of variable input prices, of discrimination between markets, and so on.

The conclusion is that profit maximization requires a proper adjustment of output, input combination, location, and price. Moreover, the optimizing values of these three variables can be determined with analytical tools derived directly from traditional economic theory.

173. MURRAY, W. G., AND MELDRUM, H. R. A production method of valuing land. Iowa Agr. Expt. Sta. B. 326: 315-335. Mar. 1935.

The production method of land valuation involves four steps: (1) Examination of soil types, drainage, and so on;((2) estimation of future yields; (3) evaluation of use of buildings; and (4) conversion of yield data into a valuation of land. Appendix includes charts illustrating the production method as applied to a specific farm, giving net return per acre.

174. NORDQUIST, G. L. Activity analysis and the theory of the firm. Dis. Abs. 21(7): 1787. 1960.
Dissertation abstract (Ph. D.) Iowa State College, 1960. 219 p.

Objective of this study is to provide an inquiry into the nature of market adjustments giving two different concepts of production: (1) Production technology in its conventional form is a smooth, continuous relationship between several inputs and outputs; and (2) production technology in the form of a finite number is based on discrete input-output choices.

175. ORCHARD, J. E. The rent of mineral lands. Q. J. Econ. 34(2): 290-318. Feb. 1922.

Discusses the limitation of Ricardian theory on the economy of developed countries and established industries; distinguishes rent of mineral land and agricultural land; determines the extensive and intensive margins of rent; and examines rent and the law of diminishing returns.

176. PINE, W. H., AND SCOFIELD, W. H. The farm real estate market in Kansas. Kans. Agr. Expt. Sta. B. 428, 20 p. Jan. 1961.

Stresses the theory of land pricing at the firm level. Indicates how various institutional factors affect land values. Analyzes net income per acre and value of land and buildings in Kansas from 1939 to 1960.

177. PRICE, L. L. Some aspects of the theory of rent. Econ. J. 1: 122-144. March 1891.

Elaborates on the payment of a rent for differential advantages from a broad point of view.

"In the first place, a similar surplus may arise in the case of other kinds of wealth but land. In the second place the differential advantages, of which it is a measure, may conceivably vary in different degrees and opposing directions, according to the special form of advantage which is under consideration; and, thirdly, the theory postulates the action of free competition," p. 128.

178. RAWLINGS, B. R., AND JOHNSON, O. R. Relationship of productivity of farm units and their ability to pay rent. Mo. Agr. Expt. Sta. Res. B. 308, 43 p. Nov. 1939.

Study is concerned primarily with the development of a technique and method for determining the adequacy of farming units from the standpoint of paying a net rent. Explores the net-rent problem and derives principles and relationships rather than definite quantitative results.

179. SAMUELSON, P. A. A modern treatment of the Ricardian economy: The pricing of goods and of labor and land services. Q. J. Econ. 73(1): 1-36. Feb. 1959.

An attempt to relate systematically input-output methodology to the Ricardian framework.

"Land, being the only primary (i.e., nonproducible) item in this simplest model, has imputed to it--either as a residual or as a marginal product--all the net product of the system. As Ricardo well knew, it is scarcity, and bottlenecks, that give rise to value," p. 20

A discussion on "Theory of Differential Rent" appears in the appendix.

180. SAMUELSON, P. A. A modern treatment of the Ricardian economy: Capital and interest aspects of the pricing process. Q. J. Econ. 73(2): 217-232. May 1959.

An explicit treatment of the problems of time, rent, and capital in the Ricardian framework. Evaluates the complications introduced by capital goods and time into the Ricardian system.

"Provided we are willing to go along with the extreme classical assumption that in the long run the minimum interest rate is determined by an infinitely elastic supply schedule that is like the long-run supply schedule of labor, we shall find that an extension of the substitutability theorem will apply and that a decompilation of all value magnitudes into land alone will still be possible," p. 20.

181. SCOVILLE, O. J. Factors of income. U.S.D.A. Ybk. Agr. 1957; Soil: 433-440.

Describes the principle of diminishing returns as applied to agriculture by varying the amount of one resource that is applied to one or a group of fixed resources.

States that there is no one "best combination" of land, labor, and capital for production under all conditions. A drop in the price of fertilizer in relation to the price of land will make it profitable to substitute more fertilizer for land.

182. STANIFORTH, S. D. Analysis of the effect of uncertainty on resource use and income. Iowa State Col. J. Sci. 27(2): 258-259. Jan. 1953. Dissertation abstract (Ph. D.) Iowa State College, 1951.

Analyzes the variability in budgeting net income from agriculture obtained from several patterns of resource use from 1917 to 1948 in order to measure the factors of risk and uncertainty in agricultural production.

The uncertainty factor is based on the premise that net income variability indicates the existence of uncertainty. The standard deviation and the coefficient of variation were the objective measures used to indicate the existence of risk and uncertainty. Share leasing reduces uncertainty relative to the alternative of low-equity financing.

183. STIGLER, G. J. Ricardo and the 93% labor theory of value. Amer. Econ. Rev. 48(3): 355-367. June 1958.

The author states that Ricardo's emphasis upon the quantitative importance of labor tended to be read as an analytical proposition that labor quantities were the sole regulators of value. Ricardo's analytical theory contained several important deficiencies, namely, the fact that it excluded rent from costs, and that it reduced all capital to previously expended labor plus interest.

"The only difference between Malthus and Ricardo in their concepts of costs of production was that the former included and the latter excluded the rent of land," p. 362.

Ricardo's labor theory was a cost-of-production theory that excluded rent. The theory was understood as a simple labor-quantity theory by Say, Mill, and Torrens.

184. TAUSSIG, F. W. Exhaustion of the soil and on the theory of rent. Q. J. Econ. 3(1): 345-348. Feb. 1917.

Concerns the theory of exhaustibility of the soil and the relation of this possibility to the Ricardian theory of rent.

The author states: "And the fundamental question regarding cost and interest, land and capital... is whether in fact there is a differential return from land of a kind which is not secured from capital in the sense of instruments made by man...the answer depends on the effectiveness of competition in bringing about equality of returns from concrete capital," p. 348.

185. TAYLOR, H. C. The differential rent of farm land. Q. J. Econ. 17 (4): 598-614. Aug. 1903.

A theoretical discussion concerning the validity of the differential theory of rent. The author refutes the idea that differential rent can be measured in terms of differences in land productivity. Attempts to answer the question of how much farm labor and capital should be applied to an acre of land in the production of a crop in order that the farmer may attain the largest net return from land.

186. TAYLOR H. C. The theory of rent and American agriculture. Amer. Econ. Rev. Supplement, 4(1): 109-112. Mar. 1914.

Approaches rent theory from a pragmatic point of view and introduces realistic problems of rent. Discusses the impact of selected forces which have an effect on the quantity of rent.

"The amount of rent tends to vary directly with the number and capacity of those engaged in agriculture and of the equipment employed, directly with the amount of capital seeking investment in farming operations, directly with the opportunities for continuous, remunerative employment throughout the years for the labor and equipments, directly with the social advantages of the locality, and directly with the prices of farm products. The rent tends to vary inversely with the efficiency of the managers, workmen, and equipments in the competing region as a whole, inversely with the prices of farm equipments, wages and the operating costs, and inversely with the abundance of good land," p. 111-112.

187. TURNER, J. R. The Ricardian rent theory. New York, New York U. Press, 1921. 221 p.

This study entails a critique of the Ricardian rent theory, and an interpretation of early American economists' doctrines.

188. WAGLEY, R. V. Marginal productivities of investments and expenditures, selected Ingham County farms, 1952. East Lansing, Michigan State College, 1953. 98 p.
Thesis (M.S.) Michigan State College, 1953.

Evaluates the application of the Cobb-Douglas production function to agricultural data. The objective of this monograph is to construct estimates of the marginal value products of various input categories. These estimates were used programmatically in determining the allocation of resources and the value of rent on individual farms.

189. WALKER, F. A. The doctrine of rent, and the residual claimant theory of wages. Q. J. Econ. 5(4): 417-437. July 1891.

Discusses the theory of rent in relation to wages and interest.

The doctrine of rent, the old-fashioned doctrine of the rent of land, is the corner-stone of the theory of distribution. Therefore, the extension of the term 'rent' to include wages and interest, and its use in such connections as 'consumer's rent' and 'producer's subjective rent,' seem to me only calculated to confuse the public mind and to lessen the popular interest in political economy," p. 437.

190. WILES, P. Empirical research and the marginal analysis. Econ. J. 60(239): 515-530. Sept. 1950.

Attempts to solve an apparent hopeless contradiction between economic theory and practice. "In theory marginal cost always equals marginal revenue. In practice it never does," p. 515.

"The main lesson surely is that the orthodox marginal analysis must not be used for describing the processes of business thought, talking to entrepreneurs, accountants or trade unionists, or analyzing statistical data. It is an esoteric language, suited to important but as yet esoteric discussions," p. 529.

191. WOLFE, A. B. Rent under increasing returns. Amer. Econ. Rev. 19(4): 580-604. Dec. 1929.

Determines what bearing, if any, the existence of an initial stage of increasing factoral returns has upon the theory of rent. Evaluates the commonly accepted doctrine of the relation of rent to the points of diminishing returns. Assumes an initial stage of increasing return and the fact that all land is free: (1) Will cultivation be extended to inferior land as soon as all the best land is occupied and the point of diminishing returns has been passed on the best land available? (2) Are there conceivable circumstances in which cultivation would be extended to poorer land before diminishing returns are encountered on the best land? (3) Will the best land necessarily command a rent as soon as the point of diminishing returns has been passed? (4) Can the better land, under any conceivable circumstances, command a rent before that point?

192. WORCESTER, D. A. A reconsideration of the theory of rent. Amer. Econ. Rev. 36(3): 258-277. June 1946.

The purpose of this paper is twofold: (1) To trace in rough outline the steps which have resulted in ambiguities concerning rent theory; and (2) to make some positive recommendations designed to unify the now divergent points of view so as to increase the content of rent theory.

"The argument proceeds through the following stages: (a) An analysis of the necessity for and the steps involved in abandoning the classical position that rent does not affect the market price of commodities; (b) how this abandonment makes necessary two theories of rent, one based on opportunity costs and the other based on real costs; (c) the manner by which the conceptual relationship between the two theories can be preserved; (d) how the Paretian concept inserts much detail into the classical and neoclassical systems but seriously impairs the meaning of the word 'rent'; (e) the advocacy of the use of the term 'rent' to indicate the full opportunity cost (or remuneration) of a unit of land, as defined below, when this is computed on the level of the firm; (f) the need for a new term if the concepts of the various groups of theorists are to be brought together--'factor profits' is suggested; and (g) subsidiary reasons for preferring marginal productivity theory in the determination of rent," p. 258-259.

Statistical Studies

193. HARMON, M. M. B. A statistical summary of farm tenure, 1954. U. S. D. A. AIB-200, 62 p. Nov. 1958.

194. HURLBURT, V. L. Supplementary tables - farm rental practices and problems in the Midwest. Washington, North Central Land Tenure Res. Comt., 1954. 130 p.

Purpose of this study is to provide empirical data for extensive research in farm rents. Author uses selected geographic areas and statistical data to compare cash, crop-share, crop-share-cash, livestock share, and labor-share rental arrangements.

195. TURNER, H. A. A graphic summary of farm tenure (Based largely on the census of 1930 and 1935), U. S. Bur. Agr. Econ., MP-261, 52 p. Dec. 1936.

196. U. S. AGRICULTURAL ADJUSTMENT ADMIN., RECORDS AND ACCOUNTS SECT. Rental and benefit payments analyzed by county and commodity through December 31, 1936. Washington, 1936. 139 p.

A compilation of statistical information on rental and benefit payments made during the calendar year 1936, and analyzed by county and commodity--cotton, wheat, tobacco, corn, sugar, rice, and peanuts.

197. U. S. AGRICULTURAL ADJUSTMENT ADMIN., RECORDS AND ACCOUNTS SECT. Rental and benefit payments analyzed by State, commodity, and program for the calendar year 1933. Washington, 1934. 4 p.

A compilation of statistical information on rental and benefit payments made during the calendar year 1933, and analyzed by State, commodity (cotton, wheat, tobacco, corn-hogs, and dairy products) and program.

198. U. S. AGRICULTURAL RESEARCH SERV. Farm costs and returns, commercial farms by type, size, and location. U. S. D. A. AIB-230, 84 p. June 1961.

Analyzes net farm income which includes the return to operator and family for their labor and management on the farm. Also takes into consideration the return on a farm investment during 1960.

Measures year-to-year changes in farm size, farm organization, land use, crop and livestock production, mechanization, technology, costs, and net returns from different types of commercial farms. Index series covers eleven summary items including gross and net income per farm, production per farm, crop yields, prices received and prices paid, and mechanization. Production ratios and costs are computed annually for each type and size of farm.

199. U. S. AGRICULTURAL RESEARCH SERV. Index number of average value of farm real estate per acre, by States, 1912-59. ARS 43-118: 38-44. Feb. 1960.

Explains the source, limitation, and application of index numbers concerning the net rent and market value of farm real estate. Low index numbers of farm real estate values may be used in farm land valuation problems. Presents a complete index series for each state from 1912 to present.

200. U. S. BUR. OF THE CENSUS. A graphic summary of land utilization. U. S. Census of Agriculture: 1954. Vol. III, Special Reports, Part 4, Chapter 1. Washington, 1956. 192 p.

201. U. S. BUR. OF THE CENSUS. Agriculture: value of farm products by color and tenure of farm operator; a special study by I. Holmes. U. S. Census, 1940. Washington, 1944. 287 p.

202. U. S. BUR. OF THE CENSUS. Graphic summary of farm tenure in the United States; cooperative report. Washington, 1948. 40 p. U. S. Bureau of Agricultural Economics cooperating.

203. U. S. BUR. OF THE CENSUS. Special reports: farm tenure, a graphic summary. Cooperative report. U. S. Census of Agriculture, 1950, 5, pt. 5. Washington, 1952. 89 p.

204. U. S. DEPT. OF AGRICULTURE. The balance sheet of agriculture 1959. U.S.D.A. AIB-214, 36 p. Oct. 1959.

Charts on p. 10-11 show that farm operators "borrow" a substantial amount of capital by means of rental arrangements. Farm rents represent the annual payment for the use of such capital which is analogous to the payment of interest for the use of borrowed funds. "Two-thirds or more of the value of the rented land was owned by nonfarm landlords. These three areas (Corn Belt, Northern Plains and Southern Plains) together accounted for 46 percent of the total value of all farm real estate in the country, and 61 percent of the value of all rented land," p. 11.

205. U. S. DEPT. OF AGRICULTURE. The balance sheet of agriculture 1960. U.S.D.A. AIB-232, 36 p. Aug. 1960.

"Nationally, the average value of farm real estate was $111.46 per acre on March 1, 1960, 9.6 times the net income per acre of $11.57 in 1959. The calculated rate of return on current market values of farm real estate, after all other costs are paid (including an allowance for unpaid labor) has been below the mortgage rate of interest in 4 of the last 5 years. In 1959, the rate was estimated at 3 percent," p. 9.

Charts on p. 10 indicate net income of farm operators and net rents to nonfarm landlords.

Empirical Studies on Rent at the Firm Level

206. ADKINS, W. G., AND GARY, R. B. Some factors in successful rental agreements. Texas Agr. Expt. Sta. Prog. Rpt. 1764, 9 p. Mar. 1955.

207. ALLEGER, D. E. Rental arrangements on crop-share farms: An analysis of contributions and returns. Fla. Agr. Expt. Sta. B. 498, 43 p. June 1952.

208. ALLEGER, D. E., AND THARP, M. M. Current farm leasing practices in Florida. Fla. Agr. Expt. Sta. South Coop. Ser. B. 13, 28 p. June 1951. (Soeast. Region. Land Tenure Comt. pub. 5)

209. ANDERSON, N. J., AND FRENCH, B. L. More farms will be rented. Neb. Expt. Sta. Q. 2(1): 14-16. Summer 1953.

210. BALLINGER, R. A. Stock share renting in Virginia. Va. Agr. Expt. Sta. B. 271, 54 p. May 1930.

211. BAUKNIGHT, L. M. Division of costs and returns under different tenure arrangements and different price and productivity levels. S. C. Agr. Expt. Sta. B. 422, 27 p. May 1955. (Soeast. Region. Land Tenure Comt. pub. 16)

211. BENTON, A. H. Cash and share renting of farms. N. Dak. Agr. Expt. Sta. B. 171, 51 p. Feb. 1932.

213. BERRY, R. L. Improved farm rental method for South Dakota. S. Dak. Agr. Expt. Sta. C. 141, 35 p. June 1958.

214. BERRY, R. L. Share rents and short term farm leases. S. Dak. Agr. Expt. Sta. C. 117, 30 p. May 1955.

215. BERRY, R. L., AND BAU, V. E. Tenant interest in long-term cash and flexible cash leases. S. Dak. Agr. Expt. Sta. B. 480, 36 p. June 1959.

216. BONSER, H. J. Some factors in farm organization and returns to tenants and landlords by type of leasing arrangements... West Tennessee, 1947. Tenn. Agr. Expt. Sta. B. 217, 58 p. June 1950. (Soeast. Region. Land Tenure Comt. pub. 7.)

217. BOYD, V. A. Rental arrangements on tractor and non-tractor farms in the Southern Piedmont. S. C. Agr. Expt. Sta. South. Coop. Ser. B. 21, 30 p. Jan. 1952. (Soeast. Region. Land Tenure Comt. pub. 6.)

218. BUECHEL, F. A. Relationships of landlords to farm tenants. J. Land & Pub. Utility Econ. 1(3): 336. July 1925.

219. BURDICK, R. T. Effects of changing conditions upon landlord and tenant income in Colorado. Colo. Agr. Expt. Sta. B. 451, 54 p. Oct. 1938.

220. CHARLTON, J. L. Social aspects of farm ownership and tenancy on the Arkansas coastal plain. Ark. Agr. Expt. Sta. B. 545, 85 p. Jan. 1955.

221. CONNEMAN G. J. Pasture rental rates and prices paid for standing hay. N. Y. State Col. Agr. (Cornell U.) Farm Econ. 215: 5774-5776. June 1959.

222. CRECINK, J. C. Tenant farmers, South Platte Valley, Colorado. U. S. Agr. Res. Serv. ARS 43-18, 81 p. Aug. 1956.

223. CRECINK, J. C., AND BURDICK, R. T. Farm rental arrangements--Northeastern Colorado irrigated area. Colo. Agr. Expt. Sta. B. 424-A, 53 p. March 1953.

224. CRICKENBERGER, R. S., AND GIBSON, W. L. Farming as a part owner. Va. Agr. Expt. Sta. B. 504, 42 p. Apr. 1959.

225. DAVIS, K. C., AND LILES, H. Rental agreements and resource contributions on irrigation leases in Caddo County, Oklahoma. Okla. Agr. Expt. Sta. Tech. B. 558, 27 p. July 1960.

226. DICKERSON, J. H. Proposed adjustments in the farm tenancy system in Missouri. Mo. Agr. Expt. Sta. Res. B. 270, 63 p. Dec. 1937.

227. ELROD, J. C., YOUNG, D. E., AND FULLILOVE, W. T. Farm rental arrangements in Georgia. Ga. Agr. Expt. Sta. B. 220, 50 p. May 1942.

228. FALCONER, J. I. Ohio farm leases. Ohio Agr. Expt. Sta. Res. B. 683, 16 p. Dec. 1948.

229. FEDERAL RESERVE BANK OF BOSTON. Capital requirements of Vermont farmers. New Eng. Farm Finance News 16(1): 2-4. Jan. 1961.

Outlines some of the problems concerning the role of capital formation, land values, and net returns to land. Uses 101 Vermont farms as a framework for analysis.

230. FELLOWS, I. F., ed. Budgeting, tool of research and extension in agricultural economics. Conn. (Storrs) Agr. Expt. Sta. B. 357, 45 p. Aug. 1960.

231. GIBSON, W. L. Renting farms in southside Virginia. Va. Agr. Expt. Sta. B. 523, 36 p. Feb. 1961. (Soeast. Region. Land Tenure Comt. pub. 38.)

232. GIBSON, W. L., ELLIS, H. H., AND SPIES, E. G. Virginia farm lease guide. Va. Agr. Expt. Sta. B. 491, 23 p. Apr. 1958. (Soeast. Region. Land Tenure Comt. pub. 30.)

233. GRAY, L. C. How to figure what your farm is really worth. Farm & Fireside 52(5): 17-24. May 1928.

234. GREISINGER, P., AND BARR, G. W. Agricultural land ownership and operating tenures in Casa Grande Valley. Ariz. Agr. Expt. Sta. B. 175: 281-292. Nov. 1941.

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236. HARRIS, J. T. An analysis of capital use on owner-operated farms in the lower Piedmont area of Georgia. Champaign, Ill., 1958. 193 p. Thesis (Ph. D.) University of Illinois, 1958.

237. HARRIS, K. Factors that give value to land or basic land values. Ariz. Agri. Expt. Sta. B. 223, 18 p. July 1949.

238. HIBBARD, B. H., AND HOWE, H. The farm lease in Wisconsin. Wis. Agr. Expt. Sta. B. 391, 26 p. Feb. 1927.

239. HILL, E. B. Farm and field rental agreements. Mich. State Col. Agr. Ext. Serv. B. 156, 15 p. Apr. 1951.

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241. HILL, H. L., AND STANIFORTH, S. D. A modification of leasing arrangements to expand farm opportunities. Wis. Agr. Expt. Sta. B. 213, 23 p. Aug. 1959.

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246. KRISTJANSON, B. H., AND SOLBERG, E. Farm rental bargaining in North Dakota. N. Dak. Agr. Expt. Sta. B. 372, 30 p. Mar. 1952.

247. KRISTJANSON, B. H., AND VOELKER, S. W. Legal aspects of renting farms in North Dakota. N. Dak. Agr. Expt. Sta. B. 368, 17 p. June 1951.

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255. ORR, A. E. Leasing Washington farms. Wash. Agr. Expt. Sta. B. 385, 39 p. Jan. 1940.

256. PECK, M. A plan for adjusting cash rent to changes in the prices of farm products. Iowa Agr. Expt. Sta. B. 295: 191-218. Oct. 1932.

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W. H. Pine, M. L. Otto, and J. E. Pallesen, joint authors.

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263. TEJADA, G. A. Comparative returns to resources used on different types and classes of farms by major types of farming areas in Ohio and neighboring states. Columbus, Ohio, 1959. 167 p.
Thesis - (Ph. D.) - Ohio State University, 1959.

264. TIMMONS, J. F. Landlord-tenant relationships in renting Missouri farms. Mo. Agr. Expt. Sta. B. 409, 43 p. Aug. 1939.

265. TIMMONS, J. F. Rent for your farm? Iowa Farm Sci. 5(10): 147-149. Apr. 1951.

266. TIMMONS, J. F., AND ARTHUR, I. W. How to get improvements on a rented farm. Iowa Farm Sci. 5(1): 72-73. July 1950.

267. TOUSSAINT, W. D. Farm rental obstacles to land improvements and suggested solutions. (Abs.) Iowa State Col. J. Sci. 29: 520-521. Feb. 1955.

268. TURNER, H. A. The share renting of farms in the United States. Internatl. Rev. Agr. Econ. (n. s.) 1(1): 500-542. Oct. 1923.

269. TURNER, H. A. Systems of renting truck farms in southwestern New Jersey. U.S.D.A. B. 411, 20 p. Sept. 14, 1916.

270. U. S. AGRICULTURAL RESEARCH SERV. [Farm Lease] U. S. Misc. Pub. 836; 837; 838. 16 p., 16 p., 16 p., 1961.

Contents: 836 Your cash farm lease by M. Harris.
837 Your livestock-share lease by M. Harris.
838 Your crop-share-cash farm lease by M. Harris.

271. U. S. AGRICULTURAL RESEARCH SERV. [Farm Rents and Leases] U. S. Farmers' B. 2161; 2162; 2163; 2164. 16 p., 23 p., 11 p., 20 p., 1961.

Contents: 2161 Your farm renting problem by M. Harris.
2162 Your farm rent determination problem by M. Harris and V. Hurlburt.
2163 Your farm lease checklist by M. B. Harmon and M. Harris.
2164 Your farm lease contract by M. Harris and H. L. Hill.

272. U. S. DEPT. OF AGRICULTURE. Landlord-tenant cooperation; use of the flexible farm lease. Washington, 1940. 8 p.

273. WALKER, W. P., AND DEVAULT, S. H. Farm tenancy and leasing systems in Maryland. Md. Agr. Expt. Sta. B. 352: 29-78. July 1933.

274. WILCOX, E. V. Lease contracts used in renting farms on shares. U.S.D.A. B. 650, 36 p. Feb. 26, 1918.

275. WILLIAMS, M. S., AND WILLIAMS, C. W. Rental agreements. Irrig. Engrn. & Maintenance 5(5): 16. May 1955.

General

276. ADDISON, L. G. More thoughts on farm rents. Land Agents' Soc. J. 54(11): 507-515. Nov. 1955.

The author states that rents should be based on the current value of farms by taking a reasonable percentage interest return, having covered expenses, so that they compare favorably with any other investment of the same security. It is the demand for farms that governs their price, and the profitability and security of farming that create the demand.

277. Agricultural rents and interest on improvements. London, Country Landowners' Assoc. Feb. 1956. 35 p.

The main purpose of this paper is to give some indication of the rental level which would be necessary to provide owners with an economic return, and to allow them to fulfill their statutory obligations. At the same time, the study shows how this can be achieved by the adoption of a new approach.

"Rent is economic only if it provides a reasonable return on the owner's capital after allowing for all the necessary outgoings. The latter consist of statutory charges, maintenance, insurance, and management, depreciation, and some provision for inflation," p. 7.

278. ASHBY, A. W. Economic return on reclamation and improvement of land. Farm Econ. 6(5): 111-117. June 1949.

States that farm rents do not necessarily rise or fall in exact proportion with variations in physical productivity. In Great Britain land has been the residual factor in the distribution of agricultural income. States that from the individual farmer's point of view the tests of economy in reclamation are: (1) The probabilities of conducting future production with assurance of at least standard returns on labor and capital; (2) the probabilities of physical and economic stability of the improvement; and (3) the net return on capital invested in the improvement.

279. BATSON, H. E. A selected bibliography of modern economic theory 1870-1929. London, Routledge, 1930. 224 p.

Part I. Subject bibliography: The scope and method of economic science, systematic treatises, production, value and distribution, personal distribution, fluctuation, and public finance.
Part II. Author bibliography: English, German, French authors; index of authors.

280. BUSH, D. G. Farm rents. Land Agents' Soc. J. 51(11): 488-492. Nov. 1952.

"Rent is usually that which is left from the produce of the land after allowing for the cost of production and a reasonable return to the farmer for his troubles and the investment of his capital. Rent assessed upon this basis seems to be satisfactory so far as the tenant farmer is concerned, but may not be satisfactory to the landlord. Rent is surplus profit, and the line between profit and surplus profit is regulated by competition," p. 489.

281. CHAPMAN, S. J. The incidence of some land taxes and the dispersion of differential advantages. Econ. J. 22: 489-492. Sept. 1912.

Indicates that the fundamental characteristics of the incidence of certain taxes connected with land are determined by the relative supplies of land endowed with different degrees of the differential advantages for which rents are paid or by the dispersion of relevant differential advantages.

"Any tax which relatively discourages the extensive use of land tends most to raise rent when differential advantages are dispersed most unevenly, and... when they are dispersed evenly rent may be reduced.... Any tax which relatively discourages the intensive use of land tends most to lower rent when differential advantages are thus unevenly dispersed, and ... when they are dispersed evenly rent may be increased," p. 492.

282. DAWE, C. V. Low rents--poor farming? Country Landowner 4(4): 206-208. Aug. 1953.

Answers the question of why poor farming is associated with low rents, and good farming associated with high rents.

"In general terms one can say that the more highly rented a farm the more possibilities there are, not only of increasing the value of the output per acre, but in varying the types of products," p. 207.

283. DENMAN, D. R. The future of land tenure. Field 204 (5312): 839-840. Oct. 28, 1954.

Low rents coupled with excessive farm maintenance is the salient cause of weakness in the leasehold system in Britain.

"Low rents are behind the changing character of many estates. The squire has turned farmer.... Erstwhile estates of leasehold have become vast owner-occupied properties.... Low income rather than high taxation is the primary trouble of the rural estate owner," p. 839.

284. DENMAN, D. R. The future ownership of agricultural land. Chartered Surveyor 92(6): 284-290. Dec. 1959.

Traces briefly the changes in farm rents and stable features in economic affairs and social ideas which have influenced land ownership, and deduces from these factors the consequences that could follow.

"Every step should be taken to maintain and multiply the income and capital of estates. Rent must be raised to satisfactory levels, advantage taken of tax concessions and capital resources exploited to achieve the optimum advantage.... High rents are not harmful to tenants; if they were they would be harmful also to landlords....High rents stimulate the well-being of both," p. 289.

285. DENMAN, D. R. Investigating land ownership. Field 202(5262): 841-842. Nov. 12, 1953.

Discusses some of the social, economic, and political consequences of land ownership and problems concerning rent and agricultural income. Stresses the need for advanced research in the field of farm rent.

286. DENMAN, D. R. The paradox of rural land investment in Britain. Land Econ. 32(2): 109-117. May 1956.

"Britain is still a land where tenant farmers outnumber men who till their own soil. Recent national surveys show the percentage of let holdings to be 70% of the total number of holdings in the country. Tenant status in Britain is sometimes misunderstood abroad in places where the word 'tenant' can be socially demeaning. Tenant farmers are among the foremost agriculturists of Britain, men farming wide acreages and controlling a commensurate wealth. Measured by their capital investment in agriculture, many tenant farmers are the peers of their landlords. Tenancy is securely anchored in statutory safeguards and the tenant is free to employ all his capital resources in farming enterprise instead of locking away a goodly part of them in land purchase and mortgate equity. In Britain the demand for farms to hire outstrips the supply," p. 109.

287. DENMAN, D. R., SWITZER, J. F. Q., AND SAWYER, O. H. M. Bibliography of rural land economy and land ownership, 1900-1957. Cambridge, Cambridge U. Dept. Estate Mangt., 1958. 412 p.

A full list of works relating to the British Isles and selected works from the United States and western Europe.

As the title denotes, the scope of the bibliography is exclusively rural. It does not extend to urban aspects of land ownership and tenure or include works which deal with these subjects in a very general way. Only incidentally does the bibliography cover agricultural techniques, agriculture economics, marketing, education, and similar specialties.

288. HURD, A. The problem of farm rents. Country Life 109(2825): 717-718. Mar. 9, 1951.

Discusses the problem of inadequate farm rents in Britain that are not sufficient to cover cost of maintenance and leave the landlord an equitable rate of return on his capital investment.

Farm rents have increased 20 percent since World War II; however, landlords' net returns have declined substantially, both in terms of money and in purchasing power.

289. KELLY, J. D. The effect of seasonal conditions and falling commodity prices on rural land values. Valuer 15(4): 212-19. Oct. 1958.

States that seasonal conditions exert an influence on rural land values--poor seasons having an adverse, and good season a buoyant effect. While seasonal conditions alone may reduce income from grazing and farming, such conditions plus falling farm prices have catastrophic effects on the rural land market in Great Britain.

290. LOCK, A. A. Rents in the melting pot. Chartered Land Agents' Soc. J. 59(6): 218-219. June 1959.

Describes the bases of land valuation and rental determination from the point of view of available evidence, comparison, and judgment. Analyzes rent determination after making deductions for cost of land, buildings, living accommodations, and other special items.

291. McLAUGHLIN, F. J. Proper capitalization rates. Valuer 16(3): 154-155. July 1960.

Ascertains the market value of land by use of the net rent multiplier table. Land values are resolved by consideration of comparable sales--in themselves a source of buyer behavior information. The author proposes that pertinent capitalization rate data be translated by using the net rent multiplier table and market data.

292. A new approach to farm rents. Country Landowner 6 (pt. 3): 147-149. June 1955.

Recommends a re-examination and re-evaluation of farm rents in Britain. Discusses the plight of the owner-occupier and the fact that he fails to realize how the general level of farm rents is related to his present financial difficulties.

"Farm rents represent 6 percent of a tenant farmer's outlays as compared with 12 percent during pre-World War II days.... Landlords' costs of providing and maintaining fixed equipment are ignored in the assessment of farm rents," p. 147.

293. PRICE, O. T. W. The treatment of rent in agricultural cost assessment. Farm Econ. 6(10): 307-315. Mar. 1951.

Analyzes farm rents from a cost assessment viewpoint: The allocation of rental costs between land and building, the allocation of rent to buildings in agricultural production costs, rent in relation to crop costs, rent in relation to joint products, rent in relation to land improvement costs, grassland rentals, rent in relation to livestock production, and rent allocation to a single enterprise which is part of an integrated combination of enterprises.

294. RIDLEY, V. Nationalize rented farmland? Country Landowner 4(5): 252-255. Oct. 1953.

Elaborates on the following aspects of farm rent: (1) Farm rents should be increased to provide the necessary capital to increase agricultural production; (2) there is great need for increased agricultural production and capital investment in land and equipment; and (3) nationalization would make land available for distribution to capable tenants.

295. ROBINSON, JOAN. The accumulation of capital. London, Macmillan, 1956. 440 p.

"An increase in population drives up rents, reduces the size of holdings, reduces average product per head, and reduces the excess per family of product over rent.... A decline in population would reduce total rents, which are higher under monopoly, but, when the population has reached that size, competitive demand for land establishes the same level of rents as would obtain under monopoly, " p. 289.

"The rise in the level of rents is governed by the rise in the marginal product of land due to the increase in population. If the rise in intensity of cultivation raises the marginal product of land sufficiently, rents rise by more than the total surplus, so that interest is squeezed, and the rates of interest falls," p. 292.

"When wages are reduced to subsistence level population can increase no further, the total surplus is at the technically possible maximum, and its division between rent and interest is governed by the ratio of the marginal product of labor to that of land," p. 293.

296. ROBINSON, JOAN. The rates of interest. London, Macmillan, 1952. 170 p.

"Examines the economy at two points of time divided by an interval in which technical progress has taken place. The cost of wheat, reckoned in wage-units, has fallen, but demand for wheat is unchanged and so is the amount available. The price of wheat, relatively to wages, is constant, while the prices of manufactures have fallen with their costs. The real wage per man is constant in terms of wheat, and has risen in terms of manufactures. The whole of the fall in cost of production of wheat has accrued to land owners as an increase in rent. The terms of trade between industry and agriculture have turned in favor of agriculture.

"Now, still with full employment, imagine that the population has increased. The demand for wheat has risen with the number of mouths. The price of wheat has risen, relatively to wages, to whatever extent is necessary to cut back demand to equality with the fixed supply (however inelastic an individual's demand may be, his consumption must suffer a reduction at some point as his real purchasing power falls). Rent per acre has been increased (in terms of wage units) by the rise in the price of wheat as well as by the fall in the cost of an acre's output of wheat. The real wage in terms of wheat has fallen," p. 113.

297. SCOTT, J. L. Farm rents. Roy. Inst. Chartered Surveyors J. 88(2): 101-102. Aug. 1955.

Discusses farm rents in the eastern counties of England: "It is the landlord who has to provide the land and the fixed equipment, and who is in normal cases responsible for proper management, insurance and repair," p. 101.

298. SMITH, J. H. The influence of higher rents on farming systems and methods. Farm Econ. 8(5): 7-10. 1956.

Summarizes the farm rent situation in Great Britain as follows: "(1) Agricultural land tends to be used most efficiently when rents are closely related to the market worth of land; (2) land which already commands its proper rent cannot, in general, sell at a higher rent; and (3) many farms would command, in the open market, higher rents than those paid at the present time. (4) If rents were brought into proper relationship to the worth of land many of the farmers affected would intensify their production and thus, wholly or partially, offset the higher costs. A small number of incompetent farmers might be forced to vacate their farms," p. 10.

299. SUTCLIFFE, P. Investment of capital in land: Outlook for landlords. Chartered Surveyor 91(3): 136-141. Sept. 1958.

Suggests the raising of farm rents to economic levels as an important initial step toward making corporate land-owning an attractive proposition.

300. TOCUMPETER, P. W. Letting farms. Chartered Surveyor 92(9): 473-475. Mar. 1960.

Describes the length of tenancies, methods of letting or disposal, and letting by tender.

"According to the world census of 1950, just over 60 percent of all agricultural holdings over 5 acres in England and Wales were rented. In 1943, the National Farm Survey put the figure at 66 percent. Assuming that the trend toward owner-occupation has continued since 1950 at approximately the same rate, it is reasonable to suppose that about half the holdings of England and Wales, possibly about 15 million acres, are still let by landlords to tenants," p. 473.

301. TURVEY, R. The economics of real property. London, George Allen & Unwin, 1957. 150 p.

Analyzes the equilibrium level of rents and the opportunity cost of capital in agriculture. States that the equilibrium level of rents is that level at which the number of entrants to farming will equal the number of retiring farmers. This equilibrium requires a certain relationship to exist between the earnings of farmers and their best alternatives outside agriculture.

A farmer's earnings will equal the surplus which he can earn on a farm less the rent of that farm, while his alternative, his transfer cost, equals what he could earn outside agriculture less the rent he would have to pay for a house and an allowance for differences in non-pecuniary advantages. A change in any of these magnitudes will tend to upset the equality of entry to and retirement from farming and lead to change in the level of rents.

302. VERDIN, R. B. Farm rents. Country Landowner 6 (pt. 5): 293-298. Oct. 1955.

Suggests that farm rents be fixed on building values in order to present a fair and practical method of recouping landowners according to their liabilities. Recommends raising farm rents from their present levels to a realistic and economic figure. States the following causes of low rents in Great Britain: (1) Increased farm rentals will increase taxes for land owners; (2) increased rents will be set by requests for increased capital outlays for fixed equipment; and (3) present approach to assessing rents and the present methods of rental valuations are both basically antiquated.

303. VERNEY, R. B. The future of the landlord-tenant system. Chartered Surveyor 93(9): 472-475. Mar. 1961.

Analyzes the distribution of farming profits, the 1958 Agriculture Act, farms let by tender, and functions of the landlord. Evaluates the landlord's share from total farming net income in Great Britain from 1935 to 1958. The landlord's share has become precarious. The author states that in 1937 the surplus (net rent) earned by agriculture over and above certain costs of production was 165 million pounds and was divided as follows: 26 percent to the landlords, 34 percent to tenant farmers, and 40 percent to hired agricultural workers. By 1957 the figure had risen to 700 million pounds, an increase of 320 percent. The landlord's share was now 12 percent, the tenant farmer's 45 percent, and the hired agricultural worker's 43 percent. While the total had increase by 320 percent the landlord's share had been halved and the landlord's increase had been only 92 percent.

Therefore, if the landlord's farming is more successful than his land ownership he should consider selling his farm and remaining on as a tenant; while if his land ownership is the more successful he should be prepared to let his farm to someone more suited to farming it.

The division of profits is based on Ricardo's principle of labor representing one unit, capital two, and the land three.

304. WALMSLEY, R. C. Farm rental arbitrations. Roy. Inst. Chartered Surveyors J. 32(2): 106-113. Aug. 1952.

Establishes principles for the determination of a proper farm rent to be applied in specific cases of farm rent arbitrations.

305. WALMSLEY, R. C. Farm rents. Chartered Surveyor: 88(10) 552-556. Apr. 1956.

Approaches the problem of farm rents from three points of view: The problem, the procedure, and the principles of rent for the working of that procedure.

"Rent being a basic factor in the ascertainment of market value, it is plainly inappropriate to start from that value when considering what figure of rent would be an adequate return," p. 553.

306. WALMSLEY, R. C. Farm rents--A new definition. Chartered Surveyor 91(4): 189-193. Oct. 1958.

Recommends that a new attitude toward farm rents be required and accepted in principle, and that the rent properly payable for a holding is the rent obtained on an open market.

307. WARD, J. T. Farm rents and tenure. Land Agents' Soc. J. 56(11): 420-426. Nov. 1957.

Reviews the possible ways by which the return to the landlord can be brought more into line with the economic productivity of the land and the permanent equipment the landlord provides.

Essentially, the author attempts (1) to examine proposals for bringing farm rents into line with farm productivity, and (2) to suggest what levels of farm rent could be regarded as "economic."

308. WARD, J. T. Farm rents and tenure. London, Estates Gazette, 1959. 95 p.

Examines the past and present farm rent and tenure situation in Great Britain. Explains the tripartite system of land tenure existing among the landlord, farmer, and farm worker. Tables and charts are included. Appendix: Valuation for rent, p. 89-95.

309. WARD, J. T. Landowners' capital in agriculture. Farm Econ. 7(2): 49-54. Aug. 1952.

Evaluates two methods of obtaining the capital value of agricultural land: Comparison of sale values of farms; and income capitalization. The reliability of each method was tested by comparing the results obtained for 1925 and 1931. The close approximation of the results suggests that this technique could be used with some confidence for later years.

310. WARD, J. T. A note on rates of capitalizing rental values of agricultural properties. Land Agents' Soc. J. 54(9): 419-422. Sept. 1955.

This study is based on rental values and farm sales recorded in the Estate Exchange Year Book and the Estates Gazette. The purpose of this article is to express in quantitative terms the wide variations in capitalization rates of farm property in any given year, and secondly to suggest how averages may be constructed, so that despite this range of capitalization rates some comparison may be made between rates in different years.

311. WARD, J. T. The rate of yield on investment in tenanted farms, England and Wales, 1937-9 to 1951. Farm Econ. 8(4): 27-29. 1955.

The purpose of this paper is to distinguish between "Consols" and tenanted farms as a form of investment. "Consols" have a fixed nominal rate of interest so that the actual rate of yield varies inversely with the sale price in the market.

"This is not true of investment in tenanted farms, as here the rate of yield varies not only with the capital value of the property but also with the contract rent payable, so that it would be possible to have a high degree of correlation between the sales value of tenanted farms and of 'Consols' without a similar

degree of correlation between the yields on the two classes of investment. For this reason it is desirable to study the relationship between the yields on these two classes of securities as well as between their capital values," p. 27.

The relationship between current rent and purchase price gives no true indication of the future rate of yield as the purchaser may be able to secure an increase in rent.

A comparison of the yields and capital values of tenanted farms and of Consols shows that the rate of yield on both classes of security had fallen continuously from the outbreak of the war until the end of the cheap money policy in 1948, but that returns on investment in farm property suffered the greater fall.

312. WHETHAM, E. H. Rent and agricultural price review. Econ. J. 68(271): 605-610. Sept. 1958.

Farm rents are increasing on new lease arrangements; however, less slowly than before on old leases. The aggregate figure for rent and interest has increased by 3 million in each of the last two years.

"Tenure provisions of the Agriculture Act, 1947, kept agriculture rents from rising with the rise in farm incomes; for the arbitrators who have adjudged rents between landowners and sitting tenants seem to have based their awards mainly on the average of existing rents, and not on the rent which an incoming tenant would offer for a new lease. Hence during the 1940's, rents were low in relation both to farm income and to maintenance costs, both of which had risen sharply during the War; the average net income accruing to owners of tenanted farms can have been only a few shillings per acre for most of the post-war decade," p. 606.

"The sale value of agricultural land is determined by a wide range of factors--the value of house property, the possibility of capital appreciation, the favourable treatment of land for death duties, the availability of mortgages, and the recent and expected rate of interest," p. 609.

313. WICKSTEED, P. H. The common sense of political economy. V. 2. London, Routledge, 1933. 871 p.

States that income from fixed capital represents a differential payment similar to the rent of land.

"If you take a number of persons who possess different talents and arrange them in the order of the marginal value to the community of the exercise of their talents, you will have near the origin an individual the product of whose efforts per annum is relatively high, and as you go forward you will come to individuals the exercise of whose talents produces a smaller and smaller pecuniary return. If we draw a line on the level of the return to the efforts of the least efficient of the men in question, the area above it will represent the excess over that minimum return that accrues to the more able individuals; and simply because this is a curvilinear figure the revenue it represents has actually been called 'rent of ability.'

"It is clear that at this rate any excess in the value of one article over another that is nominally the same would be entitled to the name of 'rent.'... Indeed, if any two things could perform the same function, but one of them could perform more of it than the other, you might regard the excess of the price of one over the price of the other as a case of 'rent.' And in very truth that is all that the Ricardian law of rent amounts to. If two pieces of land can each of them yield wheat to labour and capital, but one yields more wheat than the other, the value of that land will be proportionately higher.... In fact the

Ricardian law of rent is nothing whatever but a statement that the better article commands an advanced price in proportion to its betterness. The introduction of the hypothesis that the lowest quality of the article is to be had for nothing would make the whole price of the better article due to its 'betterness.' If there is no such gratuitous supply, then only the excess of the price of the more expensive article in the market would be due to its 'betterness,' and the rest to its 'goodness' up to the point of lowest goodness in the market," p. 568-569.

314. WILKIN, H. O. The Agriculture Act, 1958, and agricultural rents. Land Agents' Soc. J. 58(5): 167-179. May 1959.

Summarizes the role of open market farm rents in the context of land valuation problems, landlord-tenant relations, and practical farm valuation methods.

"The rent properly payable in respect of a holding shall be the rent at which, having regard to the terms of the tenancy, the holding might reasonably be expected to be let in the open market by a willing landlord to a willing tenant, there being disregarded any effect on rent of the fact that the tenant who is a party to the arbitration is in occupation of the holding," p. 167.

315. ZUCKERMAN, S., POWELL, J. E., DENMAN, D. R. AND OTHERS. Land ownership and resources. Cambridge, Cambridge U. Press, June 1958. 136 p.

Partial contents: Ch. 2, Natural resources and the national estate; Ch. 3, Development policy and the national estate; Ch. 7, The estate in land and the employment of resources.

History

316. BAYLDON, J. S. The art of valuing rents and tillages. London, Longman, Rees, Orme, Brown, and Green, 1827. 188 p.

Ascertains what rent agricultural land will bring in the market place.

"To fix a proper rent upon land, it is necessary to enquire into several local circumstances: such as its quality, whether light or strong; its soundness, whether upon a clayey or gravelly subsoil; whether it be well watered, without being over retentive and flooded; its tendency to sell well, and carry a proportionate quantity of stock; its contiguity to markets and manure; the value of agricultural produce in the neighboring markets; the poor-rates, taxes, and tithe; the expenses of labor in the neighborhood; and many other expenses and advantages which are different in almost every parish," p. 15-16.

"A better way appears to be, after making a value of the gross produce, to deduct all the expenses and outgoings of the farm, and afterwards ten percent upon the capital engaged in it; and the remainder will probably be a fair rent. But there is still another mode, which is conceived to be the best, and is therefore adopted in the following estimates. To select one acre of the best arable land in the farm, and to value the labor, expense, and produce attendant upon it, through the whole of a four-years' course of husbandry; consisting of turnips, barley, clover, and wheat; and, after taking an average of the profit, to deduce therefrom ten percent for the farmer's stock and capital; the remainder is left for rent," p. 18.

317. BONAR, J. Letters of David Ricardo to Thomas Robert Malthus 1810-1823. London, Clarendon Press, 1887. 249 p.

Partial contents: Ch. 29, The progress of wealth has a tendency to lower profits and increase rent; Ch. 39, Low prices are not necessarily a

discouragement to production; Ch 53, Rent is always a transfer, and never a creation of wealth; Ch. 73, It is not demand, but supply, which regulates value, and supply is itself determined by comparative cost of production.

318. BONAR, J. AND HOLLANDER, J. H. Letters of David Ricardo to Hutches Trower and others, 1811-1823. London, Clarendon Press, 1899 240 p.

Partial contents: Ch. 38, Discussing the view of Malthus on price, cost, and rent, pointing out his misrepresentations of Ricardo; Ch. 49, The price of corn must be referred not only to supply and demand but also to cost of production.

319. BRITTON, D. K., AND RHEE, H. A. The rent of agricultural land in England and Wales, 1870-1946. London, Central Landowners' Assoc., 1949. 58 p.

This study consists of two separate enquiries: (1) "An enquiry into agricultural rents and the expenses of landowners in England and Wales, 1938 and 1946;" and (2) "The rent of agricultural land in England and Wales, 1870-1943."

The first phase of the study was carried out jointly by the Central Landowners' Association and the Ministry of Agriculture and Fisheries. This enquiry covered 341 estates holding 1,968,401 acres of land in 1946.

The second phase was prepared in its entirety by the University of Oxford Agricultural Economics Research Institute. The objective of this research was to present a comprehensive review of the trends of agricultural rents in Great Britain during the last 75 years, since none could be found and no record of such a comprehensive study existed.

320. BROWN, T. L. Rent: Its essence and its place in the distribution of wealth. Arena 9(49): 81-96. Dec. 1893.

Purposes are threefold: (1) Make plain the true meanings of the word "value"; that is, to distinguish between intrinsic value and extrinsic value.

"The intrinsic value of a thing is its power to upbuild, to enlarge, to satisfy rational wants, and to enable man to fulfill his destiny. The extrinsic value of a thing is nothing more nor less than its power to exchange for other things--commodities or money. This value of a thing is just as much as it will bring," p. 82.

(2) To illustrate geographically what ground rent is, and how it operates in the distribution of products of the agricultural industry.

(3) To distinguish between economic rent, ground rent, speculative rent, and competitive rent.

321. CANNAN, E. A history of the theories of production and distribution in English political economy. London, King, 1924. 422 p.

Partial contents: Ch. 6, The idea of distribution; Ch. 7, Pseudo-distribution; Ch. 8, Distribution proper.

322. HUNT, H. G. Agricultural rent in south-east England, 1788-1825. Agr. Hist. Rev. 7(2): 98-108. 1959.

Traces the course of aggregate rents in southeast England. Attempts to discover how quickly and in what ways rents were adjusted to the changes in the

fortunes of the tenants, and when the actual turning-points came. Makes a detailed examination of estate papers and other material which throw light on questions of rent determination and trends in rent payments over time. Makes a contribution concerning the analysis of changes in agricultural rent in southeast England.

"Agricultural rent increased between 1788 and 1812, first at a fairly modest rate, but later, after 1805, very rapidly. The close correlation between rents and corn prices shows that the landlord was quick to participate in the 'unearned' increase in farmers' incomes.... Good harvests between 1813 and 1815 called a halt to rising farming profits, and rents consequently ceased their upward trend." p. 107.

323. MALTHUS, T. R. An inquiry into the nature and progress of rent, and the principles by which it is regulated. London, Murray, 1815. 61 p.

Malthus stated three reasons for the appearance of rent: (1) Land produced more than sufficient produce to maintain the cultivators; (2) the produce of the soil had the special attribute of creating its own demand (by increasing population); and (3) fertile land was comparatively scarce. Malthus said that what caused rent was a change in the relationship between the price of produce and the cost of producing it. If the price increased, or the cost declined, then rent appeared on land that was already in cultivation.

"It may be laid down then as a general truth, that rents naturally rise as the difference between the price of produce and the cost of the instruments of production increases. It is further evident, that no fresh land can be taken into cultivation till rents have risen, or would allow of a rise upon what is already cultivated. Land of an inferior quality requires a great quantity of capital to make it yield a given produce; and, if the actual price of this produce be not such as fully to compensate the cost of production, including the existing rate of profits, the land must remain uncultivated. It matters not whether this compensation is effected by an increase in the money price of raw produce, without a proportionate increase in the money price of the instruments of production, or by a decrease in the price of the instruments of production, without a proportionate decrease in the price of produce. What is absolutely necessary, is a greater relative cheapness of the instruments of production, to make up for the quantity of them required to obtain a given produce from poor land. But whenever, by the operation of one or more of the causes before mentioned, the instruments of production become cheaper, and the difference between the price of produce and the expenses of cultivation increases, rents naturally rise. It follows therefore as a direct and necessary consequence, that it can never answer to take fresh land of a poorer quality into cultivation, till rents have risen or would allow of a rise, on what is already cultivated," p. 27-28.

324. MARSHALL, ALFRED. On rent. Econ. J. 3: 74-90. Mar. 1893.

Compiles the major results of modern economic analyses on rent heory and applies them to the problem of rent and its relation to value.

"The rent of land appears to differ in degree rather than in kind from the net income yielded by other agents of production, the supply of which may be taken as fixed for the time under discussion, whether that be long or short.... The rent of land is seen, not as a thing by itself, but as the leading species of a large genus, though indeed it has peculiarities of its own which are vital from the point of view of theory as well as practice," p. 75-76.

"Producer's Surplus is a convenient name for the genus of which the rent of land is the leading species. Producer's Surplus is the excess of the gross receipts which a producer gets for any of his commodities over their prime cost; that is, over

that extra cost which he incurs in order to produce those particular things, and which he could have escaped if he had not produced them," p. 76.

"The rent which land will yield for one kind of product, though it does not directly enter into those expenses, yet does act as the channel through which a demand for the land for that kind of produce increases the difficulties of supply of other kinds; and thus does indirectly affect their expenses of production. This can be extended to the ground rents of factories which are applicable to several trades, the quasi-rents of their machinery; and to the rents of rare natural abilities, and the quasi-rents of trained skill, when they are not limited to a single occupation," p. 89-90.

325. MARSHALL, ALFRED. Principles of economics. Ed. 8. London, Macmillan, 1920. 871 p.

"In a sense, all rents are scarcity rents, and all rents are differential rents. But in some cases it is convenient to estimate the rent of a particular agent by comparing its yield to that of an inferior (perhaps a marginal) agent, when similarly worked with appropriate appliances. And in other cases it is best to go straight to the fundamental relation of demand to the scarcity or abundance of the means for the production of these commodities for making which the agent is serviceable," p. 412.

Concerning quasi rents Marshall states: "All old investments of capital earn quasi rents which govern their values. Interest applies only to the cases of liquid capital and new investments, in which it is accorded an influence upon 'normal supply price.' The difference is one of degree and the dividing line is neither sharp nor distinct, but gradually interest shades into quasi rent as the investment becomes settled in form and committed to a particular field of enterprise," p. 412.

326. NICHOLSON, J. S. The relations of rents, wages, and profits in agriculture, and their bearing on rural depopulation. London, Sonnenschein, 1906. 176 p.

Partial contents: Ch. 1, The history of agricultural rent in England; Ch. 2, Agricultural capital and profits; Ch. 3, Agricultural wages.

327. RICARDO, DAVID. The principles of political economy and taxation. London, J. M. Dent, 1957. 300 p.

Partial Contents: Ch. 1, On value; Ch. 2, On rent; Ch. 3, On the rent of mines; Ch. 4, On natural and market price; Ch. 5, On wages; Ch. 6, On profits; Ch. 10, Taxes on rent; Ch. 20, Value and riches, their distinctive properties.

328. ROGERS, J. E. T. A history of agriculture and prices in England, from the year after Oxford parliament (1259) to the commencement of the Continental War (1793); compiled entirely from original and contemporaneous records. Oxford, Clarendon Press, 1866-1902. 8 v.

The author describes rent as follows:

"Rent may be of two kinds:--An economic rent, strictly so defined, in which the tenant-farmer, having theoretically entire discretion in adopting and continuing his calling, and absolute facility for transferring his tenure from one holding to another without appreciable loss, procures the mean rate of profit which other industrial avocations are reputed to have, in the following of which capital and skill are fluid and mobile, and can therefore be employed with no more risk in one direction than another. This is the theory of profit held by economists of the speculative school, who having derived their illustrations mainly from the modern

money market, have written about agricultural and manufacturing capital as though it could be manipulated with almost as much ease as a balance at a banker's or an investment in consols can be. But it is almost superfluous to say that such an economic rent has never been in existance. It is true that the freedom of a tenant in the first occupancy of agricultural land is apparently perfect. I say apparently, for there may and generally does exist an urgent demand for the material on which to exercise capital and skill, especially if the industry be the only one possible, and therefore the discretion in making a contract for occupancy is or has been generally curtailed. But immediately on the tenant entering into possession his freedom is at an end. He cannot extricate himself from his holding without serious loss, and this liability of his has been the lever by which unscrupulous landowners and unscrupulous agents have raised rents, have appropriated the tenant's capital, and have brought British agriculture to its present (1887) distressful condition. Under the threat of the loss which eviction involves, a landowner can always gradually ruin his tenant, and many have done so, not indeed without ultimate damage to themselves," vol. 5, p. 801-802.

329. SMITH, ADAM. An inquiry into the nature and causes of the wealth of nations. New York, Random House, 1937. 976.

Partial contents: Ch. 11, of rent of land--Part 1, of the produce of land which always affords rent; Part 2, Of the produce of land which sometimes does, and sometimes does not, afford rent; Part 3, Of the variation in the proportion between the respective values of the sort of produce which always affords rent, and of that which sometimes does and sometimes does not afford rent.

330. WEST, SIR EDWARD. The application of capital to land, 1815. Baltimore, Johns Hopkins Press, 1903. 54 p. (Johns Hopkins University Reprints of Economic Tracts)

Proves from a theoretical and pragmatic point of view the principle that the ratio of the net product of land (net rent) to its gross produce continually diminishes in the progress of improvement.

"It is the diminishing rate of return upon additional portions of capital bestowed upon land that regulates, and almost solely causes rent.... But it is the necessity of having recourse to inferior land, and of bestowing capital with diminished advantage on land already in tillage which increases rent," p. 38-39.

331. WHITE, J. D. Nature's budget. London, Allen & Unwin, 1936. 159 p.

Partial contents: Ch. 3, Land and improvements; Ch. 5, Rent, interest, and wages; Ch. 9, National land-rent; Ch. 10, Basis of valuation; Ch. 11, Reducing taxation; Ch. 12, Valuations and values.

Aggregate Theory

332. BELLERBY, J. R. Gross and net farm rent in the United Kingdom, 1867-1938. J. Proc. Agr. Econ. Soc. 10(4): 356-362. Mar. 1954.

Constructs an annual series of net rent ratios in relation to gross rents from 1867-1938 for the United Kingdom. Attempts to ascertain the causes of variations in net rent ratios during this period.

333. BELLERBY, J. R. National and agricultural income--1851. Econ. J. 69(273): 95-104. Mar. 1959.

Gross rent, or the actual payment made by the tenant to the landowner, has been evaluated as an average per acre at certain dates by means of official and other land inquiries.

"If the average gross rent per acre ascertained for any year be multiplied by the recorded national acreage, the resulting total rent may be linked to an annual index of rent per acre and national acreage, to yield gross rent totals for all years covered by the index. This method gives convincing results for England and Wales for a period extending back to 1850. The graph of the aggregates of rent thus obtained shows a continuous interpretable relationship to the valuation of land," p. 99.

334. BRIDGES, ARCHIBALD. Farm rents. Worcestershire Agr., Chron. 25 (2): 71-83. Feb.-May 1957.

Analyzes the tenants' position vis a vis the landlords in Great Britain as to rent and agricultural land value determination. States some of the major problems involved in obtaining economic rents. Favors a new attitude by landlords, tenants, and appraisers toward farm rents in order to bring farm rents into closer alignment with rental values.

335. BUTLER, E. B. Regional agricultural rents and types of farming land. Farm Econ 8(4): 21-26. 1955.

"This study compares two series of average rents per acre for agricultural land in the standard regions. One series is conveniently and not illegitimately called actual average rents; the other is an estimated series. The comparison shows that, among the standard regions, variations in the average rents per acre of agricultural land can be explained by regional differences in types of farming land," p. 21.

336. DENMAN, D. R. Farm rent surveys 1938-1959. Farm Econ. 9 (8): 372-377. 1960.

"Farm rents, so the survey shows, are affected by the methods used to determine them. Open market rent, defined in the survey as the rent negotiated by landlords with prospective tenants who are not related either to the landlord or to his other tenants, was taken as a standard against which rents determined by other methods were measured. Open market rents, on average, were in 1957, 13.5 percent higher than rents determined by arbitrators and by independent valuers acting professionally between parties in much the same way as arbitrators do. Rents determined by soliciting bids by tender were 34 percent higher than rents determined by arbitrators and 16 percent higher than open market rents. Sitting tenant rents, negotiated with tenants in possession of holdings, corresponded fairly closely to the rents set by arbitrators, being only 3 percent higher. These figures give the national picture. Significant variations from it are seen when the evidence is arranged by farming type and farm size," p. 376.

337. DENMAN, D. R. AND STEWART, V. F. Farm rents. London, George Allen & Unwin, 1959. 206 p.

Ascertains the national average rent per acre and correlates rent to value and farm size. Surveys and compares current and past farm rents in England and Wales. The analysis of variance is applied to statistical data.

What is analyzed, tabulated and commented upon is of vital importance to the farming and land-owning communities, of immediate relevance to professional practice and original in its contribution to academic knowledge. An attempt is made to compare rent over the post-war years with war-time and pre-war years.

Discusses the relationship of farm rents to the character and location of farm holdings, the character of the estate, open market negotiation, and other methods by which farm rents are determined.

338. HARRIS, P. P., AND STEWART, V. F. Why invest in farm land? Chartered Surveyor 93(3): 111-113. Sept. 1960.

Analyzes the annual changes in gross and net rent between 1938-1958 in Great Britain. Gross rents rose from 1.27 pounds to 1.92 pounds between 1938 and 1958, accompanied by an increase of over 500 percent in profits from farming during the same period.

Farm rent increases which did take place were engulfed by increases in maintenance and improvement costs. Due to low net rents, the yield on capital invested in tenanted agricultural land has been low.

339. WARD, J. T. An economic approach to farm rents. Land Agents' Soc. 55(5): 195-202. May 1956.

Evaluates the problem of a redistribution of social income from agriculture. Recommends: (1) An examination of farm rents to assure landowners a "fair return" on their capital investment; (2) an assessment of rental values based primarily upon productivity without reference to estimated capital value; and (3) an increase in farm rents based on an internal redistribution of the social income of agriculture rather than on cost of production criteria.

340. WIBBERLEY, G. P. Farm size. Chartered Surveyor 93(8): 416-419. Feb. 1961.

"In trying to measure value of agricultural output to the nation a useful measure is that of 'social income,' that is, the sum of the farmer's profit, the rent or rental value of the farm and wages paid or due. The size of this 'social income' appears to show little variation according to the size of farm," p. 417.

Firm Theory and Empirical Studies on Rent

341. BLOOM, G. F. Technical progress, costs and rent. Economica 9(33): 40-52. Feb. 1942.

This paper deals with a comparison of Ricardian rent theory vis a vis Cassels' rent theory. The discussion is centered around the proposition that technical progress could have two possible effects upon the rent of land, that is, increase the productive power of the land and expand agricultural production by the use of more machinery and less labor.

342. BUCHANAN, D. H. The historical approach to rent and price theory. Economica 9(26): 123-155. June 1929.

Applies the equilibrium theory of value and distribution to rent theory and price theory.

"We have found that for the particular problem of the Ricardians, in which the land had no competing use, their analysis holds. Land does not shift in search of better returns and rent-payment or non-payment has no influence upon the supply or price of raw produce. For Smith's first problem, later discussed especially by Jevons, the case is different. Here the land has competing uses and it shifts from use to use in search of its best earnings just as other agents do. This shifting is followed by changes in supplies of various commodities, hence in changes in their marginal utilities and prices.

"Two questions have been confused since the time of Adam Smith. Opponents have misunderstood each other, but the principal writers treated in this paper have been in the main correct for the problems which they discussed. The theories of Ricardo and Jevons are not antagonistic, but complementary; they arise from the application of the same principle to two different questions, and constitute together something like a complete theory of the subject," p. 155.

343. BUCHANAN, D. H. Land rent and prices. Indian J. Econ. 12(2): 169-177. Oct. 1931.

States that "If the price of the product of a piece of land becomes high the rent rises in relation to it. The only way out of this difficulty seems to be that proposed by Marshall, namely, to 'go to the margin' where goods are 'on the margin of not being produced at all' and see by what process equilibrium is being formed. For our problem it means to go to the places where particular products are in that position and see whether or not land is among those factors which shift from use to use in search of the best returns, thus helping to regulate the amounts of different commodities which will be produced. If we find land passive, accepting whatever is offered it, then rent does not affect supplies and prices.... For produce in general the land is passive, as Ricardo claimed, but for particular kinds of produce land shifts on the product-changing margin just as any other agents do, and that this affects supplies and prices of the particular products," p. 176.

344. DAWE, C. V. An inquiry into agricultural rents and the expenses of landowners in England and Wales, 1950-1951. London, Country Landowners' Assoc., Feb. 1953. 35 p.

Information was obtained from questionaires of 253 estates: "The overall average result on rents was that in 1950 the rents of those holdings that changed tenants rose by 44 percent, and in 1951, by 36 percent. These figures give an indication of the trend in rents generally," p. 20.

Tables and a copy of the questionnaire appear in the appendix.

345. HALLETT, G. A note on the theory of demand and supply in relation to land. Farm Econ. 9(11): 526-531. 1961.

Discusses the problem of equating supply and demand and arriving at an equilibrium rent. Under the British tenancy system the landlord has to bear the cost of maintaining the farm buildings.

"A certain amount of cash rent is a payment for repairs, insurance, depreciation, and interest on capital invested in buildings. Depreciation and interest are extremely difficult to assess but they are, in theory, costs which the landlord has to incur and which presumably will have to be covered if he is to continue letting land under this system. It is only the rent over and above this 'building element' which is 'economic rent,' and is determined solely by demand," p. 528.

346. HAWTREY, SIR RALPH. Production functions and land--a new approach. Econ. J. 70(277): 114-124. Mar. 1960.

Stresses the role of the production function concept in rent theory and analysis. Introduces a production function formula which embraces only two factors of production--labor and capital. The formula disregards land as a factor of production and treats all labor and capital each as one factor.

"We cannot put land on the same footing as capital and labor.... The price of capital and labor is based on the marginal yield; not so with land.... The price of a piece of land under static conditions is its rental value, its total cost-saving efficacy," p. 117.

347. MAUNDER, A. H. Size and efficiency in farming. Oxford U. Occas. Papers Agr. Econ. 4, 21 p. 1952.

Analyzes the relationship between the size of farms and the productivity of the following factor inputs: Land--represented by annual rentals; labor--consisting of annual wages and the estimated value of the farmer's work; intermediate capital--represented by a 5 percent interest rate on the tenant's capital, that is, machinery, livestock, etc.; and short-term capital--annual payments for seed, fertilizers, gasoline, etc.

States that productivity is a measure of a factor's output; however, it is also necessary to take into account the measurement of capacity, which may be considered as the value of other inputs associated with a fixed amount of the particular factor under consideration. Capacity is viewed as one dimension of productivity, the other dimension being efficiency.

Appendices 1 and 2 appear in the summary and conclusions and contain various formuli used in the study.

348. PRICE, O. T. W. The economic significance of land as a factor of production, with particular reference to agricultural land. Farm Econ. 7(6): 239-253. Dec. 1953.

"In order to study changes which have occurred in the economic importance of agricultural land as a factor of production, it is first necessary to decide what elements enter into agricultural land costs; it is necessary in other words to appreciate what agents or factors of production in agriculture are remunerated by rent. Rent is the term conventionally applied to payment made for the use of land. Invariably, agricultural land has a certain amount of capital equipment associated with it such as buildings, houses, fences, drainage systems and so forth. If the depreciated cost of buildings and other permanent equipment on farms equals the total capital value of the farms themselves, as some people have claimed occurs in British agriculture, for example, it seems to follow that what is called rent is in effect interest on capital invested. If so, 'land cost' to the tenant or community has disappeared--all extraction by power of appropriation, all monopoly value, all 'pure rent' has disappeared--and there remains only interest on capital invested in buildings, roads, fences, and drains," p. 239.

349. ROBINSON, JOAN. The economics of imperfect competition. London, Macmillan, 1938. 352 p.

Attempts to account for the rent earned by a factor in a particular industry on the basis of transfer earnings. The argument is that if a factor can be used to produce two commodities of value A and B, with A less than B, then the cost necessary to bring that factor into employment is A. If, however, as is most probable, it is used to produce the more profitable commodity, it will earn the rent B minus A. This is a variation of the law of opportunity costs which is based on the assumption of specific uses of a commodity.

"The essence of the conception of rent is the conception of a surplus earned by a particular part of a factor of production over and above the minimum earnings necessary to induce it to do its work. This conception of rent, both verbally and historically, is closely connected with the conception of 'free gifts of nature.' The chief of these free gifts of nature (of which the essential characteristic is that they do not owe their origin to human effort) is space, and for this reason they have usually been referred to simply as 'land'--land being understood to comprise all the other 'free gifts' besides mere space. Consequently the term rent, which in ordinary speech means a payment made for the hire of land, was borrowed by the economists as the title of the sort of surplus earnings which the free gifts of nature receive. The whole of the earnings of land in the economist's

sense is rent in the economist's sense, for it follows from the definition of the free gifts of nature that they are there in any case, and do not require to be paid in order to exist.

"But the conception of rent has often been too closely interwoven with the conception of land. Particular units of factors of production which belong to the other three broad categories, labour, entrepreneurship, and capital, may also earn rent.... Thus, in each of the broad categories of factors, particular pieces of factors may be found which earn rent," p. 102-103.

350. WALMSLEY, R. C. Farm rents. Chartered Surveyor: 88(9) 502-508. Mar. 1956.

Comments on the ways in which agricultural rental values are ascertained and the reasons underlying the incidence of farm rents.

Evaluates the following approaches used in arriving at rental values: (1) Direct comparison basis; (2) field-to-field basis; (3) turnover basis; and (4) spot value basis. An appendix dealing with farm rents in Scotland is published at the end of the paper.

351. WIBBERLEY, G. P. Agriculture and urban growth--a study of the competition for rural land. London, Michael Joseph, 1959. 240 p.

An account of recent research into how the land in Britain is being used and the status of competition for land between farmers, and land developers. Outlines methods for measuring the value of land for agricultural use and for nonagricultural use. Analyzes farm rent from the point of view of net income per farm. Selected bibliography, p. 231-234.

352. AGGARWALA, K. C. Marshall's concept of quasi-rent. Indian J. Econ. 28(111): 555-561. Apr. 1948

Discusses Marshall's concept of rent as a surplus from the points of view of cost and the marginal return from a factor.

"From the side of 'Margin,' rent is a surplus earned by a particular unit of a factor of production over and above the earnings of the marginal unit of that factor. From the side of 'Cost,' rent 'is the excess of the value of the total returns which capital and labour applied to land do obtain, over those which they would have obtained under circumstances as unfavourable as those on the margin of cultivation' --the margin of cultivation, being defined here as, 'the margin of profitable application of capital and labour to good and bad lands alike,' " p. 555.

353. BARKAI, H. Ricardo on factor prices and income distribution in a growing economy. Economica 26(103): 240-250. Aug. 1959.

Purpose of this monograph was to re-examine the postulates of the Ricardian model. Relevant theorems were then deduced from the trend of factor prices and the pattern of income shares.

The fundamental features of the Ricardian system are outlined as follows: (1) A given quantity of land, and varying quantities of capital and labor; (2) a given and invariable production function; (3) a decreasing rate of growth of output as input increases, that is, diminishing returns; and (4) a constant and institutionally determined wage rate.

Output in the Ricardian model is usually represented by one commodity only. Similarly, the constant wage rate is defined in terms of this output.

The significant result of this inquiry is that the general Ricardian model, presuming only diminishing returns and constant wage rates, does not provide for a general theorem on the trend of distribution. The Ricardian theory on factor prices and distribution excludes technological change from the list of factors bearing upon the pattern of factor remuneration and of income distribution.

354. BOHM-BAWERK, E. Capital and interest once more: I. Capital versus capital goods. Q. J. Econ. 21(1): 1-21. Nov. 1906.

An analysis of the concept of capital in its theoretical context and from a materialistic point of view.

"Capital goods are concrete instruments of production, such as raw materials, machines, tools... land also is included," p. 4.

"Capital is a fund or quantum of matter... anyone who wishes to make an estimate of the size of this fund must measure it, not by counting the pieces or calculating their volume or weight, but by measuring it in terms of value--in terms of money," p. 5.

355. BOHM-BAWERK, E. Capital and interest once more: II. A relapse to the productivity theory. Q. J. Econ. 21(2) 247-282. Feb. 1907.

Combines aggregate theory and marginal productivity theory into a pragmatic theory of production for the general economy.

Applies the general theory of imputation to capital which includes land as a factor of production. The other productive agents are labor and entrepreneurial activity. The theory of capital is based on the premise that capital is productive and limited in amount. Therefore, capital yields a net return (rent) of a specific amount which accrues to its owner as interest.

"The product of a factor is identified with its net rent. The net rent is what is traceable to the factor," p. 279.

356. DAS-GUPTA, A. K. Land rent and pricing process. Indian J. Econ. 11(2): 166-173. Oct. 1930.

States that "the whole problem of the relation of rent to price turns on the question of the period of time to which we refer. In the short period, owing to the existence of alternative uses of land, and in view of the elasticity in the supply of land for individual uses, rent enters into price. In the long period, on the other hand, owing to the inelasticity in the supply of land, rent does not enter into price," p. 172.

357. DAS-GUPTA, A. K. Some remarks on value and cost, with special reference to their relation to rent. Indian J. Econ. 12(4): 520-541. Apr. 1932.

Examines Ricardo's theory of rent and price vis a vis Jevons' rent theory and elucidates on specific principles involved of far reaching importance from the point of view of the aggregate theory of value.

"Ricardo's theory of rent and price has been a subject of much debate in recent times. The theory enunciated by Ricardo is that rent is a surplus and does not enter in the price of commodities. The rival theory advanced first by Jevons and later on taken up by many American economists is that rent affects price in the same way as wages and interest do. Jevons calls attention to the existence of alternative uses of land and suggests that the possibility of lands being turned to alternative purposes compels farmers to pay rent for the use of land, just as the possibility of labour being transferred to alternative employments compels producers to pay wages," p. 520.

358. EL TONBARY, A. A. Rent as a criterion of land quality. Indian J. Agr. Econ. 13(2): 27-32. Apr.-June 1958.

Views rent as a theoretical rationale used to measure differences in the productive qualities of land. The author discusses and evaluates the reliability of rent as a criterion of land quality.

Data were obtained from a group of 61 cash renting farms during 1948-1949. A physical land classification study based on ecological properties of the soils such as depth, texture, drainage and structure was used as a framework for the analysis.

The main conclusions of this study center around the following reasons why higher rents were paid for smaller farms per unit area: "Smaller farms are in greater demand for their lower capital requirements; they are for the most part nearer to the town where market opportunities are available; and rent, in practice, covers a payment for the house and buildings through the interest on landlord's capital and consequently this gives a higher figure per acre for the smaller farms than the larger farms," p. 32.

359. GARLAND, J. M. The incidence of a progressive land tax. Econ. Record 11(21): 145-156. Dec. 1935.

"The incidence of a proportional tax on land value is established among the ascertained conclusions of economics. Land value, or the unimproved value of

land, is the capital representation of economic rent; it is the capitalized value of rent, its present value in perpetuity. An annual tax on unimproved value will thus fall on rent. A tax which falls on rent cannot be shifted, and must lie where it falls. Some portion of rent will therefore be absorbed. The loss of rent from the tax will then be capitalized, and unimproved value will be reduced, or amortized, by the capitalized value of the tax," p. 145.

360. HEURLIN, L. O. The economic theory of agricultural production. Acad. Scientiarum Fennicae. Ann. Serv. 87: 1-130. 1954.

This monograph seeks not only to systematize the treatment of land as an economic resource but to build a theory of agricultural production around land.

According to the author, the economic problems of agricultural production are mainly deducible from the principle of the "two dimensional quality of land." These two dimensions are inherent fertility and exploitability. Land is said to be relatively low in exploitability if the non-rental expenses for a given quantity of product are high, relative to production on another grade of land.

Several propositions are examined by means of a rigorous geometrical analysis, first on the assumption of fixed proportions of land and of other inputs to produce a given commodity, and then on the assumption of diminishing substitutability between land and non-land inputs.

The author notes that differences in land fertility may not be reflected in rents if the lands in question differ inversely in exploitability.

"For a given commodity, lands of equal exploitability per unit of product will come into production at a given price, regardless of differences in fertility. In this case, rent will be inversely proportional to the area required to produce a given quantity of the product," p. 57.

361. KEIRSTEAD, B. S. Capital, interest, and profits. New York, John Wiley, 1959. 180 p.

The author re-examines the theory of capital and defines profit, interest, and rent. Entrepreneurial and investment expectations, collective bargaining power, and monetary and fiscal policies are evaluated in this context along with the determinants of interest and rent.

A novel theory of the equilibrium of the firm in its use of capital is included. One of the author's major contributions is his eclectic theory of rent and interest.

362. KEIRSTEAD, B. S., AND COORE, D. H. Dynamic theory of rents. Canadian J. Econ. & Polit. Sci. 12(2): 168-172. May 1946.

Surpluses or rents emerge from the dynamic nature of the economy and do not exist in a static economy in equilibrium.

The author states:

"This 'exploited' monopsonist's surplus is not dynamic or temporal in origin. It is preferable, therefore, to distinguish it from the others and to call it simply a monopsonist's profit, retaining the word 'rent' to refer to those differentials emerging from the temporal process of the economy as a whole," p. 172.

363. MEHTA, J. K. Rent in economic theory. Indian J. Econ. 23(88): 59-67. July 1942.

Attempts to clarify the concept of rent and to reconcile the older concept with the more recent theories of rent. The author's theoretical treatment of rent

is based on the following assumptions: "(1) That rent is a relative rather than an absolute concept; (2) that it is capable of more than one interpretation even when it is used in its strict sense as a surplus; (3) that every type of income can be made to appear as rent or surplus; (4) that within every type of income there is an element of surplus; (5) that the quantitative measure of this element depends on whether we understand by rent the rent of a factor or the rent of a particular use of a factor; (6) that the surplus or rent, in whatever particular sense it may be used, is due to the specificity of a factor to productive use in general or to a definite use in particular," p. 64.

364. SAHA, K. B. Rent in relation to price. Indian J. Econ. 12(4): 507-519 Apr. 1932.

"The relation of rent to price has long been a subject of controversy among economists. Broadly speaking, there are two different theories about it. According to one, rent is not a part of the cost of production, and hence it does not influence price. The other theory says that rent is as much a part of the cost of production as wages, and affects price in the same way in which the earnings of labour do.

"Of these two theories, the first is associated with the name of Ricardo. 'Corn is not high,' says he, 'because a rent is paid, but a rent is paid because corn is high . . . that corn which is produced with the greatest quantity of labour is the regulator of the price of corn; and rent does and cannot enter in the least degree as a component part of its price,'" p. 507.

365. SINHA, B. C. The basis of land tax: A problem in applied economics. Indian J. Econ. 21(81): 158-166. Oct. 1940.

Investigates the problem of explaining the concept of rent in relation to a rational explanation of various types of land-tax theories.

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"In conclusion it can be said that under present conditions of production the observed tendency towards Diminishing Returns in intensive soil cultivation does not automatically apply to agricultural production as a whole. Nor is the productive effort per hectare a satisfactory means of expressing the intensity of agricultural production, but it is a combined expression measuring intensity and also the scope of the secondary production," p. 254.

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