

AN ANALYSIS OF THE FARM
REAL ESTATE MARKET IN CLAY AND
DICKINSON COUNTIES, KANSAS, 1956

by

VERNON CLYDE MCKEE

B. S., Kansas State College
of Agriculture and Applied Science, 1956

A THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Economics and Sociology

KANSAS STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE

1957

LD
2668
T4
1957
M15
C.2
documents

11

TABLE OF CONTENTS

INTRODUCTION AND REVIEW OF LITERATURE	1
Nature of the Problem	1
Objectives	4
Hypotheses	5
General Procedure	5
GENERAL OPERATION OF THE LAND MARKET	6
Trends	6
Characteristics of the Real Estate Sold	7
Characteristics and Circumstances of the Sellers	10
Characteristics and Circumstances of the Buyers	11
EVALUATION PRACTICES	16
TYPES OF CASES	19
Farm Enlargement Cases	19
Investment Cases	22
Purchase to Prevent a Reduction of the Farm Unit Cases	25
Special Cases	28
CRITICAL ANALYSIS OF THE LAND MARKET AND VALUATION PRACTICES	30
The Land Market	30
Valuation Practices	30
SUMMARY AND CONCLUSIONS	32
ACKNOWLEDGMENT	35
BIBLIOGRAPHY	36

INTRODUCTION AND REVIEW OF LITERATURE

Nature of the Problem

The average value of farm real estate in the United States advanced three percent in the four months ending March, 1957. This raised the national index to 147 (1947-49 = 100), a new record high that was seven percent above a year earlier.¹ Land values from 1939 to 1955 in Kansas followed closely the trend for the United States, except that the United States land values tended to advance faster than Kansas land values during World War II. Land values increased relatively more for Kansas in the postwar period.² Farm operators net income has reversed this trend and has steadily declined since 1951.³ Future income determines the real value of land from an investment standpoint and if this is the basis that was used when persons purchased land, then some factor has been erroneously used at some time. Either the capitalized value of land was too low prior to 1951, or the persons buying land gave no regard to capitalized values based on expected future incomes. This departure in trends in real estate values and incomes suggests that factors other than income are influencing the farm real estate market.

Many studies have been made concerning real estate evaluation but seldom have they probed for the factors and processes used by the interested parties in arriving at a price that resulted in the consummation of the transaction.

¹Current Developments in the Farm Real Estate Market, United States Department of Agriculture, May 1957, p. 3.

²Merton L. Otto, Hubert L. Collins, and Wilfred H. Pine, Trends in Land Values in Kansas, Kansas Agricultural Experiment Station Circular 541, p. 5.

³Economic Indicators, June 1957, p. 7.

An evaluation of the processes used by buyers and sellers can only be accomplished by contacting the parties involved. However, the weight they attach to a specific factor would be difficult to determine empirically.

"Market" is a term rich in connotation and susceptible of many different uses. Under competition, a market is a place or region where informed buyers and sellers meet for the purpose of exchanging goods or services, and where a single price tends to prevail at a given time for the same grade of product."¹ Fetter stated, "The idea of a market is so interwoven with that of competition that markets and market competition are but different aspects of the same thing."² Since the market and competition are interrelated, a perfect market can exist only under perfect competition which is characterized by three conditions: "(1) Each economic unit (household or firm) is so small relative to the market that it exerts no perceptible influence on the prices of the things it buys and sells. (2) All markets are free from special institutional restraints, or, more positively, prices and the mobility of resources are not restricted. (3) All economic units possess complete knowledge."³

The desirability of perfect competition and thus a perfect market is debatable. A perfectly competitive system has three fundamental advantages according to Meade.

First, it would be impossible by producing more of one thing and less of another to make any consumer better off without making other consumers worse off. Secondly, output would be maximized in the sense that it would not be possible with a given amount of the factors of production to produce more of one commodity without producing less of

¹Edward A. Duddy and David A. Revzan, Marketing, second edition, p. 9.

²Frank A. Fetter, The Masquerade of Monopoly, p. 264.

³George J. Stigler, The Theory of Price, p. 21.

some other. Thirdly, an advantage which is really only a particular case of the second--each individual firm would be of the most efficient size.¹

There are disadvantages to this system and Meade also mentions some of these.² There are certain activities which can best be performed by the government rather than individuals. Consumers may fail to distribute their expenditure wisely among different commodities. The extra cost to the community of providing one more unit of a particular commodity may not be the same as the extra cost to the individual and income distribution is not necessarily in the most desirable way.

It is apparent that the farm real estate market (hereafter referred to as the land market) can not be considered a perfectly competitive market. Buyers and sellers can not have complete knowledge. Each tract of land has characteristics peculiar to it and as such is completely immobile, although other factors entering into the production from land are partially mobile. The land market is a localized market and consequently price can be influenced by one unit.

Certain other factors suggest why the land market is not perfectly competitive and trends in farm real estate prices and in farm income are diverging. The following are some of these factors. (1) The liquidity position of farmers has improved in recent years. The total assets of all farms in the United States has more than tripled from 1940 to 1956, and the financial assets have increased about five times. During this same period the liabilities have increased but the 1956 total liabilities were less than double the 1940 liabilities. Proprietors equities increased three times from 1940 to 1956.³

¹J. E. Meade and C. J. Hitch, An Introduction to Economic Analysis and Policy, p. 117.

²Ibid. pp. 125-131.

³Statistical Abstract of the United States, 1956, p. 617.

(2) The recent advance in technology and innovations has made a larger farm unit more economical. Many farms are now too small to provide a good full-time job for one man, and owners of such farms want additional land in order to increase their efficiency and profits. (3) The fixed nature of land combined with population growth is viewed by many as one factor which may make land more valuable in the future. This may tend to make land sales more infrequent if individuals are convinced that a price rise is coming.

Objectives

The determination and evaluation of the factors and processes used by buyers and sellers in setting a price and the determination of some imperfections in the land market which could be eliminated are the main objectives of this study. Income estimates and market value comparisons are two generally acceptable methods for determining the value of farm real estate. The extent that these are used by buyers and sellers in the land market was a primary consideration in this study. The determination and evaluation of other processes used, if some buyers or sellers did not utilize the income estimate or market value comparison, was desired.

A land market that approaches a perfectly competitive market is assumed to be desirable because of more efficient allocation of scarce resources in a perfectly competitive system. Many characteristics of an imperfect land market cannot be changed but some characteristics can be changed. The knowledge and information the buyers possess and the number of persons in the market are two characteristics capable of being changed. It is an objective of this study to determine the extent of the knowledge and information the buyers possess and possible ways to increase it.

Hypothesis

The hypothesis tested in this study are: (1) The characteristics of the property sold influence the land market. (2) The characteristics and circumstances of the parties involved in a transaction influence the land market. (3) The processes used in evaluation of farm real estate are (A) market value comparisons (B) income estimate (C) both market value comparisons and income estimate (D) some process other than income estimate or market comparison.

General Procedure

The land market is characterized by a relatively small number of transactions in a specific area because of the small number of transactions, the uniqueness of each tract and transaction, and the desire to discover new factors and processes used in the land market, the case study was chosen. A complete statistical analysis would require a coverage of a large area or the transactions from a period of years. The area chosen for this study was Clay County and Dickinson County, Kansas. A preliminary check of the county records revealed that these two counties might yield 40 to 60 bona fide transactions in 1956. This area was not chosen because of any specific peculiarities or problems. It is believed to be representative of a surrounding area of several counties.

The county records were carefully screened to select only those sales that were bona fide farm real estate transactions. A bona fide transaction is defined as one where a fair market price was established by a willing buyer and a willing seller. Forced sales, family transactions in which the consideration was reduced because of relationship, deeds transferring fractional interests or unspecified part interests, and gifts were excluded. An effort was made to contact all parties involved in the transaction; buyer, seller,

agent, bidders, and any other person involved. All transactions in 1956 for the two counties were taken to obtain the desired number of cases.

The schedule used was designed with the objectives in mind. The questions were designed in a way that would not be suggestive for the answers, particularly when probing for the reasons for purchasing and the factors considered in setting prices. Initial contact was attempted and if unable to contact the person, two call backs were made to obtain the information. The number of call backs was an arbitrary number but as long as it was observed throughout the study it would not bias the schedules taken. No attempt was made to contact persons that lived more than 10 miles outside of the counties selected.

GENERAL OPERATION OF THE LAND MARKET

Trends

The trends in the Kansas land market since 1940 can be stated generally as an increase in the sale value per acre, a slight increase in voluntary transfers, and a decrease in farm real estate indebtedness. Specifically, the trend in sale value per acre has been consistently upward since 1940 with only minor deviations. The index numbers of average value per acre was 45 in 1940 and reached a high in March 1956, of 136 (1947-49 = 100).¹ The trend in numbers of transfers in Kansas has been more erratic. The number of transfers increased rapidly from 1940 to 1944 and has generally been declining since reaching the peak in 1944. Slightly more voluntary transfers occurred in 1955 than in 1940.² The trend in farm real estate indebtedness also has been more erratic than the average sale value per acre. Indebtedness decreased

¹Current Developments in the Farm Real Estate Market, U.S.D.A., May 1957, p. 3.

²Merton L. Otto, Hubert L. Collins, and Wilfred H. Pine, op. cit., p. 18.

rapidly from 1940 to 1946 and since 1948 has been increasing slowly. Farm real estate indebtedness in Kansas was over 200 in 1940 (1947-49 = 100) and decreased to slightly less than 100 in 1946. The indebtedness has been increasing since 1948 and in 1954 was approximately 130.¹

Characteristics of the Real Estate Sold

The majority of the transfers in Clay and Dickinson County were tract transfers rather than farm unit transfers. Six of the 45 cases studied were larger than 160 acres. Acres alone cannot be the criterion for the division between a farm unit and a tract transfer. One tract was actually considered a farm unit by the buyer and 44 were considered tract purchases. Tracts transferred averaged 119 acres and the cropland acres averaged 81. Two transfers were all pasture land and the remaining transfers were either all cropland or a combination of cropland and pasture land. Other physical characteristics of the tracts sold are shown in Table 1.

A recent study indicated that farm real estate within a few miles of town sold significantly higher than that at a greater distance.² Twenty-three of the transfers were within five miles of a town in Clay and Dickinson County; however, the buyers interviewed placed little weight on the distance to town unless it was the first land owned or operated. The average sale price per acre was calculated for these 23 cases to compare with the average sale price per acre for the 22 cases more than five miles from a town. The tracts five miles or less from a town averaged \$101 per acre while the tracts more than five miles from a town averaged \$108 per acre. This would indicate

¹Merton L. Otto, Hubert L. Collins, and Wilfred H. Pine, *op. cit.*, p. 17.

²Charles F. Marsh and Wilfred H. Pine, The Value of Farm Real Estate, Kansas Agricultural Experiment Station Bulletin 389, April 1957.

Table 1. Physical characteristics of the 45 farm real estate tracts sold in Clay and Dickinson Counties, Kansas, 1956 (bona fide sales).

Acres in tract	Number of sales	Improved: tracts	Unimproved tracts	Type of road		Distance to town	
				Dirt	Gravel	Hard surfaced: or less	Five miles: More than five miles
0-59	5	4	1	-	4	1	4
60-99	21	8	13	6	10	5	11
100-179	13	9	4	4	8	1	5
180 & more	6	2	4	1	3	2	3
Total	45	23	22	11	25	9	23

that in Clay and Dickinson Counties, Kansas, the persons buying land in 1956 placed no value on distance to a town; however the interrelation of other factors were not taken into account in these two averages.

Improvements on the land usually influence the price to some extent. Improvements are necessary on a complete farm unit but on tract sales the buyer often does not desire improvements. The transfers used in Clay and Dickinson Counties had 23 with improvements and 22 unimproved. The improvements were of primary consideration in some cases and as such contributed much to the buyers decision on the final price. No consideration or minor consideration was given to improvements by other buyers. The 23 tracts with improvements had an average sale price per acre of \$115, while the 22 unimproved tracts averaged \$93 per acre. This indicated that improvements commanded a premium for all the bona fide farm real estate transfers in Clay and Dickinson Counties, Kansas in 1956. Other factors may have had a confounding effect, but no projections were made from these data.

The road type showed the expected influence on sale price per acre. The 11 tracts on dirt roads averaged \$84 per acre, 25 tracts on gravel roads averaged \$109 per acre and the 9 tracts on hard-surfaced roads averaged \$116 per acre. This variation in average sale price cannot be attributed entirely to the type of roads since the interrelation of improvements, productivity, and other factors cannot be entirely separated.

The characteristics of the tracts sold appeared to have some influence on the land market. The type of road and improvements appeared to influence the market in the cases studied and the distance to town seemed to have no influence on the market. A tract market, which this study revealed, may have an influence on the market. Farmers wishing to enlarge their farm unit will be in the market for tract purchases rather than complete farm units.

Characteristics and Circumstances of the Sellers

Many of the sellers were operating under some pressure to sell which could affect their decision on pricing, although this was not considered to make them an unwilling seller. The pressure was not such that they were considered forced sales, but there was some need or desire to complete the transaction relatively soon. Information on the sellers not living in the area was obtained from the buyer to the extent that the buyer could answer the questions. Varied answers were given by the seller as to the reason for selling. Approximately one-half of the sellers were 65 years old or more. This suggests some pressure to sell and many of the answers support this suggestion. Several stated they were too old to look after the farm or they needed money or they were retiring to town and had to sell some land to buy a place in town. These answers suggest some degree of compulsion existed which could influence them to price the land lower than if they were not needing the return from the sale for a specific reason. Estate settlement was the reason for 12 sales, which would be some degree of compulsion but would probably influence the pricing relatively little. Estate sales are considered bona fide sales unless an heir to the estate is the buyer and the circumstances indicate a consideration less than market value was accepted.

It was concluded that the characteristics and circumstances of the sellers had an effect on the land market, although the data obtained were inadequate to draw definite conclusions of the effect or solutions to adverse effects. The high incidence of advanced age sellers and also the estate settlements had a tendency to place the seller in poor bargaining position. Absentee sellers can overcome their disadvantage by listing the property with a reputable land broker and this might also help others in a poor bargaining position.

Characteristics and Circumstances of the Buyers

More complete information was obtained about the buyers than the sellers. All buyers of the 45 transactions were contacted. A significant characteristic of the buyers was the relatively large number of farmers among them. Thirty-seven of the buyers gave their occupation as farmers, six were non-farmers, and two were retired farmers, (Table 2). A high proportion of farmers in the land market was expected but only eight of the farmer-buyers did not own land previously. This suggested a possible explanation of the steady or increasing land market in view of declining farm income. Many farmers need to increase their operations to have an economical size unit. Several buyers indicated they needed more land to operate in order to stay in farming. This could influence the buyer to pay more than would be indicated by income capitalization from the tract purchased.

Location. The location of the tract selling with respect to present operations was an important factor to many of the farmer-buyers. Twenty-nine of the 37 farmers that purchased land acquired a tract less than five miles from where they were presently living, (Table 2). Several of the farmers stated that they were not specifically looking for land to buy but a tract close to their present operations was put on the market and they purchased that particular tract because of the location factor. Farmers that were in the market for more land prior to completing the transaction were generally concerned with distance from their present operations. This lends support to the assumption that the land market is a relatively localized market.

Reason for Purchase. The reason for buying, as given by the buyers interviewed, were many and varied. It was difficult to ascertain the prime motive for buying in many cases. A typical case involved a person renting all of

Table 2. Occupation, location, and tenure of the 45 farm real estate buyers, Clay and Dickinson Counties, Kansas, 1956 (bona fide sales).

Occupation	Number of cases	Location to tract purchased		Tenure prior to purchase	
		Less than 5 miles	More than 5 miles	Land owner	Non-owner
Farmer	37	29	8	29	8
Non-farmer	6	3	3	2	4
Retired farmer	2	1	1	2	-
Total cases	45	33	12	33	12

the ground in the farm unit. The owner of one tract in the farm unit decided to sell and the person presently farming the tract purchased it. The reason for buying was stated as a desire to own land and the lack of opportunity to rent additional land to replace the tract for sale. It was decided that the prime motive for buying in this case was to keep the farm unit from being reduced in size, although the desire to become a landowner was also present. An analysis of all cases resulted in a breakdown as follows, (Table 3); 18 purchased land to enlarge the present farm unit, 7 purchased land for an investment, 11 purchased land to maintain present operations or keep the farm unit from being reduced. The reasons for purchase of the remaining cases are shown in Table 3. These were considered the prime motives for buying land in each case, although more than one reason was given by most buyers. The eight farmer-buyers who did not own land previously expressed the desire to become land owners. A partial motive for buying in these eight cases was ascension of the agricultural ladder from tenant to part owner; however in only one case was the tenant certain of continuing to farm the land without the necessity of buying. This led to the conclusion that in only one case was tenant to owner the prime consideration. Land purchased for an investment was probably a partial reason in every case but was considered the prime reason in only seven cases. These seven buyers were non-farmers or retired farmers. It was quite evident from the information obtained that they were buying mainly for investment purposes.

Farm Enlargement. A relationship existed between farm enlargement purchases and purchases to prevent reduction of farm units. Farm enlargement in a sense, resulted in all cases where an active farmer bought land. The land owned by that particular farmer increased but the farm unit operated was enlarged only if the tract purchased was in addition to the ground in the

Table 3. Reasons for purchase of the 45 farm real estate tracts in Clay and Dickinson Counties, Kansas, 1966 (bona fide sales).

Occupation:	Number:	Reasons for purchase						
		: Farm : enlargement :	: Investment : :	: Maintain : farm : unit :	: Land : replacement :	: For : relative :	: Retirement : :	: Tenant : to owner :
Farmer	37	18	-	11	2	2	3	1
Non-farmer	6	-	5	-	-	1	-	-
Retired farmer	2	-	2	-	-	-	-	-
Total cases	45	18	7	11	2	3	3	1

farm unit prior to the purchase. The farmer that purchased a tract he was renting because it was to be sold and he had no chance to rent land for replacement was buying to keep the farm unit from being reduced. This was the general circumstances in eleven cases studied. Data collected are inadequate to provide an analysis of the effect of these sales on net farm enlargement. Net farm enlargement would occur if the tract purchased to enlarge one farm unit did not decrease another farm unit by the same amount. Net farm enlargement results when the number of farm units decreases.

Land Shopping. The buyers did relatively little "shopping" around before they purchased a tract. The buyers considered more than just the tract purchased in only 12 of the 45 cases and this was usually only one or two more. Further inquiry revealed this was because many of the buyers were not looking for land to purchase but it was "quick decision" buying. A tract of land was for sale that would supplement their present operations in a desirable manner and consequently they bought it. This was also due in part to the person interested in obtaining a particular tract and no other tract was considered if the one desired could be purchased. The farmers buying the ground they had been renting would contribute to the lack of "shopping" for land. They had been farming this ground and knew the production capabilities and the way it would fit into their present operations. They were in a better position to evaluate the expected income, giving consideration to complementary and supplementary relationship to the existing unit. Buyers in this position seldom considered other tracts.

Price Bargaining. The lack of price bargaining was a unique characteristic of the transactions studied. Twenty-seven of the buyers interviewed indicated there was no price bargaining present. They bought the tract at the sellers asking price and if the seller had not set a price the seller

accepted the first offer of the buyer. Effective bargaining was present in 16 of the cases studied. The buyer bid less than the asking price and purchased the tract for less than the asking price. Two buyers bid less than the asking price but paid the asking price when the transaction was consummated. Bargaining on other considerations was relatively insignificant throughout the study. Mineral rights were of no significance and the buyer obtained all the mineral rights in all cases. The landlord's share of standing crops went with the sale and none of the buyers indicated difference of opinion or bargaining on this. Back taxes were due in one case and the buyer had the seller agree to pay these before the transaction was completed.

Conclusions. The characteristics and circumstances of the buyers had an effect on the land market. It was concluded that the location of the buyers' present unit to the tract purchased and the reasons for the purchase were important factors influencing the land market. The lack of looking at different tracts was an important factor but it is closely connected with the reasons for purchase and location. This leads to the conclusion that the land market is a localized market with relatively few buyers, or an imperfect market.

EVALUATION PRACTICES

An analysis of evaluation practices was attempted in this study. Accepted theory holds that future income is one basis for evaluating land. The extent that this was used by the buyers in this study was difficult to determine. None of the buyers contacted used a budget method of estimating production, production costs, and prices in deriving an estimate of the net returns for the future. Eighteen of the buyers contacted indicated that they made a

rough estimate of expected income and the remaining 27 claimed no estimate was made. Evidence provided by other questions in the schedule led to the conclusion that the majority did have some expectation of future returns, although that was not the major or deciding factor. The answer given most frequently as to the main factors that determine the price of land was the productivity of the land and the number of people desiring land. That the buyers had some knowledge of productivity, and therefore expected future income, is a logical conclusion from the preceding statement, because they cited productivity as a main determinant of price and they actually set the price on a small portion of the market.

The use of recent land sales as a guide to price setting was expected. Less than one-half of the buyers and sellers contacted indicated the use of specific sales in guiding their pricing decisions. Several of the sellers indicated that they used the general market value of land as a general guide in arriving at an asking price and a few buyers indicated they paid about the average market price for land.

Location was expected to influence buyers and sellers in evaluation practices and the evidence gathered supported this expectation. The general location with respect to roads, town, schools, and community was not emphasized appreciably. This was felt to be of minor importance in the pricing consideration of the majority of the cases. The farmer-buyers mentioned the importance of location with respect to their existing farm units. Many of them stated specifically that the tracts were put on the market and that they would fit in well with their present operations which prompted them to buy. Most of them indicated a willingness to pay more for the tracts because of location.

A determination of patterns used in setting prices or general transaction procedures was attempted. A significant pattern observed was the number of tracts purchased by the persons that had been farming the land prior to the sale. An explanation of this was the sellers contacting the person farming the tract when they decided to sell. The buyers who had farmed the land prior to the sale were also in a better position to evaluate the production capabilities of the land. Thirteen cases studied revealed this particular pattern. The sellers often mentioned that their tenant had asked about buying the land prior to the decision to sell.

Another pattern observed was the relatively large number of buyers that stated they were not in the market for land prior to the tract they purchased. It was expected that most buyers had given serious thought to buying land to the extent that they had been looking for some land to buy. Twelve buyers indicated they had looked at other tracts and the remaining 33 considered only the tract they purchased. Many of these transactions were quick decision buying as stated previously, and the location to the buyer's operation unit influenced the decision to buy.

Real estate agents or land brokers were involved in only 12 of the cases studied. The sellers often knew of a prospective buyer and would make the contact personally rather than listing the sale with an agent. Several of the sellers indicated the belief that they could sell the land for as much money as the agent could and not have to pay a commission.

The lack of competition from other bidders was much greater than expected. Information from the buyers indicated competition from bidders in only six cases. This suggests a high degree of imperfection in the real estate market. A careful analysis of the cases studied suggested several reasons or possibilities for this lack of bidders. (1) The seller priced the land low, relative

- to the general market, and the first person contacted made the purchase. (2) The seller made no effort to contact persons other than the ultimate buyer. (3) The seller contacted a person well acquainted with capabilities of the land. (4) The buyer was overly optimistic in estimating the future returns. (5) The seller did not advertise or list the tract with an agent.

Other responses from the buyers involved led to the conclusion that competition is present without another person making a firm bid on the tract. Several persons indicated that the number of people desiring land is a main factor in determining price. These persons must have felt that competition was present; although not a particular bidder, someone would have purchased the tract, given the opportunity. This does not indicate a perfect market, but less of an imperfect market than the number of bidders indicates.

TYPES OF CASES

The main types of cases, based on buyers' reasons for buying, were farm enlargement, investment, and preventing a reduction of the farm unit. These three categories included 80 percent of the cases studied. Two transactions in each category, selected as typical cases for that category, were analyzed in detail. This afforded an opportunity to study problems and peculiarities in detail.

Farm Enlargement Cases

Case one in this category was an 80 acre unimproved tract in Dickinson County, Kansas. This tract consisted of 57 acres of cropland and 23 acres of meadow used for prairie hay. The land was not irrigated and the buyer indicated no possibility for irrigation. The wheat acreage allotment was 19 acres.

The tract was on a dirt road, seven miles from a hard-surfaced road, and two miles from a town. This tract was being farmed as a part of a larger farm and the buyer will farm it as part of his farm. The buyer had never farmed this land before. The buyer judged the quality of the land as average compared to other land in the locality and estimated an average wheat yield of 16 bushels per acre, which is comparable to the average yield of 16.8 for Dickinson County, 1945-54.¹ The sale price was \$6,000.

The buyer was an active farmer 48 years old. He had farmed as a tenant for 28 years and also had farmed land he owned for 16 of the 28 years. He owned 240 acres prior to this purchase and rented an additional 540 acres. He bought the tract to enlarge his farm and also for investment purposes. He estimated he could operate at least 1,000 acres with the equipment he now has but would need additional labor. He had money invested in bonds and expects a higher return from the land purchased than the money invested in bonds. This tract was the only one he considered and the seller contacted him about buying. The tract was adjacent to some land in his present unit, and he indicated that he knew what the crop yields had been. There was no appraisal made and the buyer felt he could judge the land better than an appraiser. He indicated that he did not estimate what the land was worth based on the expected use of the land, the yields, and the expected prices; although previously he indicated a higher expected return from the land than the money invested in bonds. This led to the belief that he did have some estimate of future income. He stated that recent land sales were not used in price determination.

¹Computed from the Biennial Report of the State Board of Agriculture.

Price bargaining was not present in this case. The buyer paid the sellers asking price on the condition that the seller pay back taxes that were due and give immediate possession. The buyer did not have to use credit to finance this purchase and paid the total amount in cash to the seller.

The seller was an active farmer 58 years old. He owned 400 acres after this sale. The main reason for selling was to meet some mortgage payments. He based his price mainly on what he paid for it three years prior to this transaction. The sale was completed through an agent although the seller contacted the buyer before listing with the agent. He listed it with an agent to facilitate the mortgage release since other ground owned by the seller was included in the mortgage. The only terms set by the seller was a cash settlement. No other bidder was indicated by either the buyer or the seller.

The agent handling the sale indicated he contacted one other person but the price was too high. He did not inspect the property or obtain any information as to past yields or net income figures. He advertised in the papers in addition to the personal contacts. He felt the price was reasonable but indicated the tract would appeal most to someone who lived close to it.

Case two in this category was a 160-acre improved tract in Clay County, Kansas. The tract consisted of 114 acres of cropland, 40 acres of pasture, and six acres of farmstead and waste. The buyer considered the quality of land as average upland and the quality of buildings as average. He estimated an average wheat yield at 20 bushels per acre which is above the average of 16.8 for Clay County, 1945-54.¹ The tract was on a dirt road, one mile from a hard-surfaced road, and 10 miles from town. The purchase price was \$15,000.

The buyer was an active farmer 40 years old. He owned 480 acres prior to this purchase. He operated 320 acres and rents out 160 acres to a tenant.

¹Computed from the Biennial Report of the State Board of Agriculture.

He purchased this additional 160 acres to enlarge the unit operated by his tenant. He had been in the market for farm land about three years and had only considered two other tracts during this period. He was interested only in land close to the existing unit and this tract adjoined the 160 acres farmed by the tenant. Improvements were not required and were given minor consideration in the pricing process. He indicated the need to obtain additional land to have a more economical size unit to rent to his tenant.

The buyer used other sales as a guide to pricing and an estimate of expected income. He cited a specific 160 acre tract close by that was inferior to the tract he purchased and the price differential was \$1,000. He indicated the use of a rough estimate of expected returns based on returns received from the 160 acres he was renting out previously.

This sale was an estate settlement and information concerning the seller was obtained only through the buyer. The buyer indicated that one of the heirs handled the sale and there was not an agent involved. The buyer felt that the seller set the prices using advice from other people, although there was no appraisal made. Price bargaining was absent but the buyer was uncertain about obtaining a clear title to the tract. He moved a building off the premises before he actually had the title and this created a minor problem with the seller.

Investment Cases

Case number one was a 120 acre unimproved tract in Dickinson County, Kansas. It was all cropland with no irrigation and the buyer had no plans for irrigation. The wheat acreage allotment was 46 acres. The buyer had never farmed it and intends to rent it out. It was located on a dirt road,

one mile from a hard-surfaced road, and six miles to the nearest town. The buyer estimated the quality of land above average compared to other land in that locality and estimated an average wheat yield of 20 bushels per acre.

The buyer was in a non-farm occupation and was 57 years old. He had lived on a farm as a child until he was 20 years old. He owned no land prior to this purchase and bought this for an investment. He has other money invested in stocks and bonds and indicated that he expects about the same return from the farm land as the other investments. He wanted to diversify his investments. He considered no other land and the buyer's agent contacted him about this particular sale. The buyer inspected the property but had no information concerning past crop yields or net incomes. He offered the seller less than the asking price and the seller accepted the offer. Bargaining was on the price only, although the buyer received all the mineral rights and the landlord's share of the wheat. The buyer estimated what the land was worth based on the expected net income. He sold some of his stocks and bonds to have cash to pay for this tract.

The seller was in non-farm occupation and was over 65 years old. This tract was all the farmland he owned and he sold it because of the chance to make a quick profit. He purchased the tract in 1956 for \$7,800. He spent \$350 building waterways and sold it in December, 1956 for \$9,600. He planned to use the money from the land to buy another tract. The seller used the price he paid as a consideration in the pricing although he indicated that the return from the land was the most important factor that set the price of land.

The agent handling this transaction approached the seller for the listing. He indicated he had several prospective buyers in mind but only one was interested. He did not advertise in papers and utilized only personal contacts.

He made an inspection of the property and was familiar with land in that general area as he had previously farmed in that location. The information obtained from the agent corroborated the information obtained from the buyer and seller.

Case two in this category was a 160 acre improved tract in Dickinson County, Kansas. The tract consisted of 109 acres of cropland, 49 acres of pasture and two acres in the farmstead. The wheat acreage allotment was 35 acres. The tract was on a gravel road, one mile from a hard-surfaced road, and four miles from town. The buyer judged the quality of land as average for that area and the quality of the buildings as average. He estimated an average wheat yield of 16 bushels per acre. This tract sold for \$14,000.

The buyer was 48 years old and in a non-farm occupation. He had never lived on a farm and did not own farmland prior to this purchase. He had looked at two other tracts but did not seriously consider any other than the one purchased. He had a definite idea as to the type of land he wanted. He was looking for a 160 acre tract with pasture and cropland, complete farmstead, and close to the town he lived in. He learned this tract was for sale through the agents ad in a paper. He inspected the property and obtained information as to what the crop yields had been. He indicated that he made no estimates as to expected income from the land and did not use any recent land sales as a guide to price determination. He offered \$2,000 less than the sellers' asking price and bought the tract for his offer.

The buyer received all of the mineral rights and the spring crops but not the wheat. The transaction was completed in May, 1956. The buyer borrowed approximately one-half of the purchase price from an insurance company and secured the rest of the funds from sale of stocks and bonds. He felt

that he paid more than the land was worth but he believed there was more security in land investment than in stocks and bonds.

The seller was a widow over 65 years old. This was all the farmland she owned and decided to sell because she was too old to look after it and also to pay off a mortgage. She asked the advice of the agent in setting the price and relied on his help to a great extent. She acquired this tract by inheritance when her husband died. Her husband had farmed it until that time and she had some knowledge of the productivity of the land. The only term specified was a cash sale.

The agent was not available to be contacted for this case. The seller expressed satisfaction in the way the agent handled the case, although the seller expected a higher price for the land.

Purchase to Prevent a Reduction of the Farm Unit Cases

Case one under this category was a 160-acre improved tract in Dickinson County, Kansas. The tract contained 130 acres of cropland, 15 acres of pasture, and 15 acres of creek, wasteland, and farmstead. The buyer judged the quality of land above averaged compared to other land in that locality and the quality of buildings as average. It was located on a gravel road, two miles from a hard-surfaced road, and seven miles from town. The buyer estimated an average wheat yield at 22 bushels per acre. The wheat acreage allotment on this tract was 45 acres. The sale price of this tract was \$22,000.

The buyer was an active farmer 47 years old. He had farmed as a tenant for 13 years, as a part owner for 11 years, and as a hired man for two years. He owned 400 acres prior to this purchase and rented an additional 480 acres,

which included the 160 acres purchased. He had farmed this tract about five years prior to the sale and expressed a desire to keep it in his operations. He indicated that he could have rented additional land but would rather buy than rent if possible.

The buyer was not looking for land to buy and consequently he considered no other tracts. He offered the seller \$4,000 less than the asking price and he purchased the tract for \$2,000 less than the initial asking price. The seller had the land appraised for estate purposes and the buyer's first offer was the appraisal value. He used other recent sales as a general guide but did not estimate the expected income from the land. It was assumed that the buyer had some estimate of expected income since he had farmed it before the sale.

The seller was a widow over 65 years old. She owned no other property and decided to sell and move to town when her husband died in 1955. Her husband had farmed this land until 1946 and consequently she had some knowledge of the production capabilities. She had an appraisal made and set the asking price \$4,000 above the appraisal value, because she felt it was worth more.

The agent was not available for interview. The seller indicated she was satisfied with his services. She discussed the asking price with the agent and he suggested that it was too high.

The sale was made to the son-in-law of the seller but this did not influence the price. One other party bid as much as the buyer, but he was not over bid.

Case two in this category was an unimproved 80 acre tract in Clay County, Kansas. The cropland was 62 acres and the remainder was pasture. The tract

was located on a dirt road, one mile from a hard-surfaced road, and two miles from town. The buyer judged the quality of land as average and estimated an average wheat yield at 20 bushels per acre. This tract was sold in June, 1956 for \$5,500.

The buyer was an active farmer 39 years old. He owned 170 acres prior to this purchase and was renting this tract he purchased. He was not looking for land to buy but the owner decided to sell the 80 acres he was renting and he had to buy it or lose it as a farming operation. He indicated that about one-half of his wheat acreage allotment was on this tract and he was anxious to keep it.

The buyer was in a good position to determine the value of the land. He had farmed it for six years and he knew what returns could be expected. He knew the owner paid \$3,500 for the tract about 10 years ago and since then the owner had terraced the farm and had fenced it. The buyer also cited a specific 80 acre tract, which was very similar to the tract he purchased, that sold for \$6,000. He indicated that he would have paid \$6,000 for this tract if necessary to buy it, however he met the sellers asking price of \$5,500. The seller took back a mortgage for \$5,000 which could be paid in any amount when the interest payments were due. The buyer was not in a position to buy except on liberal financing terms.

The seller could not be contacted and limited information was obtained from the buyer. The seller was over 65 years old and was in a non-farm occupation. The buyer believed this was the only farm property he owned and his age influenced him to sell. This property was not listed with an agent and the buyer did not know of any competition from other bidders. The buyer was of the opinion that the seller's cost 10 years ago was the main basis for price setting.

Special Cases

The six cases presented were considered typical in most respects. Each case could be categorized by a different criterion and still be considered as a typical case. Cash sale, financed sale, estate settlement, sale through a land agent, and direct sale are other categories that were covered in the six cases presented. They were not typical in all respects because such items as type of road, distance to a town, and size were given minor consideration.

There was one case in this study that was atypical with respect to the method used in selling the tract. This case was analyzed and studied in detail in an attempt to judge the merits of the method. The limited information obtained prevented as complete an analysis as was desired.

This case was an 80-acre unimproved tract in Dickinson County, Kansas. This tract was all cropland and the wheat acreage allotment was 37 acres. The tract was located on a hard-surfaced road 12 miles from town. The buyer judged the quality of land as average and estimated an average wheat yield of 25 bushels per acre.

The buyer was an active farmer 30 years old. He did not own land prior to this purchase but had farmed seven years as a tenant. He rented 380 acres and was not in the market for land but this tract was adjacent to the ground he had been renting and he wanted to increase his farm unit. He indicated that he could have rented additional land but not with the desirable location this tract offered. He felt that he knew the production capabilities of the land and his father helped him reach a decision on price.

The unique characteristic about this sale was the method of selling. The seller lived out of state and had a personal friend act as his agent to take sealed bids and send them to him. The owner then sold the tract to the

person submitting the highest bid, which was \$8,550. The other people submitting bids and the seller were not contacted, which would be necessary to complete the analysis that was desired.

This method appeared to provide a solution for absentee sellers and sellers not acquainted with market values. This would act as a substitute for information and knowledge which the seller should have in price setting. The buyer in this method should have all the information and knowledge possible. He is not meeting the asking price to complete the transaction, but competing with other bidders and some pressure is on the buyer to bid the maximum he is willing to pay if he is aware that several others were bidding. The seller may want protection of a minimum price acceptable in case of only one or two bids submitted.

Another case supports the hypothesis that the characteristics and circumstances of the parties involved influence the market. This case was an unimproved 80 acre tract that was all crop land in Dickinson County, Kansas. The buyer and seller considered the land as average for river bottom land and it sold for \$8,000. The buyer was in a non-farm occupation and was buying for an investment. The seller was retired and was selling because of poor health and the need for money. The seller had not set a price and the buyer offered \$8,000, which was accepted. The seller indicated satisfaction with this price and indicated he thought this was about the general market value of land.

There was not an agent involved in the transaction; however an agent, contacted in reference to another transaction, mentioned the low sale price on this tract. He indicated that he could have sold the tract for \$12,000 had it been listed with him. He was of the opinion that the seller knew nothing of land values and the buyer was quick to take advantage of this.

It was concluded that this case represented a need for more information and knowledge of the market for parties involved in land transfers. The seller in this case could have used valid market comparisons, income estimate, or listed with an agent and obtained a higher price.

CRITICAL ANALYSIS OF THE LAND MARKET AND VALUATION PRACTICES

The Land Market

The land market is imperfect judged from the criterion of a perfectly competitive market. It was assumed that a more perfectly competitive market is desirable. It was previously stated that some factors contributing to imperfections in the land market cannot be changed; therefore the attention was focused on these factors that could lead to a more perfect land market.

The information and knowledge possessed by the buyers and sellers was studied. It was felt that both parties, particularly the buyers, possessed limited knowledge of production capabilities of the property involved. The knowledge they possessed of other factors, such as income estimates and other economic principles, was felt to be inadequate. It appeared that the majority of the sellers inadequately used valuation methods if their objectives were to obtain maximum prices for land sold.

Valuation Practices

Murray stated,

There are three generally recognized valuation methods or approaches available to appraisers. They are market value comparison, income estimates, and replacement cost less depreciation and obsolescence. All evidence on value can usually be reduced to one or more

of these three sources. In farm valuation, market values and income are the chief approaches because land does not lend itself to a cost valuation.

---income is usually the most important, although not the only, factor determining the market value of a farm.¹

The information obtained in this study indicated that the buyers were generally using methods of valuation acceptable in theory, with some modification. Relatively few buyers estimated physical inputs and outputs and then estimated prices received and prices paid to derive an estimate of income. The mechanics of this method are more exacting than the estimates involved, but it is a reliable method if the estimates are reliable. Many of the buyers claimed some knowledge of productivity by farming the tracts prior to sale, or farming in close proximity to the tracts. It was felt that these buyers made a reasonable estimate of the expected returns on this basis and in some cases this method was probably as reliable as a detailed budget analysis. The majority of the buyers used the market value comparison to a certain degree. They indicated that the final price was in line with the general market value, although relatively few of the buyers or sellers used specific sales for comparison. The effectiveness of this method is limited in part by the ability of the persons involved to make comparisons between different tracts of land. It is also limited by the functioning of the land market in the past. Comparisons with a malfunctioning land market would not tend to increase the efficiency of the land market.

"Sale price or value includes both the income from production and the satisfaction from intangibles."² The farm appraiser, using the income estimate approach, adds or subtracts an estimate of the value of intangibles

¹William G. Murray, Farm Appraisal, 3rd edition, pp. 5-6.
²Ibid., p. 259.

after the income estimate is completed. Murray states, "Intangible locational factors may be grouped readily into four classes: road type, distance from town and city, community or neighborhood characteristics, and utilities."¹ These factors are generally of more importance to the farmer starting his operations than to the farmer adding land to his present operation. The latter type will tend to place more importance on the location with respect to their present operations. The majority of the buyers in this study were established in farming and the information collected indicated they were concerned about location with respect to their present operations, more than general location factors. Distance to town is not a strictly intangible factor. The costs of transporting goods to the market can be computed and as such can be incorporated in the value of the land.

It was concluded that the valuation practices used by the parties in this study were similar to methods acceptable in theory. The weight attached to the methods used or the various factors of a method, was not discernible from the information. It was the opinion of the writer that the valuation practices used by the persons in the land market studied would have been improved by closer adherence to the methods acceptable to theory.

SUMMARY AND CONCLUSIONS

Facts indicate that something is or has been wrong in the land market. The decline in farm income and the increase in land values at the same time appear in conflict. This indicates a need to determine if the error was in the past or today. Economists could try to evaluate this dilemma by estimating

¹William G. Murray, op. cit., p. 254.

yields on farms that had been sold, based on agronomists estimates of yields for that soil type, estimates of production cost, and estimated future prices, based on their own predictions, and come to the conclusion that the farm sold too high, too low, or at the right price for that particular time. This may be a relatively accurate method from a pure investment position; however, the person buying or selling the land may evaluate certain factors differently. This could be determined only by contacting the persons involved in transactions.

This study analyzed what happened in Clay and Dickinson Counties, Kansas in 1956. No projections or inferences were made from this data and the conclusions reached pertain only to the 45 transactions in these counties in 1956.

It was concluded that characteristics of tracts sold influence the land market. The characteristics that had the most influence in this study were improvements and type of roads, as indicated by a higher price for improved tracts and a better type of road. The inherent productivity of the land was assumed to have an influence on the price of land, although data collected were inadequate to make a test of this. Location with respect to a town showed an inverse of the relationship expected in this study.

Characteristics and circumstances of the parties involved in the transactions influence the land market. Circumstances of many of the sellers in Clay and Dickinson Counties led to the conclusion that they priced the land lower than under other circumstances to facilitate an early completion of the transaction. It was felt that the characteristics and circumstances of buyers have greater influence on the land market than characteristics and circumstances of sellers. The relatively large number of farmers buying tracts to supplement or maintain their farm units tends to hold the market up. The farmer who feels he must have additional land or cease farming will probably value the additional

tract at a higher price than the expected income would warrant. The farmer-buyer will pay a premium for a tract conveniently located to his existing unit. This and the fact that no absentee buyer was encountered support the assumption of a relatively localized market. The lack of price bargaining between the buyer and seller supports the assumption that the land market is imperfect and the hypothesis that the characteristics of the parties influence the market.

The conclusion was reached that processes used by buyers and sellers in the evaluation of farm real estate are comparable to those used in theory. Income estimates and market comparisons are used by the buyers and sellers but not to the extent that a farm appraiser would use them. Both methods were partially used in most cases in this study, although some parties indicated that they used only a market comparison in price setting. The hypothesis that some process other than income estimate and market comparisons was used was not proved or disproved. It was felt that other factors or methods were used by some parties but the statements obtained did not support this.

This study indicates that additional study of the land market is needed. This study could be considered as a pilot study to guide others in this field. The basic facts behind a transaction are not difficult to obtain, but motives of persons are difficult to determine. Future studies should concentrate on this aspect of the land market. More thorough information and analysis than this study of Clay and Dickinson Counties, and a wider coverage would permit projections and inferences that would be beneficial to society.

ACKNOWLEDGMENTS

The assistance given by Wilfred H. Pine, Professor, Agricultural Economics, Kansas State College, in the preparation of this thesis is gratefully acknowledged.

The cooperation of the Agricultural Research Service of the United States Department of Agriculture, particularly the suggestions and assistance of William Schofield and Virgil R. Hurlburt were deeply appreciated.

The cooperation of the Northern Great Plains Committee on Tenure, Credit, and Land Values and the North Central Land Tenure Research Committee, Sub-committee and Land Pricing and Credit is acknowledged.

The suggestion of others in the Department of Economics and Sociology, Kansas State College, were also deeply appreciated.

BIBLIOGRAPHY

Books

- Duddy, Edward A. and Revzan, David A. Marketing. Second edition, New York: McGraw-Hill Book Company, Inc., 1953.
- Fetter, Frank A. The Masquerade of Monopoly. New York: Harcourt, Brace and Company, 1931.
- Meade, J. E. and Hitch, C. J. An Introduction to Economic Analysis and Policy. New York: Oxford University Press, 1938.
- Murray, William G. Farm Appraisal. Ames, Iowa: The Iowa State College Press, 1954.
- Stigler, George J. The Theory of Price. New York: The Macmillan Company, 1947.
- United States Department of Commerce. Statistical Abstract of the United States 1956. Washington: Government Printing Office, 1956

Journal

- Ise, John, "Monopoly Elements in Rent." The American Economic Review, March 1940, 30:33-45.

Government and State Bulletins

- Hurlburt, Virgil L. Buying of Farms in Story County, Iowa, 1940-48. Iowa Agricultural Experiment Station Research Bulletin 377, December, 1950.
- Marsh, Charles F. and Pine, Wilfred H. The Value of Farm Real Estate. Kansas Agricultural Experiment Station Bulletin 399, April, 1957.
- Otto, Merton L., Collins, Hubert L., and Pine, Wilfred H. Trends in Land Values in Kansas. Kansas Agricultural Experiment Station Circular 341, August, 1956.
- U. S. 85th Congress, 1st Session. Economic Indicators June 1957. Washington: Government Printing Office, 1957.
- U. S. Department of Agriculture. Current Developments in the Farm Real Estate Market. Washington: Agricultural Research Service, May, 1957.

AN ANALYSIS OF THE FARM
REAL ESTATE MARKET IN CLAY AND
DICKINSON COUNTIES, KANSAS, 1956

by

VERNON CLYDE MCKEE

B. S., Kansas State College
of Agriculture and Applied Science, 1956

AN ABSTRACT OF A THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Economics and Sociology

KANSAS STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE

1957

The purpose of this thesis was to study some problems associated with buying or selling farm real estate. Future income is one of the main determinants of land value; consequently farm income and land prices are expected to move in the same general direction. The expected has not been the case in recent years. Farm income has been declining since 1951 but the sale value of farm real estate has been increasing during this period. It was felt that methods of land valuation used by persons buying and selling land did not coincide with methods acceptable in theory.

The main objectives of this study were the determination and evaluation of the factors and processes used by buyers and sellers in setting a price and the determination of some imperfections in the land market which could be eliminated.

The hypotheses tested in this study are: (1) Characteristics and circumstances of the property sold influence the land market. (2) Characteristics and circumstances of the parties involved in a transaction influence the land market. (3) Processes used in evaluation of farm real estate are (A) market value comparisons, (B) income estimate, (C) both market value comparisons and income estimate, and (D) some process other than market value comparisons or income estimate.

All bona fide farm real estate sales in Clay and Dickinson Counties, Kansas in 1956 were used in this study. The information was obtained by personal interview of the parties involved in the transactions. The conclusions reached were based on information obtained and interpretation of data by the writer. This study was conducted as a case study and no statistical conclusions were included. Conclusions reached pertain only to the 45 cases analyzed in Clay and Dickinson Counties.

The conclusion was reached that the characteristics of the tracts sold influence the market. Tracts with improvements sold higher and tracts on better roads had a higher sale value. The interrelation of other factors was not considered; therefore, the price differential between improved and unimproved tracts could not be attributed all to the improvements. The same condition held for type of road. The location of the tracts with respect to a town indicated a higher price for tracts farther from a town, which is not expected. Again other factors were assumed to influence this price differential.

It was concluded that certain characteristics of the parties involved influence the market. The circumstances of many sellers led to the conclusion that sellers price land lower to facilitate an early completion of the transaction. The number of sellers of advanced age and estate settlements suggests a slight pressure to sell. Reasons for buying tend to influence price. Farm enlargement, investment, and maintenance of present farm unit accounted for 80 percent of the reasons for buying. Thirty-seven buyers were active farmers. Eighteen farmer-buyers bought tracts for farm enlargement and 11 bought tracts to maintain their present farm unit. The large number of farmers buying tracts to enlarge or maintain their farm units led to the conclusion that this tends to support higher land prices.

The processes used by buyers and sellers in evaluating farm real estate was considered comparable to methods used in theory, with some modifications. It was concluded that income estimate or market comparisons, and a combination of both are used but not used as completely as possible. Conclusive evidence did not indicate that some processes other than income estimate or market comparisons are used; however, it was felt that other factors and processes are used.

The final conclusion is that a more thorough investigation of motives in the real estate market is needed.