THE DETERMINANTS OF CLASS POSITION IN THE CHANGING STRUCTURE OF AGRICULTURE

Thesis for the Degree of M. A.

MICHIGAN STATE UNIVERSITY

MARK LANCELLE

1977

ABSTRACT

THE DETERMINANTS OF CLASS POSITION IN THE
CHANGING STRUCTURE OF AGRICULTURE

By

Mark Lancelle

Major structural changes in agricultural production have been developing over time which have resulted in a greater proportion of farms characterized by higher degrees of differentiation between ownership, management, and labor. The problem addressed in this paper was that of identifying the major determinants of attaining ownership of the type of farm likely to dominate production for some time into the future, the owner-managed, nonmanager-worked farm. Elements of three general areas of opportunity were examined: access to land, family resources, and skills. It was concluded: that most members of the farm workforce were recruited from farm backgrounds; that having farmowning parents was a necessary, but not sufficient condition for attaining ownership; that only the wealthiest, highest status, farmowning families are likely to determine ownership of farms in the future, primarily through the transfer of family wealth; and that a larger proportion of the rural farm population is likely to be structurally immobile.

THE DETERMINANTS OF CLASS POSITION IN THE CHANGING STRUCTURE OF AGRICULTURE

By

Mark Lancelle

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Department of Sociology

1977

ACKNOWLEDGMENTS

Many thanks to Dick Rodefeld, my committee chairman, friend, and advisor. His encouragement, advice, and assistance helped make this project a pleasurable learning experience. I'm also grateful to Drs. Fred Buttel and Rick Hill for their thoughtful advice and criticism. Olivia Mejorado lent some valuable technical assistance, and her typewriter.

Finally, thanks to my fellow grad students here at MSU. They didn't add much to the substance of my thesis, but they kept me loose while I was working on it.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

Major structural changes have occurred within agriculture in the recent past. While there is general recognition of the fact that the number of farms has declined greatly and the average farm size has increased since about 1935, the significance of these changes has been the subject of some disagreement. One of the bases for the disagreement has concerned the relative status of the family owned and operated farm within the structure of agricultural production. This has generally been labeled the "corporate farm - family farm" debate.

Some propose that the increase in average farm size and decrease in number of farms indicate that the status of the family farm is declining significantly as absentee, nonfarm interests come to control a greater proportion of agricultural land. Others maintain that the changes in farm numbers and size are due primarily to the increased efficiency of family owned farms. They maintain that farms owned and operated by individuals or families continue to dominate. They also point to the small percentages of farms and total acreage controlled by nonfarm corporations to support their position.

Another approach can be identified which bases the study of changing farm types not upon changes in nominal ownership patterns, but upon changes in the "farm as a production system" (Rodefeld, 1974: pp. 39-109). Four basic factors of agricultural production are

identified: land, capital, management, and labor. Farm structural types are defined by the degree to which the ownership and/or provision of these factors is differentiated within the farm as a system of production. The statuses which an individual occupies within the structure are also defined by the ownership and/or provision of these factors. This approach therefore provides a conceptual framework which subsumes the issues of concern to those who engage in the "corporate farm - family farm" debate.

The objective of this study is to identify some of the major determinants of who is most likely to attain ownership of the types of farms most likely to dominate agricultural production in the future. Because the study concerns both changes in farm type and the differential status attainment of individuals within farm organizational structures, we will approach it by considering the structural changes which have occurred in the farm as a production system.

A Structural Definition of Farm Types

Four basic status positions can be identified which are directly associated with each of the four basic factors of production necessary for the functioning of a farm as a production unit (Rodefeld, 1974: pp. 56-70). The four positions serve to define the organizational structure of the farm. They are: landowner, capital owner, manager, and laborer. An individual, or family, may assume one or more of these positions on a farm and perform the functions associated with each.

The degree to which these four statuses are differentiated between non-related individuals on any particular farm determines the definition of the farm type (Rodefeld, 1974: pp. 85-98). Four basic farm types will be identified for the purposes of this study. In all

cases but one it will be assumed that ownership of the land implies ownership of most of the nonland capital. The three remaining positions will be abbreviated as follows: ownership (O), management (M), labor (L). Farms range from the least differentiated type on which a majority of the role requirements for all of the status positions are provided by one individual or family, to the most highly differentiated type of farm on which each role is performed by a different individual.

The first type (O-M-L) is the one most commonly referred to as the "family farm," on which most of the management and labor are provided by the owner-operator and his family. The second (O-M/L), is the type of farm on which the owner also manages the day-to-day activities, while a majority of the labor is provided by hired workers. This type is often considered to be a family-type farm, but it is generally larger than the average farm of the first type. The third type of farm (O/M-L) has been commonly referred to as a "tenant farm," on which an individual operator and his family provide a majority of day-to-day management and labor, while the land is owned by someone else. On this type of farm, a majority of nonland capital may be owned by the tenant rather than the landowner. The fourth type (O/M/L) might be considered "large scale industrial type farms" (Rodefeld and Wilkening, 1971), on which a majority of the management is provided by other hired workers, as is a majority of the physical labor, while the land and capital are absentee owned.

The Historical Situation: Small Farms With Low Levels of Differentiation

Historically, agriculture in the United States has been dominated by relatively small, dispersed farms with low levels of differentiation.

Farms have traditionally been owned by individuals or families who also provided a majority of both the day-to-day management and physical labor (O-M-L). There are exceptions. The significance of much larger, more highly differentiated farms has been greater in the southern and western areas of the U.S. This is due primarily to historical settlement patterns, and to the types of commodity production which have dominated. However, the overall significance of farms characterized by a high degree of differentiation between ownership, management, and labor (O/M/L) has been small, both in terms of numbers of farms and total acres of land (Moyer, 1969), although the average size of these farms is much larger than the average sized family farm.

Tenant farms (O/M-L) accounted for 42 percent of all farms and 32 percent of all farm acres in 1935 (Moyer, 1969). Their significance as a proportion of all farms has declined greatly since that time. In 1964, they accounted for only 17 percent of the farms and 13 percent of the land (Moyer, 1969), figures which, because of Census definitions, include more highly differentiated farms of the O/M/L type. Historically, the Upper Midwest has been characterized by low rates of tenancy relative to other areas of the country.

A number of conditions have contributed to the maintenance of the relatively small, family-type farm (Rodefeld, 1974: pp. 110-210; Rodefeld, 1975). Historical settlement patterns were conditioned to a great extent by the policies of the Federal government related to the sale of unsettled land. These policies generally served to restrict the size of farms to that which was necessary to provide a family with the necessary means of support, although they were inconsistent and allowed the accumulation of large holdings in some areas (Gates, 1941).

Large quantities of cheap land provided for low purchase prices for farms large enough to support a family. Farming for a long time was very labor intensive, with few opportunities for replacing labor with capital. This served to place limits on the amount of land one family could operate. Also, costs of nonland resources were low, while relatively high wages could be obtained throughout the settlement period, allowing many the opportunity to acquire necessary capital. Finally, incentives for the penetration of nonfarm capital have not been great. The rate of return on investment has not been high enough to compensate for the risks associated with farm production. These conditions encouraged the maintenance of small sized farms with a generally low degree of ownership-management differentiation.

There were also incentives to keep management-labor differentiation low. Incentives which served to keep farms small in size also served to make labor requirements small and make hired labor unnecessary on most family-operated farms outside the South and West. High labor costs encouraged the manager and his family to work the farm, while discouraging nonmanager worked types. As mechanization developed, labor productivity increased to an extent which allowed managers to account for even more of the labor requirements. The nonroutine nature of farm work served to reduce work force efficiency. The dispersed pattern of ownership of small farms served to make it difficult and costly to assemble the large tracts of land which might require hired labor to operate. Biological, climatological, and economic uncertainties and risks have not encouraged the nonfarm investment which would be more likely to rely on hired labor.

Changes in the Structure of Agriculture: Number of Farms, Farm Size, and Levels of Differentiation

The number of farms reached a peak in 1935 at 6.8 million. However, by 1970 the number of farms had been reduced to 2.7 million. Within the same time period, the average farm size increased from 157 acres to 387 acres (Moyer, 1969). An explanation for these changes can be based upon a number of related developments which have occurred since 1935. The size of the farm population and the demand for land increased while the supply of farmland declined. This resulted in

Table 1: Numbers of Farms and Average Farm Sizes, 1900-1970[1]

Year	Number of Farms	Average Farm Size
1900	5.74 million	146 acres
1910	6.36 million	138 acres
1920	6.52 million	147 acres
1930	6.55 million	151 acres
1940	6.35 million	167 acres
1950	5.65 million	213 acres
1960	3.96 million	297 acres
1970	2.66 million	387 acres

increasing land values. The adoption of technological innovations, particularly mechanization, increased output per worker and unit of land and contributed to profit increases. More financially stable farmers could then afford to expand their holdings in order to more fully take advantage of increased mechanization. The increased substitution of labor by capital, combined with the costs of new technology,

[1] The figures were derived from the Census of Agriculture, and were reported in Ball and Heady (1972).

rising land values, and increased farm size have increased the purchase price of farms and have made them increasingly inaccessible to individuals unaided financially.

At the same time, incentives for the investment of nonfarm capital in land ownership and nonland farm resources have increased. Government programs have served to reduce the risks associated with price fluctuations. Production risks have been reduced to a great extent by technological innovations. Although the risk reductions have served to increase the probability of profit and greater return on invested capital, of greater importance to nonfarm interests is the fact that rising land values have made investment in land attractive in terms of capital gains, and the fact that laws provide tax shelters for those who invest in land (Raup, 1973; Sundquist and Guither, 1973). The advantages associated with vertically integrated enterprises, which control the production, processing, and marketing aspects of the agricultural industry, have encouraged agribusiness and other corporations to invest in land and nonland resources (see, for example, Barnes and Casalino, 1972). What these incentives for the investment of nonfarm capital imply is that changes may be occurring which will increase the level of ownership-management differentiation.

There are reasons to expect that the number of large farms with a high level of differentiation between management and labor will increase (Rodefeld, 1975). Many of the historical restraints on the development of these farm types have been reduced for the following reasons: larger farms are better able to generate the capital necessary to aggregate larger portions of land; many of the risks involved in long-term capital investment have been reduced through technological

innovation and government price stabilization programs; specialization and mechanization have routinized much of the farm work and have made labor more efficient; large farms may be able to compete more successfully for labor. Certain economies of size can be taken advantage of including: access to technology and credit; buying and selling economies; and spreading costs and risks. Attempts to achieve power equalization with large, highly concentrated suppliers and processors may contribute to increasing size and differentiation.

Presently, changes can be observed which indicate that farm types with higher levels of differentiation are of increasing importance, both as a proportion of the total number of farms and for the proportion of total sales for which they account. It has been indicated above that size and level of differentiation are highly associated. While size may not be considered a direct indicator of level of differentiation, it is reasonable to expect that an increase in one implies an increase in the other.

Tables 2 and 3 indicate the increasing importance of the largest segment of farms. Farms exceeding 1000 acres in size have increased in absolute number and as a proportion of the total number of farms. Their increased importance is revealed even more clearly by examining the change in proportion of total farm acres for which they have accounted. Their significance can be seen to be increasing in all four major regions, suggesting that their influence is increasing even in those areas where they have not been of great importance historically. The number of farms with sales exceeding $100,000 have also been increasing absolutely and relatively. Their proportion of total sales reveals more clearly their increasing stature. Again, their importance is shown to be increasing in all geographic areas but one.

Table 2: Numbers and Percentages of Farms and Farm Acreage By Size[1]

	Year				
Number of Farms (x1000)	1930	1940	1950	1959	1969
Farms less than 1000 acres	6214	6001	5267	3569	2579
Farms larger than 1000 acres	81	101	121	136	151
Total	6295	6102	5388	3705	2730
Acres in Farms (x1000,000)					
Farms less than 1000 acres	713	699	668	568	485
Farms larger than 1000 acres	277	366	495	555	578
Total	990	1065	1163	1123	1063
Percentage of Total by Farms Over 1000 acres					
Number of Farms	1.3	1.6	2.3	3.7	5.5
Acreage	27.9	34.3	42.6	49.4	54.4
Northeast	2.5	3.0	3.3	5.3	6.6
Northcentral	12.3	16.4	20.6	25.5	33.0
South	24.9	29.5	36.1	43.4	47.4
West	64.8	73.7	82.3	86.8	89.3

[1] Figures have been derived from the 1930-1969 Censuses of Agriculture, and are reported in Rodefeld (1975).

Table 3: Farm Numbers and Sales, and Percentages of the Total Number of Farms and Total Sales by Farm Sales Class[1]

	Year		
Number of Farms (x1000)	1959	1964	1969
with less than $100,000 in sales	3685	3125	2678
with more than $100,000 in sales	20	31	52
Total	3705	3156	2730
Total Sales of Farms (x $1 billion)			
with less than $100,000 in sales	25.6	26.8	30.3
with more than $100,000 in sales	5.0	8.5	15.3
Total	30.6	35.3	45.6
Percentage of Total by Farms with More Than $100,000 in Sales			
Number	.5	1.0	1.9
Sales	16.3	24.2	33.6
Region			
Lake States	3.5	7.6	13.1
Appalachia	5.0	9.1	15.8
Corn Belt	5.4	9.4	18.9
Southeast	23.8	35.7	33.4
Mountain	28.4	39.5	54.0
Pacific	44.7	59.3	66.3

[1] The 1959 and 1964 figures were obtained from Nikolitch (1970), the 1969 figures from the Census of Agriculture. All are reported in Rodefeld, 1975.

There are more direct indications that the level of ownership-management differentiation is increasing. Table 4 distinguishes between farms which are fully owned by the manager, those partly owned, and those on which none of the land is owned by the manager. Although a decline in number of farms in each category between 1935 and 1964 is registered, the proportionate decreases are more significant. Farms with a low level of differentiation (100% manager-owned) declined in number by 42 percent from 1950 to 1964, while those of the intermediate level decreased by only 5 percent. Farms with high levels of differentiation decreased by 61 percent, but this category includes both hired-manager farms and tenant farms. Hired-manager farms decreased by only 10 percent, while tenant farms declined by 61 percent (Rodefeld, 1975).

The patterns of change from 1950 to 1964 in acres of land operated reveal an even greater difference. Farms with the lowest levels of differentiation decreased by 24 percent, farms intermediately differentiated increased their acres owned by 14 percent and acres rented by 44 percent. Highly differentiated farms declined by 19 percent. However, farms with hired managers increased their acreage by 6 percent, while tenant-operated farms declined by 32 percent. The percentages of total land operated reveal the same differences. The percentage of total land not owned by the manager increased from 41.8 percent in 1954 to 45.7 percent in 1964.

Increasing management-labor differentiation is also indicated. It appears that the proportion of commercial farms employing hired laborers is increasing and that the hired work force is generally becoming more dominated by fulltime workers, while seasonal workers

Table 4: Number of Farms and Total Acreage By Level of Management-Ownership Differentiation [1]

	Level of Differentiation						
	Low		Intermediate			High	
Year	number	acreage	number	acreage owned	acreage rented	number	acreage
1935	3.2	391	.69	132	134	2.95	280
1950	3.1	419	.83	250	173	1.42	397
1954	2.7	397	.87	278	195	1.12	290
1959	2.1	349	.83	279	219	.75	277
1964	1.8	319	.79	284	249	.56	258
(Percentage of Total)							
1935	47.1	37.1	10.1	12.5	12.7	42.8	37.7
1950	57.4	36.2	15.3	21.6	14.9	27.2	27.4
1954	57.4	34.2	18.2	23.9	16.8	24.4	25.0
1959	57.1	30.9	22.5	25.4	19.5	20.4	24.1
1964	57.6	28.7	24.8	25.6	22.4	17.6	23.3

[1] The numbers of farms and the acreage figures are reported in millions. Farms classed as those with low levels of differentiation are those on which 100% of the land is owned by the operator (O-M-L and O-M/L). Intermediate level farms are those partly owned (1%-99%) by the operator (O-M-L and O-M/L). Highly differentiated farms are those on which none of the land is owned by the operator. These include tenant farms (O/M-L) and hired manager farms (O/M/L). Figures are derived from Moyer (1969) and are reported in Rodefeld (1975).

decline in proportion. From 1959 to 1969, the percentage of all commercial farms reporting expenditures for labor increased from 74 percent to 80 percent, and the percentage of commercial farms reporting the presence of workers employed for more than 150 days increased from 12.5 percent to 14.3 percent (Rodefeld, 1975). All tenure categories reported increases in the average number of workers per commercial farm (Moyer, 1969).

Table 5: Number of Farm Wageworkers and Percentage Change in Numbers by Days Worked, 1963-1973 [1]

	Number of Wageworkers (x1000)				
Days of Farm Wagework in Year	Year 1963	1968	1973	Percentage Change 1963-68	1968-73
1-24	1735	1299	1085	-21.7	-16.5
25-149	1163	1039	918	-10.7	-11.6
150-249	309	256	247	-17.1	-3.5
250+	390	324	421	-16.9	23.0
Total	3597	2919	2671	-18.8	-8.5

Table 5 indicates that the hired work force composition is changing toward an increased proportion of fulltime workers (250 days or more). The percentage decline in numbers of workers decreases as the number of days worked increases. McElroy (1974) in reviewing figures from 1968 to 1973 revealed a similar finding. His figures indicate a one percent increase in total worker numbers, with workers employed 150 days or more per year increasing their percentage of the total from 20 percent to 22 percent, and with workers employed less than 75 days per year as the only category to experience decline. They also show that the total man-days of work done by hired workers

[1] This table was reported in Rodefeld (1975). The figures were obtained from Bowles and Sellers (1965), and McElroy (1969, 1974).

increased 9.4 percent during that period and that the percentage increases were greatest for those who worked more than 150 days per year.

Table 6: Farm Numbers, Percentage of Total Farms and Total Sales By Level of Management-Labor Differentiation [1]

Level of Differentiation	Farm Numbers (x1000)			Percentage of Total Number of Farms			Percentage of Total Sales		
	1959	1964	1969	1959	1964	1969	1954	1964	1969
Manager worked	3530	2996	2580	95.5	95.1	94.4	70	65	62
Nonmgr. worked	165	154	146	4.5	4.9	5.6	30	35	38
Total	3695	3150	2726						

Table 6 indicates that those farms on which over one-half of the labor was not provided by the manager and his family increased as a proportion of total farms from 1959 to 1969. Their proportion of total sales increased by an even larger percentage. Nikolitch (1972: p.9) also indicates that the nonmanager worked farms increased their percentage of total sales in every geographic area during this time period.

Finally, Rodefeld (1975) compiled the figures reported in Table 7 which are divided essentially according to the four basic farm types which were defined earlier. Changes from 1959 to 1964 indicate that "tenant-type" farms constitute the only category which is declining as a proportion of the total. Farms with the lowest level of differentiation (O-M-L), while increasing as a proportion of the total number of farms, registered a decrease in the proportion of total sales for which they could account. The two types with the highest levels of

[1] The figures in this table were computed by Nikolitch (1972: p.4). The 1969 figures are not available, and are therefore estimated.

Table 7: Number of Farms and Percentage of Sales By Level of Differentiation[1]

Level and Type of Structural Differentiation	Number of Farms (x1000) 1959	1964	pct. change	Sales (x $1 million) 1959	1964	pct. change	pct. change per farm
Landowner managed: manager worked (O-M-L)	2808	2475	-11.9	15224	17276	11.9	28.7
Nonlandowner managed: manager worked (O/M-L)	721	521	-27.7	5912	5372	-9.1	25.7
Landowner managed: nonmanager worked (O-M/L)	139	122	-12.2	7202	8915	23.8	41.0
Nonlandowner managed: nonmanager worked (O/M/L)	26	32	23.1	2024	3512	73.5	41.0
Total	3695	3150	-14.7	30362	35075	15.5	35.5
	% of Farms			% of Sales			
Landowner managed: manager worked	76.0	78.6		50.1	49.3		
Nonlandowner managed: manager worked	19.5	16.5		19.5	15.3		
Landowner managed: nonmanager worked	3.8	3.9		23.7	25.4		
Nonlandowner managed: nonmanager worked	.7	1.0		6.7	10.0		

[1] Source: Rodefeld (1975: p.54)

differentiation (O-M/L and O/M/L) increased their percentages of total farms and their proportions of total sales.

Implications

The figures cited above indicate that although farms with the lowest levels of differentiation (O-M-L) continue to dominate in terms of total number of farms, their proportion of total sales has been declining. These farms did not account for a majority of total farm land or total sales in 1964 despite their numerical superiority. Large scale farms (those with more than 1000 acres and/or more than $100,000 in sales) have been growing in absolute and relative numbers and sales. Nonmanager worked farms are increasing in proportion of total number and total sales, relative to manager worked farms. The greatest rates of increase in number and sales were registered by the farm type characterized by the highest differentiation between ownership, management, and labor (O/M/L).

There is no reason to expect that the conditions and forces which have encouraged these trends toward higher degrees of differentiation will lessen in importance. Rising costs, technological change, and competition from nonfarm interests are some of the major forces which are likely to discourage the entrance of young prospective farmers unaided by family resources and to encourage the trend toward larger, more highly differentiated farms. Given the dominance of manager-worked farms and the relatively small influence of absentee owned farms at present, we would expect that owner-managed farms will continue to dominate farm production for some time into the future. Their sizes will continue to increase and they are likely to come to rely on hired labor to a far greater degree. The total number of

farms is likely to decrease with the least differentiated family-type farms (O-M-L) making up a decreasing proportion and the most highly differentiated (O/M/L) increasing their proportion of the total.

This period of change can be considered a transitory phase. Ultimately, if the forces contributing to the tendencies toward a higher degree of concentration in land ownership and increased differentiation of the labor force are not negated, the logical development of these forces will most likely result in a relatively stable structure. This structure would be characterized by a very small number of very large landholdings, most likely absentee-owned, and with high levels of differentiation between ownership, management, and labor.

The Problem

It has already been stated that, by assuming the continuation of present trends, it can be expected that farms will continue to decrease in number, increase in size, and be composed of a lesser proportion of the least differentiated, traditional family-type farms and a greater proportion of more highly differentiated farms. These trends lead one to expect that landowning managers will continue to dominate production for some indefinite period of time, while management-labor differentiation increases, until a more final, stable state is reached.

A change in the relative importance of farm types is logically related to changes in the occupational composition (according to the definition of the statuses occupied) and class structure. Each farm type is defined by the degree of differentiation between the various statuses defining the structure of the production system. Change toward more highly differentiated farm types will result in a

decline in number and proportion of land owning managers, while the proportion of nonmanaging owners and hired managers increase. An increasing proportion of the physical labor will be done by hired workers with no management functions, and management responsibilities are likely to become more differentiated from physical labor. In the long run, the class structure will be characterized by a relatively small number of large land owners, with hired workers fulfilling all of the management and physical labor functions.

The changing occupational structure of agriculture carries with it implications for the individual, family, and community within the rural sector in addition to wider, societal-level implications. Land tenure can be considered the basis for a whole system of social relations in the rural sector. How it determines the work process, division of labor, and the allocation of decision-making power affects all levels of rural society.

At the individual level, the trends imply a further denial of opportunities for obtaining positions in the productive process which allow the degree of freedom and control which owning a farm provides. The wealth and status accorded the landowning, relatively independent farmer will be accessible to fewer people. Increased division and differentiation of labor may result in an increased level of alienation for the increasing proportion of the work force constituted of hired laborers (Rushing, 1972).

The family's class position (according to owning and nonowning farm occupations) has been shown to be related to the family's structure, general economic status, and level of involvement in the community (Rodefeld and Wilkening, 1971; Rodefeld, 1974: pp. 263-297; McMillan, 1944a; Schuler, 1938b). Generally, those in lower class positions

have had higher rates of occupational and residential instability, lower incomes and levels of wealth, and less involvement in the community. A farm workforce comprised of a larger proportion of nonowning, hired labor implies a generally lower standard of living for a larger proportion of the rural population.

A decline in numbers of a farm workforce made up of an increasing proportion of hired labor will result in changes in rural communities. Community compositional characteristics, such as level of education and level of income, are likely to be affected. Changes in the population structure are likely to be reflected in the age distributions, fertility rates, dependency ratios, and rates of out-migration in rural communities. Equally important is the fact that the institutional infrastructure of rural communities has historically been based upon small-scale, dispersed family owned and operated farms. Rural areas have been characterized by small, dispersed businesses, schools, churches, and other enterprises. The livelihoods of a large proportion of the nonfarm rural inhabitants has been dependent upon servicing family farmers and marketing their produce. A declining farm population with a higher percentage of hired labor obviously will have detrimental effects on those rural institutions. Past research has supported this proposition (Goldschmidt, 1968; Raup, 1970; Rodefeld, 1970).

At a broader level, we can perceive a more sharply defined class structure with the increasing concentration of land, nonland capital, and other resources under the control of fewer owners, and the increasing proportion of hired labor. An increasingly capital intensive mode of agricultural production will result in even fewer employment opportunities and may serve to further aggravate unemployment problems

in the rural sector, and increase the flow of out-migration from rural areas. Increased efficiency, in terms of per unit costs, has long provided the economic rationale for arguing in favor of large-scale, capital intensive agricultural production. It is argued that these savings will be passed on and provide the consumer with cheaper food. However, the presumed advantages of economies of size in agricultural production have been questioned, not only in terms of per unit cost, but also in terms of management, energy efficiency, natural resource utilization, and the potential market power of large, integrated firms (Raup, 1969, 1973; Madden and Partenheimer, 1972; Clark, 1975).

Trends toward larger farms with more complex divisions of labor and structural differentiation have been identified. If rational alternatives to the potentially detrimental consequences of this process are to be developed, a fuller understanding of the causes of the change process must be gained. A key area of concern for those who wish to understand the dynamics of the process and its implications for the future must center upon the determinants of differential opportunities for the attainment of farm ownership. Some of the more specific problems which can be addressed are: the identification of those aspects of an individual's social background that are most likely to determine the opportunities he has for attaining farm ownership; to what extent a rural farm background as a youth influences the opportunities; to what extent the family-of-origin's class position determines the prospective farmer's opportunities; the extent to which nonfarm capital is penetrating the rural farm sector.

This paper will be addressed to the problem of identifying the determinants of farm ownership. We are most concerned with identifying the determinants most likely to influence differential opportunities into the future. Since present trends indicate that for some time into the future owner-managed farms of larger size are likely to dominate, the focus of our study will center on those farms which are at present among the largest owner-managed farms. A sample of those owners will then be compared to a sample of hired laborers on highly differentiated farms. Because of the historical dominance of owner-managed farms in the Midwest, it was thought that a sample drawn from the state of Wisconsin would provide a good insight into the change process. If we are able to identify the determinants of ownership of some of the largest farms at present, and we assume that present trends will continue, we may be able to logically predict the determinants of farm ownership in the future. By doing so, we will essentially be identifying some of the major determinants of the trend toward increased concentration of ownership and increased differentiation of the farm work force.

Chapter II

A REVIEW OF PAST RESEARCH AND THE SUGGESTED HYPOTHESES

A Review of Relevant Literature

Unfortunately, little empirical sociological research has been done concerning this issue since the 1940's, despite the dramatic changes which have occurred since then. Perhaps an increasing proportion of owner-operatorship, as compared to tenancy, after World War II alleviated much of the concern for understanding the land tenure process which was generated in response to the high tenancy rates of the 1930's. Perhaps combined with an uncritical acceptance of the presumed advantages of economies of size for society as a whole, a general attitude prevailed which refused to recognize the increasing concentration of land ownership and changing structure of agriculture as problems with which sociologists should be concerned. Regardless of the reasons, it is necessary to rely mainly on research done in the first half of this century for insights into the situation through empirical research.

The Agricultural Ladder

Much of the earliest research work done on the process of attaining farm ownership was derived from the "agricultural ladder" conceptual model. Spillman (1918) is usually credited with first developing the model. It consisted of four basic phases of land tenure which generally described the process of attaining farm ownership.

The individual began by working on his parents' farm without wages, accumulating experience and a knowledge of farm practices. Next, the individual was expected to assume a position as a hired laborer on another farm, saving enough capital in this phase to allow him to proceed to the next phase, tenancy on a farm which he operated but did not own. By accumulating enough capital as a tenant farmer, the individual was expected to finally obtain the encumbered ownership of his own farm. Each phase of tenure implies a step upward in wealth and status, with a final qualitative change when one attained unencumbered ownership. Later research resulted in an expansion of the model to include phases of wage labor on the home farm, in other rural occupations, and in urban occupations (Wehrwein, 1931). Occupational histories were then examined to determine which phases were used most by owners on their way up the ladder.[1]

The model was based on two assumptions. First, that access to land was available to all those who chose to attempt to attain farm ownership. The second assumption was that wages would be high enough, and return to the operator of a tenant farm great enough, to allow those in the intermediate phases the opportunity to save enough to eventually buy a farm. However, the model was developed at a time when the number of farms was increasing, sizes had not yet been greatly affected by the influence of mechanization, and farm incomes were quite favorable compared to nonfarm incomes. Since that time, farms have become larger and fewer in number, capital requirements have risen

---

[1] A review of some of the more important agricultural ladder research is provided by Carl F. Wehrwein, "An Analysis of Agricultural Ladder Research," Journal of Land Economics, 1958, vol. 34, pp. 329-37.

tremendously while incomes have not kept pace. A logical basis for the two assumptions can no longer be established.

Paul S. Taylor (1943), in his historical analysis of the changing status of the "hired hand" in U.S. agriculture, concluded then that this occupation could no longer provide the opportunities it once did for accumulating the capital necessary for upward mobility through the agricultural status hierarchy. His conclusion might have been generalized to wage labor in general. Other research indicated that over time intermediate rungs were becoming less important in favor of direct movement from home farm work to farm owner through family transfer arrangements (Wehrwein, 1931; Tetreau, 1931; Barlowe and Timmons, 1950; Harris, 1950; Parsons and Waples, 1945).

The model was also criticized for its lack of explanatory power. This became especially evident to those who were concerned with the rising rate of tenancy. Lawanda Fenlason Cox (1944) criticized the research generated from this model for lacking an historical perspective which might allow one to discover an explanation for rising tenancy rates. The model also failed to account for downward mobility and for reasons why some could not attain ownership and remained in lower status positions.

The agricultural ladder model was based on the assumption that individual performance, and not social conditions, was the primary determinant of one's status. It was primarily a description of the steps which one night use to attain farm ownership. Therefore, most of this research was of little help in explaining differences between owners and nonowners as groups, and the obstacles to nonowners which prevented their attainment of farm ownership. Some of the research

done within the context of the agricultural ladder model has been useful, since it was directed toward a specific step, tenancy, and then attempted to explain differences between owners and the nonowning tenants (Von Tungeln, 1927; Wehrwein, 1928, 1930, 1931; Tetreau, 1931; Barlowe and Timmons, 1950).

The Depression and Tenancy

The early Depression years were characterized by an increasing proportion of tenant-operated farms. An increase in concern with the social conditions associated with this tendency was manifested within the political sphere in a number of ways, but there are indications that this concern was not reflected to as great a degree among social science researchers. The Social Science Research Council (1933) and Joseph Ackerman (1941) provide reviews of the research done on tenancy up until 1940. Their findings indicate that although the amount of research had increased greatly, topics such as land ownership and transfer, labor as part of the tenure system, and the social implications of the U.S. tenure system received relatively little attention.

In the Midwest, the North-Central Regional Committee on Land Tenure Research (1944) considered the trend toward increased tenancy and proposed a series of policy recommendations. They were based upon those aspects of land tenure they considered most important for ensuring adequate income and security for family farmers. Their recommendations were based on a rural, populist ideology which was reflected in their assertion that legal rights to exploit the land owned in any way must be tempered with education and, if necessary, laws to ensure a "permanent agriculture" and strong, stable, rural communities. Many were focused upon measures designed to encourage dispersed

family farm holdings and maintaining continuity on the home farm, including: controlling farmland prices, credit terms, and market fluctuations; graduated land taxes to discourage large-scale absentee ownership; measures to discourage nonfarm corporations from investment in farmland; and the improvement and wider development of father-son operating agreements and transfer arrangements.

Otis Durant Duncan (1940) recognized the need for research on farm tenancy as a sociological phenomenon. He proposed fifteen hypotheses which he hoped would lead to further research on explaining the relation between the tenure system and social organization in general. The areas which he emphasized include the relations between tenancy and: status differentials, social mobility, ownership patterns, population structure, preservation of family holdings, the man/land ratio, work organization, community organization, and general standards of living.

The Relations Between Farm Ownership and Social Background

Another body of literature, while not completely distinct from the agricultural ladder studies, emphasized the relations between a number of social and cultural variables and the individual's opportunity to acquire ownership. A tendency toward this type of research seems to have evolved as it became more generally recognized that prime farmland was limited, land values were rising, the number of farms was declining, farm sizes were increasing, capital requirements were rising, and despite the fact that the possibilities of raising needed capital through wage work and tenancy were very limited, the percentage of farms owned by the operator was increasing. The study of land tenure was broadened to include the potential influence of

social background on the opportunities for an individual to attain farm ownership. Obviously family resources and their transfer were becoming increasingly important in this respect.

Several studies have indicated that a high degree of occupational transmission exists between generations within the farm sector (Tetreau, 1931; Anderson, 1930, 1935, 1941). It was measured both in terms of the percentage of farm families with one or both sets of parents as farmers, and as the percentage of sons of farmers who enter farming. Hill and Christensen (1942), in a study of Wisconsin farm families, added another dimension to occupational transmission by concluding that boys raised in farm families of low socioeconomic status entered farming occupations to a much lower degree than did boys from farm families of relatively high socioeconomic status.

Another aspect of a farmer's background which has been shown to be associated with his ownership status is his history of residential stability. A number of studies (Galpin and Hoag, 1919; Anderson, 1930, 1935; Wehrwein, 1930; Tetreau, 1940; McMillan, 1944a; McMillan and Duncan, 1945; Salter, 1943) have shown that farm owners possessed a much higher degree of residential stability throughout their lives. Those owners benefitting from inheritance and those who purchased farms both were likely to have been raised on farms and were likely to have remained in the home community near the home farm. Rohwer (1950) concluded that familism was related to both security on the land and residential stability.[1]

---

[1] Rohwer measured familism in farming according to the following criteria:
1) Operator's starting farming through family arrangements.
2) Working together of the family in regular farming activities.
3) Siblings' choice of the occupation of farming.
4) Continuity of the family on a home farm.
5) Family policy favoring business cooperation within the family.

One of the primary determinants of the ownership status of farmers identified was the tenure status of their parents. As early as 1919, Galpin and Hoag (1919) discovered in a study of a southern Wisconsin community that intergenerational transfer of farm ownership within families determined to a very great extent the opportunities available for ownership within the community. Tetreau (1931) and Salter (1943) found very high proportions of the owners in their studies had inherited all, or part, of their farms. VonTungeln (1927) and Wehrwein (1931) found high proportions of tenants related to their landlords, thus implying eventual transfer of ownership from owning parents in many cases. Tetreau (1931) found owners very likely to have owning parents and grandparents, while tenants were likely to have nonowning parents and grandparents. McMillan (1943, 1944a, 1944b; McMillan and Mason, 1945; McMillan and Duncan, 1945) found in his series of studies in Oklahoma that the tenure status of those in farming occupations was highly related to the tenure status of their parents. Rohwer (1950) found familism to be significantly related to security on the land. He also found that the tenure status of parents was closely, but not significantly related to ownership status.

The literature cited above obviously emphasized the importance of inheritance and other forms of family assistance to the opportunity for a young farmer with landowning parents to obtain ownership of a farm. Other studies have focused upon specific aspects of this process. Gibson and Walrath (1947) reviewed the many forms family assistance may assume, its importance, its functions, and some of the problems facing the beneficiaries. The problems include excessive subdivision requiring one heir to buy out the others, and the fact that this has

contributed to the flow of wealth from rural to urban areas. Tetreau (1940), Bradford (1954), and Salter (1943) point out that inheritance often does not provide a prospective owner free and clear ownership and that overcoming encumberance becomes a critical problem for young farmers despite family assistance.

The importance of family assistance in determining the tenure status and general socioeconomic status of a farmer is mediated by a number of characteristics of his family of origin, including: family size or number of siblings; number of brothers; and position in the birth order. McMillan (1943) indicates that although ownership status is highly related to parents' tenure status, the majority of an owner's offspring still do not acquire ownership. This implies that in most instances the son who does assume ownership of his parents' farm must buy from his siblings their shares of the inheritance and assume a large debt. Anderson (1941) found that as the number of sons in a farm family increased, the proportion of families in which at least one son entered a farming occupation increased, but the proportion of sons in farming remained fairly constant. He also found that the oldest son was most likely to enter a farm occupation, while the youngest was next most likely. He explained this by pointing out that the oldest was most likely to be needed as his father's helper on the farm, while the youngest was most likely to reach working age at a time nearer his father's retirement. Hill and Christensen (1942) found that the greater the number of sons in a family, the greater the proportion which would enter nonfarm occupations and move from the area. However, Rohwer (1950) found the number of siblings and security on the land not to be highly related.

The size of the parents' farm obviously determines the importance of inheritance to a degree. VonTungeln (1927) presumed that the ability to transfer ownership of a farm was based upon the ability of the farm to support two families temporarily. He therefore proposed that family size and farm size had to be balanced to the extent that adequate income could be generated for both. Long (1950) came to a similar conclusion. Salter (1943) found that most of the unencumbered owner-operators who had acquired their farms within the family had parents who could leave them enough land for a profitable enterprise, and who still had enough land or capital left for other heirs.

The marital status of the farmer and the age at which he marries may influence his opportunities for assuming ownership. McMillan (1944b) found that the influence of the ownership status of a wife's parents was equal to that of the husband's parents in determining their socioeconomic status, and that marriages tended to be highly endogamous with respect to the parents' tenure status. Other studies (McMillan, 1944a; McMillan and Mason, 1945; McMillan and Duncan, 1945) show a tendency for owners to have been married at slightly older ages than nonowners. However, the difference was not shown to be significant and the influence of age at marriage may have been lessened as the importance of inheritance rose.

Past research has indicated rather large differences between the average ages of owners and nonowners. Within the context of the agricultural ladder model, each progressive step toward ownership implied an older age. The individual was required to spend a certain amount of time in each phase accumulating the capital necessary for advancement. Related to these studies is research which revealed the fact that large

proportions of tenants were related to the owners of the farm (Parsons and Waples, 1945; VonTungeln, 1927; Barlowe and Timmons, 1950; Salter, 1943). It indicated that tenants had the tendency to rent at a young age, allowing the relative to maintain ownership until death or retirement. Tenants unrelated to owners tended to be older and were likely to remain nonowners.

Other studies have indicated that the proportion of farmers who owned farms increased with average age (McMillan and Duncan, 1945; Timmons and Barlowe, 1949). McMillan (1943) found that hired laborers left home to work at a younger average age than farmowners. In a later study (1944a), he found that nonowning former owners had acquired their first farms at a younger average age than those who remained owners.

Closely related to residential background and family economic status are the formal educational level and occupational experience of farmers. Anderson (1930) found that his sample of farm owners had shifted to and from other occupations very little during their lifetimes. Salter (1943) found that tenants unrelated to the owners of their farms tended to have much more diverse occupational histories than owner-operators or those tenants on farms owned by relatives. Rohwer (1950) found familism to be significantly related to both security on the land and stable occupational histories, including the least farm and nonfarm wage work. Tetreau (1931) found owners to have been less dependent on wage work throughout their occupational careers than tenants were, and that those who had worked for a wage tended to be in higher status occupations. They had also occupied fewer farms during their career as farmers. Barlowe and Timmons (1950)

found nonfarm labor to be of increasing importance for those not in line for inheritance. McMillan (1944b) found that nonowners had been significantly more reliant upon nonfarm income than were owners.

McMillan in some of his studies (McMillan, 1943, 1944a; McMillan and Mason, 1945; McMillan and Duncan, 1945) found no significant relationship between ownership status and level of formal education, although he detected a tendency for owners to be a bit more highly educated. However, his study of the relationship between parents' tenure status and the socioeconomic status of farmers (1944b), does indicate a significant difference between the educational levels of owners and nonowners, with a higher proportion of owners having completed eight or more grades of school. Further, he shows that farmers with owning parents have significantly higher educational levels than those with nonowning parents and that a significantly larger proportion of owners have owning parents. McMillan and Mason (1945) suggest that education may be of increasing importance as competition for the land increases.

The tenure status of the farmer at the time he first left the family and entered the fulltime workforce has been shown to be significantly related to his status throughout his earning life (McMillan, 1943; McMillan and Duncan, 1945; McMillan and Mason, 1945). This is obviously related to the parents' tenure status and the importance of inheritance and other forms of family assistance, in that a higher proportion of owners have been whown to proceed directly from working on the home farm to ownership (Parsons and Waples, 1945; Barlowe and Timmons, 1950.

McMillan (1944a) studied differences between owners and nonowners who had at one time owned a farm in order to determine which factors

best explained a fall in tenure status for those who once owned. He found owners to have been significantly older than nonowners when the first farm was acquired. He also found that a significantly smaller proportion of the owners had acquired their first farm during the agricultural depression years between 1917 and 1922. Owners had had a significantly smaller debt per farm value ratio than nonowners for their first farms. He also indicated that owners had a significantly smaller average number of children. McMillan (1944b) supported the findings concerning equity and number of children. Salter (1943) also pointed out the extent of encumbered ownership and the associated hazards. McMillan (1944a) also considered the differing socioeconomic status of owners and former owners. It leads one to assume that it was very unlikely that nonowners could once again attain ownership.

Other factors considered in these studies include: type of production; religion; and nationality. Wehrwein (1931) found that a township characterized by a low tenancy rate was dominated almost entirely by dairying. The high tenancy township had more beef and corn production though dairying was most important. McMillan (1944a, 1944b) found owners more likely to be producing wheat, nonowners more cotton. McMillan and Duncan (1945) found livestock production to be most highly associated with ownership, cotton the least.

Hill and Christensen (1942) found Catholics to be leaving farm occupations in slightly higher proportions than Lutherans, among third generation Germans of equal economic status. They also found Scandanavians to be more occupationally mobile than Germans, among Lutherans of equal economic status. However, Rohwer (1950) found no significant relationship between familism and religion or nationality.

Summary

From a review of the most important research done concerning social conditions influencing the land tenure status of our farm population, we can detect a difference in emphasis over time. Up until the 1930's attempts to explain the attainment of ownership generally conformed to the agricultural ladder model of mobility with its implicit assumption of equal opportunities for all men to attain farm ownership. By progressing, more or less, through stages of unpaid family labor, wage labor, and tenancy, any individual could obtain the necessary skills and the necessary capital required to own and operate a farm.

However, as structural changes in our society developed throughout the twentieth century, the explanatory power of this model was shown to be very limited. Research showed that an increasing proportion of farm owners were skipping the intermediate phases of wage labor and tenancy. Movement directly from unpaid family laborer to ownership with the aid of inheritance and other forms of family assistance was assuming an increasingly important role.

Rising rates of tenancy through the 1930's instigated research into the differences between tenants, sharecroppers, other nonowners in farm occupations and farm owners. Explanations for these differences continued to be of concern to some researchers even after the economy stabilized. Despite an increasing proportion of owner-operators among the farm population, the number of farms began to decline, farm sizes increased, and capital requirements rose as land values increased along with the importance of mechanization.

Research through the 1940's and into the 1950's revealed the increasing importance of family assistance to young farmers in helping them attain ownership. A prospective owner from a farm owning family had not only the benefit of gaining farm experience at home, but also that of access to the land owned by his parents, and the benefit of being relieved of accumulating a large portion of the capital requirements. It became increasingly difficult for sons of nonowning parents to accumulate the capital necessary for the purchase of farmland and equipment. Intra-family transfer of farmland and competition from nonfarm interests limited the accessibility of land. The sons of non-landowning parents could probably not, in most cases, benefit from the management experience which a young man on his father's farm could acquire.

It was shown that parents' tenure status and general economic status determined to a great extent the opportunities for a prospective owner to achieve his goal. This influence was shown to be mediated by a number of factors, some based in the family-of-origin, some in the families of the respondents. These findings will serve to provide the basic structure of our approach to the present study of the determinants of farm ownership.

Advantages and Limitations of Past Research

The literature reviewed constitutes a portion of the most important research addressed to a topic which has not received a great deal of attention by sociologists in the recent past. Much of the research attempted to explain differential opportunities for attaining ownership, some were concerned with broader trends and policy implications. Those concerned with explaining the process of attaining farm ownership

broadened the analysis from a consideration of individual movement through a structure of opportunities assumed to be relatively static, to an approach which considered the influence of more general social conditions on differential opportunities. Scope ranged from small-scale comparisions of townships to broad overviews of land tenure in the Midwest. Some of the later studies employed statistical techniques which allowed finer distinctions of the relative importance of the determinants. For these reasons, past research has provided some basic guidelines for present research.

Despite the insights this past research has provided, its applicability to present studies may be quite limited. Most often, the problem addressed in this past research was determining the causes of increased tenancy rates by comparing samples of owner-operators and nonowning tenants. Tenancy as an organizational form is defined by a structure in which management, labor, and much of the nonland capital are provided by the family operating the farm, while ownership of most or all of the land is vested in another concern. Changes in the organizational structure of agriculture since World War II have been identified which indicate that tenancy rates have been declining, and that owner-manged farms continue to dominate agricultural production in the Midwest. If trends toward increasing farm size and the increased differentiation of the major factors of production continue within this context, the nonowning farm occupations which assume increasing importance are those of the hired manager and hired laborer. In addition, the problems associated with rising capital requirements have become more extreme. Whether or not the determinants identified in past research continue to be the best indicators of opportunities for

attaining ownership can only be considered an empirical question. The relative influence of these variables may have changed in response to structural changes which have occurred since then.

Conceptualizing Components of a Structure of Opportunities Determining Access to Farm Ownership

The literature has indicated a number of variables which have been associated with land tenure status. We might conceive of these variables as elements of three broader categories which constitute a structure encompassing many of the primary determinants of an individual's opportunity for attaining farm ownership status. The three broader categories include: access to land; access to family resources; and access to skills.

The tenure status of an individual's parents has been indicated as a primary determinant of his access to land. It has become increasingly difficult for individuals to accumulate the capital necessary for purchasing a farm large enough to provide an adequate income. Land values have risen to the point where the cost of a farm makes it available only to those individuals who have been able to accumulate a large amount of capital in high status occupations outside of farming, to those who assume a large debt (if credit is available on reasonable terms), and to those who acquire ownership of their parents' farm on favorable terms. If married, the tenure status of the parents of the prospective farmer's wife may influence to some degree the individual's access to land.

Closely related to the first category is the general pool of family resources available to a prospective farmer. A prospective farmer from a family of relatively high economic status may be

relieved of many of the difficulties of acquiring the capital necessary to assume the status of farm owner. This applies particularly to those from farmowning families, where the size of the farm and its productivity determine to a great extent the amount of resources available. Obviously, a key variable is the provision of family assistance, through inheritance or other forms. Access to family resources is also mediated by the influence of the number of siblings in the family-of-origin, especially the number of brothers, and the individual's position in the birth order.

The third basic structural category consists of the determinants of an access to the knowledge and skills necessary for one engaged in agricultural production. Work on a home farm as a child and young adult can provide a prospective farmer with a great deal of practical experience in the management and operation of a farm. This experience may grant him an advantage over others raised in a nonfarm environment. The level of formal education may be assuming greater importance as farmers have come to rely upon a more complex technology and more scientific farming methods. In addition, formal agricultural education can provide further advantages for prospective farmers.

Hypotheses Concerning the Determinants of Opportunities for Attaining Farm Ownership

The literature suggests a number of hypotheses which will serve as a guide for our present research. Inconsistencies with past research findings may suggest that the relative importance of the determinants involved has changed in relation to the changes in the organizational structure of agriculture. The general proposition that an individual's opportunities for attaining farm ownership will be determined in large

part by his access to land, family resources, and skills most probably still holds, although the importance of elements within each structural category may have changed.

The following hypotheses will be tested:

Access to Land

1) Most of those presently engaged in farm occupations, and their wives, were born and raised in rural areas and had fathers who farmed.

2) Ownership status will be positively related to residential stability within the present community.

3) Ownership status will be positively related to the tenure status of the parents. If married, the ownership status of the farmer is also expected to be positively related to the tenure status of the wife's parents.

4) Ownership will be positively related to the respondent's tenure status at the time he entered the workforce for the first time.

Access to Family Resources

1) Ownership status will be positively related to the general socioeconomic status of the parents. If married, the ownership status of the farmer is also expected to be positively related to the general socioeconomic status of the wife's parents.

2) Ownership status will be negatively related to the size of the family-of-origin, particularly the number of brothers a farmer has.

3) Ownership status will be positively related to receiving family assistance.

4) Ownership status will be related to the family cycle, if the farmer is from a farmowning family.
   a) Owners are more likely to be the oldest or youngest son in the family in order to be in the best position for assuming management and ownership of the home farm.
   b) Nonowners are likely to occupy an intermediate position in the birth order, which lessens the likelihood that they will assume control of the home farm.

Access to Skills

Ownership will be positively related to level of education.

Other Correlates

1) Ownership status is positively correlated with age.

a) Owners will have an older average age than nonowners.
b) Nonowners leave the home to work at younger ages.

2) Ownership status is related to occupational stability.
   a) Owners will have had a smaller number of jobs and less wage work, particularly in nonfarm jobs.
   b) Nonowners will have worked at a larger number of jobs, including more nonfarm jobs.

There are some indications that religion and nationality determine to some extent the likelihood that farm youth remain in agricultural occupations. However, Rohwer (1950) found them to be insignificant influences, and we might expect that their influence has become less important as time has passed.

The Potential Implications of These Hypotheses

These hypotheses suggest that as tendencies toward larger farm sizes, rising land values, and rising capital requirements manifested themselves since World War II, wage work and tenancy no longer allowed one to advance to ownership of a farm large enough to function as a viable economic unit. It seems that all segments of the farm workforce are descended primarily from families in which the father had a farm occupation, but it appears that those from wealthier families which rank high in socioeconomic status have a distinct advantage over those whose fathers were in lower status positions. An increasing proportion of owners seem to have benefitted from inheritance. Those with more limited family resources seem less likely to attain ownership. These developments are combined with the tendency toward incorporation of farm enterprises, with its inherent advantages of access to capital and transfer of wealth. This suggests that agricultural production will become a more closed system with increased concentration of wealth

in the hands of those families who have historically been able to accumulate land and wealth, and who now possess advantages for increasing their holdings.

Chapter III

THE SCOPE OF THE STUDY AND THE METHODOLOGICAL APPROACH TO THE PROBLEM

Scope and Level of Generality

Agriculture in the Upper Midwest has historically been dominated by dispersed, relatively small family farms with low levels of differentiation. Wisconsin agriculture, in particular, has been dominated by a type of production, dairying, which has been particularly conducive to maintaining small operating units (see, for example, Sundquist and Guither, 1973). This state has also been characterized by relatively low tenancy rates historically. Yet even in this state, the average farm size has increased greatly in the recent past, from 149 acres in 1954 to 181 acres in 1969. By choosing an area of study where family owned and managed farms dominate, and yet where the average farm size has been steadily increasing, a better insight may be gained into the process of land ownership concentration and structural differentiation.

The problem has been defined as one which requires an attempt to identify the determinants of the ownership of the types of farms which are likely to dominate for some time into the future. Previously it was determined that, based upon an analysis of trends in changing farm types, owner-managed farms of steadily increasing size and with perhaps more reliance on hired labor would dominate farm production for some time. Therefore, the universe of farms which became relevant to this study was that which included the largest owner-managed farms with the highest levels of differentiation.

The method employed to get a representative sample of these types of farms was one which required the assumption that many of them would also be incorporated. The sample was selected from a list which enumerated all corporations engaged primarily in agricultural production during 1967 and 1968. As the following section indicates, this selection process yielded a sample of farms constituted primarily of owner-managed and part-owner-managed farms which employed enough hired labor to yield an adequate sample with which to compare the owners. These two groups were then used to test the generality of past research findings concerning the determinants of farm ownership.

This study is essentially cross-sectional, the data having been collected in 1970. However, the purpose of the study is not to merely describe the determinants of the opportunities for farm ownership up to that point. By selecting a purposive sample of very atypical farms at that time, it is hoped that the conditions which are identified as being among the determinants of the ability to attain ownership of those farms will aid us in determining what the major antecedants of farm ownership are likely to be in the future. The results of this study are not intended to be generalized to all farms existing now or at that time, but rather to the types of farms which are likely to increase in importance in the future. The study is an attempt to focus upon one aspect of a major trend in farm type change with the purpose of being better able to explain the underlying causes of the trend.

Selection of the Sample of Farms and Respondents

The data for this study was collected as part of a study of Wisconsin incorporated farms conducted in 1970 at the University of

Wisconsin.[1] The initial list of corporations upon which the study was based was obtained from a review of all Wisconsin corporate tax returns for the years 1967 and 1968. Approximately 884 corporations were identified which appeared to have been engaged in agricultural production. Questionnaires were sent to an officer, owner, or agent of each of these corporations. Based upon the information provided by those responding, it was determined that 529 firms were producing primarily agricultural products.[2] The final selection of 266 from which the sample was drawn resulted from excluding tenant-operated farms, farms with sales below $10,000 (because of the desire to deal only with commercial operations), cranberry and fruit farms (which depend on seasonal workers, who were not included because interviewing was done in the Spring), and fur farms (because they are atypical and because of the presumed difficulty of separating processing from production workers). One hundred and thirty-two farms were randomly selected from this final selection of 266.

---

[1] The study was conducted by E.A. Wilkening and Richard D. Rodefeld and was supported by the Wisconsin Agricultural Experiment Station, Project no. 6019. Descriptive characteristics of these farms and of the owners, managers, and hired workers can be obtained in the following publications: Rodefeld, R.D. and E.A. Wilkening, Wisconsin Incorporated Farms I: Types, Characteristics, and Trends, and Wilkening, E.A. and R.D. Rodefeld, Wisconsin Incorporated Farms II: Characteristics of Resident Owners, Hired Managers, and Hired Workers, Madison: University of Wisconsin, Department of Rural Sociology, December, 1971.

[2] Seven hundred-eighty responded to the questionaire. Of these, 187 claimed to not have any agricultural income, 46 rented all of their land to others, and 75 were involved in nontraditional or nonagricultural production. Four hundred and seventy-two responded and were qualified. In addition, 57 of the 104 nonresponses were allocated to the qualified group, based upon the proportion of those responding who were qualified.

Intensive interviews were then conducted and completed on 110 of the 132 farms.[1] Interviews were conducted with the principal manager on each of these farms. Eighty-three of these were also owners. Nineteen were full owners. Sixty-four were part owners, with varying percentages of total corporate stock. Twenty-seven were nonowning hired managers. Since two-fifths of the farms had no regular hired workers, one of every three hired workers on the remaining farms was selected for interview, up to a maximum of three on any one farm. A total of seventy hired workers were interviewed. For this study, the nonowning hired managers and hired workers have been combined into one group of nonowners, because the primary focus of this study centers upon differential access to ownership, not status distinctions within the nonowning, hired labor sector of the work force. Interviews were conducted in order to obtain information on the personal characteristics, family characteristics, and economic characteristics of the respondents, and their educational and occupational backgrounds.

Operationalizing the Components of the Opportunity Structure[1]

Access to Land

1) In order to determine the type of environment in which the respondent and his wife were raised, the respondent was asked to classify his and his wife's residences before they reached age 15 according to either of five categories: farm; rural nonfarm; a village of less than 2500 people; a town ranging in size from 2500 to 10,000

---

[1] Six of the 22 uncompleted interviews resulted from refusals to respond. The remainder were not completed because of insufficient interviewing time.

[2] The specific questions asked of the respondents are included in Appendix A.

people; a city with more than 10,000 people.

2) Residential stability was determined by asking the respondent how many years he had lived in both the county and community in which he resided at the time of the study. He was asked for the number of years he had lived and worked on the farm on which he was located. He was also asked for the number of years he had lived and worked on the farm on which he was located. He was also asked for the number of relatives he had who lived in the same community, and for the number who lived within thirty miles of his residence.

3) The respondent was asked to give his father's first occupation, his occupation at the time the respondent entered the work force, and his occupation at the time of the study, or when he retired. If any of those were farm occupations, the respondent was asked for the tenure status of his father at that point, owner or nonowner. The respondent was also asked if his father owned a farm at the time of the survey, or when he retired. If so, the respondent was asked if the farm was still in the family, and if he presently occupied that farm. The occupation and tenure status of the wife's father at the time of the respondent's marriage was also ascertained.

4) The respondent was asked for the type of occupation in which he engaged when he first entered the workforce as a fulltime worker.

Access to Family Resources

1) The respondent was asked for the occupation of his father at the three times mentioned under no. 3, above. Occupations were ranked according to the Reiss (1961) standards. If the father was a farm-owner, the size of the farm was determined. The same questions were asked concerning the wife's father. The respondent was also asked for

the educational levels attained by his father and mother.

2) The respondent was asked for the number of siblings he had, and for the number of brothers.

3) A series of questions was asked in order to determine the influence of family assistance. Eight categories of assistance were identified and respondents were asked whether or not they had received each type of assistance. An index composed of the number of "yes" responses was then determined.

4) The respondent was asked for the number of older brothers he had, which, when compared to the total number of brothers allows one to determine whether the respondent is the youngest or oldest brother in the family.

Access to Skills

Respondents were asked how many years of formal education they had received. In addition, each was asked how many years of each of the following types of agricultural education he had received: 4H; high school vocational agriculture; adult farmers' classes; veterans' training; agricultural short courses; agricultural college. The number of years of each type were then totaled to provide an index of formal agricultural training.

Other Correlates

1) All respondents were asked their present ages and ages at the time they started their first fulltime jobs.

2) Respondents were asked for the total number of jobs and farms at which they had worked. They were also asked if they had ever worked fulltime at a nonfarm job and, if so, how many such jobs they had had.

Owners were asked if they had ever worked as a fulltime farm laborer, and all were asked for the number of farms on which they were fulltime farmworkers. Laborers were asked if they had ever owned a farm.

Mode of Analysis

The determinants identified in the above hypotheses are considered independent variables, with ownership status considered a dichotomous dependent variable. For independent variables measured at the nominal level, crosstabulation and chi-square statistics will be used to interpret the results. Phi (ø) and Cramer's V will be used as indicators of the strength of the relationships. For those independent variables measured at the interval level, Pearson Product-Moment correlation coefficients were computed. The dependent variable was coded "0" for a nonowner, and "1" for an owner in order to allow these computations. For correlating ordinal level occupational scales with ownership status, occupations were ranked and assigned a number in ascending order. Pearson Product-Moment correlation coefficients were then computed.

Chapter IV

RESULTS AND ANALYSIS

Previously it had been established that trends can be observed which indicate that the organizational structure of agriculture has been changing and that farmland ownership is becoming more highly concentrated. The structural types of farms likely to dominate agricultural production for some time into the future were identified as those which continue to be owner-managed, but with the type characterized by management-labor differentiation likely to assume increasing importance. The problem identified was that of establishing which elements of an individual's social background are most likely to determine the attainment of ownership of these types of farms.

Previous research has suggested a number of hypotheses concerning the conditions which are likely to determine differential opportunities for acquiring ownership of a farm. While the insights provided by past research are limited due to the time at which most of it was conducted, those hypotheses served to provide the basic structure for the present study. The previous chapter described how the essential elements of these hypotheses have been operationalized for this study, and how they have been combined with a methodological approach which attempts to address the problem in a way which will allow us to better understand the underlying dynamics of the trends in structural change.

This chapter will review the findings of this study for each of the components which have been identified as conditioning the opportunities for attaining farm ownership. The approach will be one which addresses each of the hypotheses identified previously. The results will be compared to the hypothesized relationships and explanations for any discrepancies will be attempted.

Assessing the Impact of Each Category of Opportunities

The Influence of Differential Access to Land

As expected, most of those in farm occupations were raised on farms as youths (Table 8). Nearly equal percentages of owners (80.7%) and nonowners (81.4%) were raised in a farm environment and very small

Table 8: Area of Residence of Respondents and Their Wives Before Age Fifteen, by Tenure Status

Area of Residence	Respondent		Wife	
	nonowner	owner	nonowner	owner
Farm	79 (81.4%)	67 (80.7%)	55 (69.6%)	35 (46.1%)
Rural Nonfarm	3 (3.1%)	1 (1.2%)	1 (1.3%)	3 (3.9%)
Village	6 (6.2%)	6 (7.2%)	6 (7.6%)	7 (9.2%)
Town	4 (4.1%)	6 (7.2%)	10 (12.7%)	10 (13.2%)
City	5 (5.2%)	3 (3.6%)	7 (8.9%)	21 (27.6%)
	V=.100		V=.284 X^2=12.47 p<.014	

percentages in both categories were raised in cities. Nearly 78 percent of the fathers of present owners and approximately 72 percent of the fathers of present nonowners were in farm occupations at the time respondents entered the workforce for the first time (Table 11). The wives of married respondents did not conform to expectations. Much lower proportions of them came from farm backgrounds, particularly

the proportion of wives of owners. A significant relationship can be identified which suggests that the wives of owners are more likely to have been raised in a nonfarm environment than are wives of nonowners.

The hypothesized relationship between residential stability and ownership was supported in this study. Table 9 indicates strong relationships between ownership and both the number of years lived

Table 9: Number of Years Respondents Resided Within the County and the Community, by Tenure Status

	Residence			
Number of Years	Within the Community		Within the County	
	nonowner	owner	nonowner	owner
0-5	24 (24.7%)	7 (8.4%)	18 (18.6%)	3 (3.6%)
6-10	17 (17.5%)	5 (6.0%)	13 (13.4%)	4 (4.8%)
11-15	10 (10.3%)	3 (3.6%)	7 (7.2%)	1 (1.2%)
16-25	13 (13.4%)	10 (12.0%)	15 (15.5%)	7 (8.4%)
26-35	16 (16.5%)	19 (22.9%)	15 (15.5%)	19 (22.9%)
36-50	12 (12.4%)	29 (34.9%)	20 (20.6%)	35 (42.2%)
over 50	5 (5.2%)	10 (12.0%)	9 (9.3%)	14 (16.9%)
n	97	83	97	83
V	.395		.392	

within the community and the number of years lived within the county. Nearly 70 percent of the owners had lived within the community for over 25 years, 82 percent had lived in the county for at least 25 years. Comparable figures for nonowners were 34 percent and 45 percent, respectively. Approximately 42 percent of the nonowners had resided within their present community for 10 years or less, compared with about 14 percent of the owners. A fairly strong, positive relationship was also found between ownership and the number of years an individual lived and worked on the farm on which he was located

at the time of the study (V=.531, n=180).

Using the number of relatives as an indicator of residential stability did not provide conclusive results. The number of adult relatives living within thirty miles of the respondent's residence was found to be positively correlated with ownership (r=.146, n=179), but the number of relatives within the community was found to be slightly negatively correlated with ownership (r=-.04, n=154). However, the first correlation was significant at the .026 level, while the second was significant at only the .292 level.

Residential background and stability may help explain differential opportunities for farm ownership to some extent by indicating that long-time community residents have readier access to land resources that become available within that community. However, it is difficult to directly link these two variables without including the effects of intervening conditions. Therefore, we will again refer to this area when discussing differential access to skills, and it will be linked to the following discussion of the family-of-origin's tenure status.

A condition closely related to residential background is the father's tenure status. It has already been established that very high percentages of both owners and nonowners had fathers in farm occupations. In previous sections it was observed that inheritance and family assistance are likely to determine to some extent the differential opportunities for attaining farm ownership. One of the strongest relationships indicated in previous research was the correlation of tenure status with that of a farmer's father's tenure status. The hypothesized relationship is largely supported by the present findings.

Table 10 portrays the varying percentages of fathers of the respondents who owned or partly owned a farm at three different points in their careers. Large differences can be observed between fathers of owners and those of nonowners at all three times. The strength of the

Table 10: Father's Tenure Status at Three Points in Time, by Respondent's Tenure Status

Percent of Fathers Owning Farms	Respondent's Tenure Status: nonowner	owner	n
at the time he first entered the workforce	30.9	43.2	175
at the time the respondent first entered the workforce	46.7	74.0	167
at the time of the survey, or when the father retired	45.4	78.0	179

relationship increases at each point. Of particular interest are the large differences observed at the time the respondent entered the workforce when 74 percent of present owners' fathers owned a farm compared to 46.7 percent of the fathers of nonowners, and at the time of the survey or when the father retired, when 78 percent of owners' fathers owned a farm compared to 45.4 percent of the fathers of nonowners. The importance of this difference is magnified in Table 12, which indicates that in 91 percent of the cases where a present owner had a farmowning father, that farm remained under the ownership of a family member. Of that 91 percent, 78 percent were operated by the farmowning respondent. In the case of present nonowners, only 59 percent of the fathers' farms remained in the family. Only 1 nonowning respondent (4 percent) occupied the same farm which was owned by his father.

The tenure status of the fathers of respondents' wives was not found to be highly correlated with present ownership status. This may be expected due to the fact that a tendency was revealed which indicated

Table 11: Father's Tenure Status at the Time the Respondent First Entered the Work Force

	Respondent's Tenure Status	
Father's Tenure Status	nonowner	owner
Nonowner	48 (53.3%)	20 (26.0%)
farm occupation	23 (25.6%)	3 (3.9%)
nonfarm occupation	25 (27.8%)	17 (22.1%)
Owner	42 (46.7%)	57 (74.0%)
Total	90	77

ϕ=.277 X^2=12.85 p <.001 n=167

that wives of farmowners are more likely to come from nonfarm backgrounds than are those of nonowners. However, even by including only those fathers who were engaged in farm occupations, no significant relationship could be identified.

Table 12: Father's Tenure Status at the Time of the Survey or When He Retired and the Present Ownership of His Farm

	Respondent's Status		
Father's Status	nonowner	owner	ϕ
Nonowner	53	18	
Owner	44	64	.333 (n=179)
farm owned by family member	26	58	.373 (n=108)
same farm occupied by respondent	1	45	.685 (n= 84)

A strong relationship between the individual's beginning tenure status and his status at the time of the study could not be identified (ϕ=.182). Although 120 of the 179 respondents to this question indicated that they had begun their careers in a farm occupation, only 11 had begun as farmowners. Nine of these are present owners and 2 are presently nonowners.

The Influence of Access to Family Resources

When the occupations of all fathers at the time respondents entered their first fulltime job were ranked according to the Reiss standards, their occupational statuses were found to be significantly related to the ownership status of the respondents (r=.224, p<.002, n=167). An even stronger relationship was identified between ownership and father's occupation at the time of the survey or when the father

Table 13: Father's Occupation at the Time the Respondent First Entered the Workforce

	Respondent's Tenure Status	
Father's Occupation	nonowner	owner
Blue Collar	16 (17.8%)	8 (10.4%)
Lower White Collar	5 (5.6%)	1 (1.3%)
Upper White Collar	4 (4.4%)	8 (10.4%)
Total Nonfarm	25 (27.8%)	17 (22.1%)
Farm Laborer	5 (5.6%)	0
Farm Manager	18 (20.0%)	3 (3.9%)
Farm Owner	42 (46.7%)	57 (74.0%)
Total Farm	65 (72.2%)	60 (77.9%)

retired (r=.248, p<.001, n=177). The wife's father's occupational status was not found to be highly related to the respondent's ownership status (r=.096).

The occupational status of those fathers in farm occupations has already been shown to be related to the respondents' ownership status. By selecting only those respondents with farmowning fathers, a significant relationship between the size of a father's farm and ownership status was demonstrated. The relationship was shown to be significant for the father's farm size at the time the respondent entered the workforce ($r=.216$, $p<.016$, $n=99$). An even stronger relationship was detected between the father's farm size at the time of the survey or when

Table 14: Father's Farm Size at Two Points in Time, by Respondent's Tenure Status

Father's Farm Size (acres)	At Time of Respondent's 1st Job		Now, or When Father Retired	
	nonowner	owner	nonowner	owner
0-50	2 (3.2)	3 (5.2)	2 (3.4)	1 (1.7)
51-150	30 (47.6)	17 (29.3)	26 (44.8)	13 (22.0)
151-200	15 (23.8)	15 (25.9)	15 (25.9)	8 (13.6)
201-300	8 (12.7)	7 (12.1)	7 (12.1)	9 (15.3)
301-500	4 (6.3)	10 (17.2)	4 (6.9)	14 (23.7)
over 500	4 (6.3)	6 (10.3)	4 (6.9)	14 (23.7)
Totals	63 100%	58 100%	58 100%	59 100%
Average size	233.5	267.6	254.1	403.7

he retired and ownership ($r=.361$, $p<.001$, $n=100$). The number of acres on a farmowning father-in-law's farm was not found to be positively related to ownership. In fact, the relationship was found to be negative ($r=-.292$, $n=53$). The occupational status of only those fathers who were in nonfarm occupations was also related to ownership. A strongly positive relationship was indicated for both the father's occupation at the time the respondent started his first fulltime

job (r=.290, p<.031, n=42), and the father's occupation at the time of the survey or when he retired (r=.256, p<.032, n=53).

Table 15: Parents' Educational Attainment, by Respondent's Tenure Status

	Respondent's Tenure Status	
Parents' Education	nonowner	owner
Father		
8th grade or less	69 (81.2%)	53 (67.1%)
9th to 12th grade	13 (15.3%)	13 (16.5%)
College	3 (3.5%)	13 (16.5%)
Total	85	79
Mother		
8th grade or less	46 (54.1%)	45 (54.9%)
9th to 12th grade	33 (38.8%)	28 (34.1%)
College	6 (7.1%)	9 (11.0%)
Total	85	82

The educational attainment of the respondent's father was found to be positively related to ownership (r=.163, p<.018, n=164). No significant relationship could be identified between ownership and the mother's education. Table 15 displays the distributions and reveals that perhaps the most significant difference exists within the college education category of the fathers, where 16.5 percent of the owners' fathers are shown to have had some college education compared to only 3.5 percent of nonowners' fathers.

A negative correlation was found to exist between ownership and the total number of siblings a respondent had (r=-.235, p<.001, n=180). A weaker, but still significant, negative correlation existed between ownership and the number of brothers (r=-.162, p<.015, n=180). The mean for the number of siblings of the nonowners was 5.1, compared to 3.7 for owners (t=-3.29, p<.001). The mean number of brothers for

nonowners was 2.6 and for owners, 2.0 ($t=-2.20$, $p<.029$). The hypothesized relationship between ownership and family size was thus supported.

Table 16: The Number and Percentage of Respondents Receiving Each of Eight Types of Parental Assistance, by Tenure Status

	nonowner		owner		
Parental Help -	number	percent	number	percent	m.d.
getting a job or locating a farm	25	26.6	38	47.5	6
getting a loan or mortgage	17	18.1	32	40.0	6
with work, job, farm chores	26	27.7	40	50.0	6
with gifts, money, financial assistance	36	38.3	36	45.0	6
with child care	33	35.9	46	59.0	10
on special occasions	42	45.2	45	57.7	9
in education	1	1.1	3	3.9	9
other	1	1.0	5	6.0	0

Scores on the family assistance index were found to be highly, and positively, correlated with ownership ($r=.308$, $p<.001$, $n=178$). Table 16 displays the number and percentage of each group who had received each of the eight types of parental assistance specified. It indicates the extent to which owners rely, or have relied, on assistance from parents and the large differences in benefits received between owners and nonowners. Furthermore, the correlation between the assistance index and the number of siblings in the respondent's family was found to be negative ($r=-.268$, $p<.001$, $n=178$).

The respondent's position in the birth order of his family was not shown to be related to ownership ($V=.069$). The correlation between

the year a respondent's father retired and the year the respondent first entered a fulltime job was high for both groups, as would naturally be expected. But the correlation was a bit stronger for owners (r=.77) than for nonowners (r=.71), suggesting that owners may have had a slight advantage in this respect.

The Influence of the Acquisition of Skills

The increasing complexity of farming methods and techniques would seem to grant certain advantages to those who were able to acquire the highest levels of education, both general and agricultural training.

Table 17: Level of Education, by Tenure Status, by Age Categories

Level of Education	Age Under 35		35-49		Over 50	
	nonowner	owner	nonowner	owner	nonowner	owner
Less than 8th grade	0	0	0	1 (3.0%)	3 (9.4%)	4 (12.1%)
Eighth grade	4 (15.4%)	0	16 (41.0%)	2 (6.1%)	14 (43.8%)	6 (18.2%)
High School, Some High School	19 (73.1%)	8 (50.0%)	17 (43.6%)	17 (51.5%)	9 (28.1%)	12 (36.4%)
College, Some College	3 (11.5%)	8 (50.0%)	6 (15.4%)	13 (39.4%)	6 (18.8%)	11 (33.3%)
Totals	26 100%	16 100%	39 100%	33 100%	32 100%	33 100%
V	.460		.442		.284	

It has become increasingly difficult for farm youth to acquire all of the skills needed to operate a farm by merely learning the techniques applied by his father on the home farm. A relationship between a

father's education and ownership has already been identified. As expected, the level of formal education of the respondents was found to be significantly related to ownership ($r=.277$, $p<.001$, $n=179$). The results in Table 17 suggest not only that formal education is a major determinant of farm ownership, but also that it has become increasingly important in the recent past. The relation between ownership and education is shown to strengthen as age decreases, with increasing proportions of owners having benefitted from college.

Table 18: Mean Number of Years for Each of Six Types of Agricultural Training and Education, by Tenure Status

	Mean Number of Years[1]	
Type of Training	nonowner	owner
4H	1.23 (95)	1.41 (74)
High School Vo-Ag	.91 (96)	1.18 (83)
Adult Farmer Classes	1.15 (97)	.65 (83)
Veterans Training	.12 (96)	.01 (83)
Agricultural Short Courses	.23 (97)	.17 (82)
Agricultural College	.24 (97)	.80 (82)*
Other	.03 (95)	.04 (83)
Total	2.82 (93)	5.20 (82)*

[1] The sample size is indicated within parentheses.
* indicates that the difference in means is significant at the .01 level.

Also highly related to ownership was the total number of years spent in various types of agricultural training ($r=.220$, $p<.002$, $n=175$). Table 18 allows one to examine the differences in mean number of years for each group in each of seven different categories of agricultural training. Although the differences are not significant, except for one category, the overall mean difference is quite significant. The

table again illustrates the growing importance of college education in determining the ability to acquire ownership of a farm.

Other Influences

Contrary to the findings of past research, the difference between the two groups in mean ages was not found to be significant. Table 19 indicates that the nonowners are more heavily represented in the "under 30" category. The relatively small differences in percentages of the

Table 19: Age, by Tenure Status

	Tenure Status			
	nonowner		owner	
Age	number	percent	number	percent
Under 30	20	20.6	8	9.7
30-44	34	35.1	29	35.4
45-54	24	24.7	21	25.6
Over 55	19	19.6	24	29.3
Totals	97	100%	82	100%
Mean Age	42.82		45.76	

totals indicate that, despite the possibility that some of the non-owners in the youngest age category may yet attain ownership, the distribution among age categories would not change to an extent which would make age a significant factor in determining the attainment of farm ownership.

A fairly strong, positive relationship was found between a respondent's age when he first entered a fulltime job and ownership ($r=.128$, $p<.043$, $n=180$). This supports the hypothesis that those who are nonowners are likely to have left home at earlier ages. Part of

the difference may be due to the lesser probability that nonowners would have been able to benefit from family assistance. The fact that owners generally possess a higher level of education may also explain their later entrance into the workforce.

Ownership status was shown to be significantly related to the total number of jobs and farms at which the respondent worked. The correlation is negative ($r=-.245$, $p<.001$, $n=176$) and suggests support for the hypothesis that owners will have experienced much more stable occupational histories. Although a slightly higher proportion of nonowners had had at least one nonfarm job, the difference between it and the proportion of owners who had had a nonfarm job was not large enough to provide the basis for a significant relationship. The total number of nonfarm jobs held by respondents was not significantly related to ownership status. Twenty-one nonowners, or almost 22 percent of the total number of nonowners, had at one time owned a farm. Fifty-six (67.5%) of the owners had worked as hired farm laborers. Although the respondents' first occupations are heavily weighted to the farm occupations, a significantly positive relationship was identified between the first occupation and ownership ($V=.308$, $X^2=16.96$, $p<.05$).

Evaluating the Hypotheses

Access to Land

The hypothesis proposing that most of those engaged in agricultural occupations and their wives are descended from rural farm backgrounds has been basically supported. Previous studies (Anderson, 1930, 1941; Tetreau, 1931) found over 90 percent of those in agricultural occupations had been raised in rural farm backgrounds. This study

revealed that a higher proportion of both owners and hired workers had come from nonfarm backgrounds (approximately 20 percent in both cases). This finding suggests that a change toward larger, more highly differentiated farms may be accompanied by a change toward an increasing proportion of the workforce constituted of those from nonfarm backgrounds. This hypothesis can be considered only partially supported because of the qualification above, and because high proportions of wives were raised in nonfarm environments. Support was also generated for the hypothesis concerning residential stability and ownership. The number of years lived within the county and within the community were found to be highly related to ownership.

The tenure status of the parents was found to be highly related to the tenure status of the respondents. This partially supports the hypothesis relating the two, however a rather large percentage of nonowners had parents who once owned a farm. A wider gap between the percentages of each who had parents who owned a farm was detected. Earlier research found that higher percentages of nonowners had had owning parents (Salter, 1943; McMillan, 1944b; Tetreau, 1931) and that the difference between percentages of parents who owned between the two groups was much smaller. The proportion of owners who had fathers who once owned a farm remains approximately equal to that discovered in earlier research (Tetreau, 1931; McMillan, 1944b). The tenure status of the parents of the wives was found not to be related to the respondent's ownership status. This was a significant deviation from past research findings.

The strength of the relationship is made even more clear by examining the tenure status of the parents at the time of retirement

or the survey and tracing the ownership of farms owned by the family. The ability to pass on the home farm within the family was obviously very important to establishing the ownership of the offspring. The third hypothesis was thus partially supported, with some rather important deviations from past findings. Contrary to past findings, the tenure status of a farmer at the time he first entered the workforce was not highly related to present ownership status, thus contradicting the fourth hypothesis.

Access to Family Resources

The first hypothesis is quite strongly supported according to measures of the relationships between three key indicators of the socioeconomic status of parents and tenure status of the respondents. The father's occupational status, for all occupations, was found to be positively related to ownership. For both farm and nonfarm occupations considered separately, the tenure status of respondents is related to the occupational status of the parents. By controlling on the ownership status of the fathers, the size of farm owned was shown to be highly related to the ownership status of the respondents. The educational attainment of the father was also positively related to ownership. Generally, the economic status of the parents seems to have determined to a great extent the opportunities for their offspring to attain ownership. Contrary to previous findings (McMillan, 1944b) the status of the wife's parents was not significantly related to the respondent's ownership status.

The second hypothesis was strongly supported, especially for the relationship between total number of siblings and ownership status.

The logically related third hypothesis is also supported in the present study. A negative correlation was observed between the number of siblings and the amount of parental assistance received. Furthermore, the amount of parental assistance received was in turn related to the respondents' ownership status. However, the hypothesized relationship between one's position in the birth order and his ownership status was not supported.

Access to Skills

The hypothesized relationship between the level of education attained and the ownership status of an individual was strongly supported. Furthermore, a consideration of only those types of education related directly to agriculture also revealed a strongly positive relationship. Of increasing significance in this respect is college education.

Other Correlates

The hypothesis concerning the relationship between average age and ownership status was not supported by the findings of this study. This contradicted the findings of several previous studies (for example, McMillan and Duncan, 1945; Timmons and Barlowe, 1949). A positive relationship was detected between ownership and the age of the respondent when he first entered the workforce, but a large part of the variance may be explained by the average length of time spent obtaining an education.

The hypothesized relationship between occupational stability and ownership was partially supported. The total number of jobs held was negatively correlated with ownership. However, the total number of

nonfarm jobs was not significantly related to ownership status. Furthermore, the results suggest that a large proportion of owners worked as wage laborers in nonfarm occupations and in farm occupations as hired laborers. These results contradict past research findings and also serve as a further refutation for the hypothesized relation between beginning tenure status and present tenure status. The status of the respondent's first occupation was found to be positively related to his tenure status at the time of the study, however.

CHAPTER V

SUMMARY AND CONCLUSIONS

A Summary of the Results

Trends in the change of the structural organization of farms in the United States have been identified which indicate that the average farm size will continue to grow and that this will be accompanied by an increased level of differentiation within the farm, considered as a production system. The forces which have been identified as major determinants of these changes can be expected to continue. The potentially detrimental consequences of these changes for the individual, family, community, and society as a whole were discussed previously. In order to increase our understanding of these structural changes and their implications for society, this paper addressed the problem of identifying which conditions best explain differential opportunities for attaining ownership of the type of farm considered most likely to dominate agricultural production in the Midwest for some time into the future. This type is characterized as one on which an individual or family owns and manages most of the farm resources, while relying to a great extent upon hired labor.

A review of some of the most important previous research which bears upon this problem resulted in the identification of three general areas of opportunity which determined the accessibility of farm ownership: access to land; access to family resources; and access

to skills. Within each of these categories, a number of interrelated factors were identified and hypotheses were generated which related them to the ownership status of the farm workforce. However, most of the previous research was done prior to 1950, before many of the forces which have influenced structural change were fully manifested.

Some of the earliest work was done in an attempt to develop a model of occupational mobility within the agricultural sector. At the same time, and moreso later, research was conducted in response to the generally recognized development of high tenancy rates throughout the country. Having a rural farm population constituted of a large proportion of nonowning tenants was recognized as a problem with many potentially detrimental effects on the rural sector. While this research revealed the possibility for a permanent tenant class, the condition of hired labor was not examined. Since the objects of their research were tenants, as operators and workers of a farm unit, the applicability of their findings to the conditions faced by the farm workforce presently was questionable. This consideration, added to the fact that little research has been carried out on land tenure since the early 1950s, made it necessary to subject the hypotheses to empirical test in order to determine the influence of the identified factors.

Based on the results of the analysis, we can conclude that the ownership status of one's parents will determine to a great extent the possibilities for that person to attain ownership of this type of farm. A much smaller proportion of present nonowning hired workers had parents who owned their own farms. This can be considered a necessary, but not sufficient, condition for achieving ownership.

Upon considering the rather large proportion of nonowners who had parents who owned farms, and the proportion of owners who had been raised in nonfarm backgrounds, it becomes obvious that further explanation is necessary.

The general economic standing of the farmer's family-of-origin assumes significance in this respect. For those from families which at some time owned a farm, it appears that present owners had fathers who owned much larger farms, farms which were increased in size during the father's career, and which were maintained within the family to a much greater extent upon the retirement of the father. Nonowners appear to have had fathers who owned smaller farms of more stable size which were not transferred with the family to as great an extent. Further, the results indicate that a small percentage of these fathers actually fell from ownership status during their careers. For those from nonfarmowning families, the evidence indicates that the occupational and educational statuses of the father determine to a high degree the ownership status of present members of the farm workforce.

The significance of the family's total economic resources to the prospective farm owner becomes more apparent when the results concerning family assistance are examined. The provision of family resources to a prospective owner appears to be a major determinant of the possibility for him to attain ownership. Furthermore, the division of those resources between a smaller number of siblings provides him greater advantage.

The results also indicate that advantages experienced by owners descended from wealthier families are reflected in a higher

degree of residential and occupational stability throughout their lives. Owners tend to have remained within the community for longer periods of time, perhaps working for a time with a farmowning father under some form of joint operating agreement. Although few of the owners began their working careers as farm owners, their first full-time occupations were generally of higher status than those of present nonowners, and they tend to have been employed in a smaller number of different jobs throughout their lives. Nonowners have been employed in a significantly larger number of jobs. A substantial proportion of them at one time owned a farm, but fell from that status by the time of the survey. This suggests that although many nonowners may have benefitted from the transfer of family property, it was not of an amount sufficient enough to ensure the maintenance of the farm as a viable operating unit.

Finally, it is apparent that higher levels of formal education are necessary for operating and managing the type of farm examined in this study. Obtaining a college education appears to be assuming a more important role over time, particularly in an agricultural college. Evidentally, the practical knowledge acquired by farm youth at home is not sufficient to allow them to own and operate the largest, most complex farms. Although a high level of education appears to be necessary for the operation of these farms, education's independent influence in determining farm ownership has not been ascertained. It is possible that both educational level and ownership status result directly from the economic status of the family-of-origin.

Conclusions

The general proposition, derived from previous research, that conditions within three general areas determine to a great extent the opportunities available to an individual for attaining farm ownership has been essentially supported. However, the relative importance of elements within each category in influencing those opportunities has changed over time. Several of the findings imply that factors identified as major correlates of farm ownership in the past do not determine to as great an extent the opportunity to attain farm ownership while others have assumed greater importance.

While it appears that farm occupations continue to be transmitted intergenerationally to a relatively large degree, this study indicated that a larger proportion of the farm workforce has entered from a nonfarm background. Furthermore, the ownership status of those from nonfarm backgrounds is evidently related to the occupational status of their fathers. Although it is difficult to detect a trend by relying only on this study, it does suggest the need for further research on the importance of the movement of nonfarm residents into farm occupations. A trend of this type would imply increasing competition for available land, and might indicate that the labor process has been divided to the extent that nonfarm youth who have acquired specialized skills may provide competition for nonowning labor and management positions on the farm.

A much lower proportion of those in nonowning farm positions had parents who owned a farm, when compared with nonowners in previous research. A slight majority of them came from non-farmowning families, whereas past research indicated that a majority of nonowners had

farmowning fathers (Tetreau, 1931; McMillan, 1944b). The proportion of owners who had farmowning fathers is roughly equivalent to past findings. All of these results support the hypothesized relationship between parental ownership status and the status of the respondents. However, the magnitude of the difference between present and past nonowners suggests that parental tenure status has assumed a much greater role in determining the opportunity for offspring to attain ownership. The results also indicate that the nonowning farm occupations are not occupied predominantly by those offspring of farmowners who have not had the opportunity to acquire ownership of the home farm.

Although this study reflects the heavy influence of parents' tenure status, it further reveals that farm ownership by one's parents is a necessary but not sufficient condition for one to assume and maintain ownership of a farm. While earlier studies detected a trend toward the increasing importance of inheritance, this study attempted to carry the analysis a step further by attempting to determine empirically the relationship between parents' wealth and the ability of offspring to maintain ownership of a farm. Some of the earlier researchers indicated the possibility of inheritance contributing to an impenetrable barrier for the landless (McMillan, 1943; Tetreau, 1931; VonTungeln, 1927; Barlowe and Timmons, 1950). The fear most often expressed was that of having a permanent tenant class. This study emphasizes that the barrier may be excluding not only those from nonowning families, but also youth from the less wealthy families owning smaller farms. The large proportion of the hired workforce which once owned a farm serves to indicate the probability that, although the sons of farm owners continue to possess a distinct advantage over

the sons of nonowners, they must benefit from the transfer of land and other resources of an amount which is relatively much greater than that required previously.

One of the most significant differences between the findings of this study and those of previous studies is that which indicated no great differences in average age between owners and nonowners. One of the bases for formulating earlier mobility theories of land tenure was that which showed tenants to be generally younger than owners, thus implying that tenancy for most farmers was a temporary phase in the process of attaining ownership. The proportion of older hired workers in this sample and the relatively high average age of the nonowners indicate that the probability that many of them will eventually achieve ownership is rather small.

Little of the previous research detected significant differences in education. The hypothesis concerning education did not rely heavily on past studies. This study suggests that the importance of formal education has been of increasing importance to prospective farm owners. It may also indicate that the division of labor on the most highly differentiated farms will proceed to the point where functions requiring scientific knowledge of farm operation and management will become increasingly separated from laboring positions within the farm sector.

A basic difference between this study and most of the research on land tenure done previously is that the nonowning segment of the farm workforce examined here was constituted of fulltime hired labor rather than being predominantly tenant farm operators. Trends examined in the first chapter indicate that tenants have constituted a

decreasing proportion of the farm workforce while that of fulltime hired labor appears to be increasing. Hired labor positions are even further removed from the status of farm owner than are those of tenants.

This study suggests that opportunities for mobility upward to ownership status are even more restricted than previously, and for a larger proportion of the rural population. Farmers can no longer be considered one class. Earlier mobility theories do not accurately reflect the reality of the situation now, which reveals that a large portion of the farm population is immobile due to structural constraints. A likely result of the forces encouraging changes in farm type is the restriction of farm ownership to a decreasing proportion of the rural farm population, to those whose parents now own the largest, wealthiest farms.

The Limitations of the Study and Suggestions for Further Research

One of the most obvious limitations of this study is the extent to which the results can be generalized to the farm population. The sample included only the owners and hired workers on the largest, most highly differentiated farms in a particular state. The owners are likely to be among the wealthiest in the state and the workers among the best paid. The intent and objectives of the study required a purposive sample and hopefully it reflects accurately conditions influencing the attainment of ownership of the type of farm which is likely to assume increasing importance in Midwestern agriculture. Nevertheless, a more comprehensive analysis of the conditions influencing the attainment of farm ownership would include a broader sample including the smaller, less differentiated farms with poorer owners

and the poorest hired laborers. Assessing the differences associated with farm size in relation to the variables studied here would be required. The inclusion of farms from areas dominated by other types of production would also be necessary.

The size of the sample also imposed restrictions on the types of meaningful analysis which could be carried out. Certain subsegments of the sample used in this study could be analyzed in order to gain a better understanding of the tenure system. Owners and nonowners from nonfarm backgrounds should be studied further. Further analysis could be accomplished by studying differential conditions between four groups: farmowners who had farmowning parents; farmowners who did not have farmowning parents; hired workers who had farmowning parents; and hired workers who did not have farmowning parents. Attempting to detect the reasons for the downward mobility of hired workers who at one time owned a farm could also be attempted. Other important areas requiring further research include determining the extent of and types of father-son operating agreements and distinguishing part-owners from full owners of farms.

The introduction of further controls on conditions considered as independent variables would allow more sophisticated analysis and a better understanding of the interaction and interrelations of the variables assessed in the bivariate analyses of this research. As mentioned previously, relating education to other family background characteristics would be a key concern. A broader sample would allow one to control farm size and identify the determinants of acquiring ownership of farms of various sizes. Introducing age controls may allow one to detect more fully changes over time in the relative importance of various determinants.

An attempt at this type of analysis was conducted with the data used in this study. The sample was divided into two groups, those younger than fourty-five years of age and those older. A series of bivariate correlations was then computed with key variables in order to assess their changing importance over time. The following results summarize the differences which suggest the changing influence of these variables:[1]

1) A slightly higher proportion of the younger group came from non-farm backgrounds.

2) Although the parents' tenure status is significantly related to ownership for both, it is more strongly related to ownership within the younger group.

3) For those from farmowning families, the importance of the father's farm size has assumed much greater importance in distinguishing owners from nonowners.

4) The father's educational level is much more strongly related to ownership for the younger group.

5) Family assistance is much more strongly related to ownership for the younger group.

6) Educational differences are much more pronounced within the younger group.

7) Differences in the statuses of the respondents' first occupations were much greater for the younger group, particularly if the first job was a farm occupation.

This study concentrated upon the attainment of farm ownership and the characteristics of farm owners. A more comprehensive analysis of

---

[1] See Appendix B for tabulations of some of these results.

"the farm as a production system" would include an analysis of the labor process, particularly if our expectations regarding increased structural differentiation are realized. This type of analysis would focus upon how the nature of farmwork has changed for workers on highly differentiated farms when compared with the functions performed by the family farmer who owns, manages, and provides the labor on a farm. Comparing the self-exploitation of the family farmer to wage labor exploitation on more highly differentiated farms would also be attempted. Assessing both the degree to which technological change is reducing the labor component of total input and its effects on the composition of the labor force would be necessary.

A study based upon a cross-sectional sample is of limited value in detecting detailed changes over time. This study was based on the identification of trends in the changing structure of agriculture. A purposive, cross-sectional sample was selected in order to predict which conditions will most influence the attainment of ownership of the type of farm likely to dominate in the future. However, a more complete, historical analysis would be required in order to better understand the process of change in farm types. This study has attempted to provide some insight into the process of farm type change and its relation to the land tenure system and hopefully it will stimulate further research into this area.

APPENDICES

APPENDIX A

Selected Questions From the Interview Schedule

Farm Position	0 = Family farm-full owner 1 = Larger than family farm-full owner 2 = Family farm-part owner 3 = Larger than family farm-part owner 4 = Large scale industrial farm-manager 5 = Family farm workers 6 = Larger than family farm workers 7 = Large scale industrial farm workers
Respondent's age	actual
Respondent's age	0 = less than 25 1 = 25-29 2 = 30-34 3 = 35-39 4 = 40-44 5 = 45-49 6 = 50-54 7 = 55-59 8 = 60-64 9 = 65 and over
Marital Status	0 = single, never married 1 = married 2 = widowed or divorced
Highest School Grade Completed	actual
Highest School Grade Completed	0 = less than 5 years 1 = 5-7 years 2 = 8 years 3 = 9-11 years 4 = 12 years 5 = 13-15 years 6 = 16 years 7 = 17 or over

Respondent's, and Wife's, Residence before Age 15	1 = on a farm 2 = in the country, not on a farm 3 = in a village of less than 2,500 4 = in a town of 2,500 to 10,000 5 = in a city of 10,000 or more
How many years have you lived or worked on the farm you are now on?	actual number of years
How long have you lived in this community?	actual number of years
How long have you lived in this county?	actual number of years
About how many adult relatives do you and your wife have in this general area (within 30 miles)?	actual number
How many of these are residents of this community?	" "
Would you indicate the number of years of the following types of agriculturally related education or training you have had?	actual number of years (9 = 9 or more)
4-H club member	
High school vocational agriculture	
Young or adult farmer classes	
Veterans training	
Agricultural short courses	
Agricultural college	
Other	
Total number of years	
What was your father's first fulltime occupation?	0 = laborers, except farm and mine 1 = farm laborers, unpaid family workers 2 = private household and service workers 3 = operative and kindred workers 4 = craftsmen, foremen, and kindred workers 5 = sales workers 6 = clerical and kindred workers 7 = farm owners and managers 8 = nonfarm manager, officials, and proprietors 9 = professional, technical
What was your fathers occupation when you obtained your 1st fulltime job?	(same as above)

What is your father's occupation now or when he retired?	(same as above)
What was your wife's father's occupation when you got married?	(same as above)
If your father's first fulltime occupation was a farm occupation, what was his position on the farm?	0 = migrant laborer 1 = hired laborer 2 = farm manager 3 = tenant farmer 4 = working farm on shares 5 = renting farm 6 = part-owner of farm 7 = full-owner of farm
If your father was in a farm occupation at the time you obtained your first job, what was his position on the farm?	(same as above)
If your father is in a farm occupation now, or if he was when he retired, what was his position on the farm?	(same as above)
If your father-in-law was in a farm occupation at the time you were married, what was his position on the farm?	(same as above)
If your father was on a farm when you obtained your first job, how many acres were on that farm?	actual number
If your father is in a farm occupation now, or if he was when he retired, how many acres were on that farm?	actual number
If your father-in-law was in a farm occupation at the time you were married, how many acres were on that farm?	actual number
In what year did you obtain your first fulltime job?	last 2 digits of the year
In what year did your father retire?	last 2 digits of the year
Does your father own his own farm now, or did he when he retired?	0 = no 1 = yes

Is the last farm owned by your father still in the family?	yes, no
Is this the farm you are now on?	yes, no
To the best of your knowledge, how many years of schooling did your father have?	actual number of years
. . . did your mother have?	" "
How many brothers do you, or did you have?	" "
How many sisters do you, or did you have?	" "
How many of your brothers were older than you?	" "
After getting out of school, what was your first fulltime job (don't include military service or part time jobs)	same occupational breakdown as that for fathers
How old were you at this time?	actual number of years
If your first job was on a farm, what was your position on that farm?	same positional breakdown as that for fathers
. . . how large was this farm, in acres?	actual number of acres
In what year did you start in that position?	last 2 digits of the year
How many years were you on that farm, in that position?	actual number of years
Have you ever owned a farm of your own?	yes, no
Hired laborers: How many years have you been employed on this farm as a hired employee?	actual number of years
Have you ever been employed on any other farms?	yes, no

Owners and managers: Have you ever been employed on a farm full-time as a hired employee other than as a manager?	yes, no
Have you ever worked fulltime in a nonfarm job, solely or in addition to farming?	yes, no
How many such jobs?	actual number
Total number of jobs, and farms worked at:	actual number
Of what type was your first nonfarm job?	same occupational breakdown
Owners: Have you ever worked on a farm fulltime as a salaried or non-salaried worker?	yes, no
Managers and laborers: Have you ever owned your own farm?	yes, no
Have you or your wife ever received any of the following kinds of assistance from your parents? - help in getting a job or locating a farm - help in getting a loan or mortgage - help with work, job, chores - valuable gifts, money, financial assistance - caring for children - help on special occasions - help in education - other	yes, no
Assistance index	number of yes responses to questions concerning assistance

APPENDIX B

Additional Tables With Age Controls

Table 20: Father's Tenure Status at Two Points in Time, and the Present Ownership of His Farm, by Respondent's Tenure, by Respondent's Age

Proportion of Farmowning Fathers	Age under 45		Age over 45	
	nonowners	owners	nonowners	owners
when respondent got first job	40.7%	70.3%	46.5%	66.7%
at time of survey, or when father retired	42.6%	78.4%	48.8%	77.3%
farm still in family	82.6%	100.0%	33.3%	82.4%
same farm occupied by respondent	0	89.7%	14.3%	67.9%
n	54	37	43	44

Table 21: Father's Farm Size When the Respondent First Entered the Workforce, by Respondent's Tenure Status, by Age

Farm Size (Acres)	Age: under 45		Age: over 45	
	nonowners	owners	nonowners	owners
0-150	50.0%	18.5%	51.9%	48.4%
151-300	36.1%	33.3%	37.0%	41.9%
over 300	13.9%	48.1%	11.1%	9.7%
n	36	27	27	31

Table 22: Father's Farm Size Now, or When He Retired, by Respondent's Tenure Status, by Age

Farm Size (Acres)	Age: under 45		Age: over 45	
	nonowners	owners	nonowners	owners
0-150	50.1%	10.7%	46.2%	35.5%
151-300	34.4%	28.6%	42.3%	29.0%
over 300	15.7%	60.7%	11.5%	35.5%
n	32	28	26	31

Table 23: Father's Education, by Respondent's Tenure Status, by Age

Years of Education	Age: under 45		Age: over 45	
	nonowners	owners	nonowners	owners
0-7	23.5%	20.0%	41.2%	32.6%
8	54.9%	37.1%	44.1%	44.2%
9-11	5.9%	5.7%	0	9.3%
12	15.7%	8.6%	5.9%	7.0%
13+	0	28.6%	8.8%	7.0%
n	51	35	34	43

BIBLIOGRAPHY

BIBLIOGRAPHY

Ackerman, Joseph
1941 "Status and Appraisal of Research In Farm Tenancy," Journal of Farm Economics 23: pp. 277-290.

Anderson, W.A.
1930 "Social Mobility Among Farm Owner Operators," Social Forces 8: pp. 378-380.

Anderson, W.A.
1935 Mobility of Rural Families II: Changes in Residence and in Occupation of Sons and Daughters in Rural Families in Genesee County, New York. Ithaca, New York: Cornell University Agricultural Experiment Station, Bulletin No. 623.

Anderson, W.A.
1941 The Transmission of Farming as an Occupation. Ithaca, New York: Cornell University Agricultural Experiment Station, Bulletin No. 768.

Ball, A.G. and E.O. Heady
1972 "Trends in Farm and Enterprise Size and Scale," Size, Structure and Future of Farms, ed. by A.G. Ball and E.O. Heady, Ames, Iowa: The Iowa State University Press.

Barlowe, Raleigh and John F. Timmons
1950 "What Has Happened to the Agricultural Ladder?" Journal of Farm Economics 32: pp. 30-47.

Barnes, Peter and Larry Casalino
1972 Who Owns the Land? A Primer on Land Reform in the U.S.A. Berkeley, Calif.: Center for Rural Studies.

Bowles, G. and W.E. Sellers, Jr.
1965 The Hired Farm Working Force of 1963: With Supplementary Data for 1962. U.S.D.A., ERS, Agricultural Economic Report No. 76, Washington, D.C.

Bradford, Lawrence A.
1954 "Critical Problems of Young Families In Getting Established In Farming," Journal of Farm Economics 36: pp. 1011-1020.

Clark, Wilson
1975 "U.S. Agriculture Is Growing Trouble As Well As Crops," The Smithsonian 5(10): pp. 59-65.

Cox, Lawanda Fenlason
1944 "Tenancy in the United States 1865-1900, a Consideration of the Validity of the Agricultural Ladder Hypothesis," Agricultural History July pp. 97-105.

Duncan, Otis Durant
1940 "A Sociological Approach to Farm Tenancy Research," Rural Sociology 15: pp. 285-291.

Ellis, Harold H.
1951 "Legal Problems in Father-Son Farming Operations," Journal of Land Economics 27: pp. 235-247.

Galpin, C.J. and Emily F. Hoag
1919 Farm Tenancy: An Analysis of the Occupancy of 500 Farms. Madison, Wis.: University of Wisconsin Agricultural Experiment Station Research Bulletin No. 44.

Gates, Paul Wallace
1941 "Land Policy and Tenancy in the Prairie States," Journal of Economic History 1: pp. 60-82.

Gibson, W.L. and Arthur J. Walrath
1947 "Inheritance of Farm Property," Journal of Farm Economics 29: 938-951.

Goldschmidt, Walter R.
1946 Small Business and the Community: A Study in Central Valley of California on Effects of Scale in Farm Operations. Report of Special Committee to Study Problems of American Small Business, U.S. Senate, December 23, 1946. Washington: GPO.

Harris, Marshall
1950 "A New Agricultural Ladder," Journal of Land Economics 26: pp. 258-267.

Hill, George W. and Harold T. Christensen
1942 "Some Cultural Factors Related to Occupational Mobility Among Wisconsin Farmers," Rural Sociology 7(2): pp. 193-200.

Long, Erven J.
1950 "The Agricultural Ladder: Its Adequacy as a Model for Farm Tenure Research," Journal of Land Economics 26: pp. 268-273.

Madden, J.P. and E.J. Partenheimer
1972 "Evidence of Economies and Diseconomies of Farm Size," Size Structure and Future of Farms, ed. by A.G. Ball and E.O. Heady, Ames, Iowa: The Iowa State University Press.

McElroy, R.C.
1969 The Hired Farm Working Force of 1968: A Statistical Report. U.S.D.A., ERS, Agricultural Economic Report No. 164, Washington, D.C.

McElroy, R.C.
1974 The Hired Farm Working Force of 1973: A Statistical Report. U.S.D.A., ERS, Agricultural Economic Report No. 265, Washington, D.C.

McMillan, Robert T.
1943 "The Relationship of Selected Social Background Factors to Farm Tenure Status," Southwestern Social Science Quarterly 23(4): pp. 320-330.

McMillan, Robert T.
1944a "Characteristics of Former and Present Farm Owners," Journal of Land Economics 20: pp. 52-55.

McMillan, Robert T.
1944b "Farm Ownership Status of Parents As A Determinant of the Socioeconomic Status of Farmers," Rural Sociology 9: pp. 151-160.

McMillan, Robert T. and Otis Durant Duncan
1945 Social Factors of Farm Ownership in Oklahoma. Stillwater, Oklahoma: Oklahoma Agricultural Experiment Station Bulletin No. B-289, Oklahoma A&M.

McMillan, Robert T. and Marylee Mason
1945 "Social Background and Farm Ownership," ed. by Paul Landis, Rural Sociology 10: pp. 414-416.

Moyer, D., M. Harris and M. Harmon
1969 Land Tenure in the United States: Development and Status. U.S.D.A., ERS, Agricultural Information Bulletin No. 338, Washington, D.C.

Nikolitch, R.
1970 Our 31,000 Largest Farms. U.S.D.A., ERS, Agricultural Economic Report No. 175, Washington, D.C.

Nikolitch, R.
1972 Family-Size Farms in U.S. Agriculture. U.S.D.A., ERS, Agricultural Economic Report No. 499, Washington, D.C.

North-Central Regional Committe on Land-Tenure Research
1944 Improving Farm Tenure in the Midwest: Problems and Recommended Policies. Urbana, Ill.: University of Illinois Agricultural Experiment Station Bulletin No. 502.

Parsons, Kenneth H. and Eliot O. Waples
1945 Keeping the Farm In the Family: A Study of Ownership Processes in a Low Tenancy Area of Eastern Wisconsin. Madison, Wis.: Wisconsin Agricultural Experiment Station, Bulletin No. 157.

Raup, P.M.
1969 "Economies and Diseconomies of Large-Scale Agriculture," American Journal of Agricultural Economics 51.

Raup, P.M.
1970 "The Impact of Trends in the Farm Firm on Community and Human Welfare," Emerging and Projected Trends Likely to Influence the Structure of Midwest Agriculture, 1970-1985, ed. by J.R. Brake, Iowa City, Iowa: Agricultural Law Center, College of Law, University of Iowa, Monograph No. 11.

Raup, P.M.
1973 "Corporate Farming in the United States," Journal of Economic History 33(1): pp. 274-290.

Reiss, Albert J., ed.
1961 Occupations and Social Status. New York: Free Press, pp. 109-138.

Rodefeld, Richard D.
1970 "Farm Types as Related to the Question of Enhancing and Preserving Rural Communities," unpublished paper presented at Governor-elect Lucey's Budget Hearings in Eau Claire, Wisconsin, December, 1970.

Rodefeld, Richard D. and E.A. Wilkening
1971 Wisconsin Incorporated Farms I: Types, Characteristics, and Trends. Madison, Wis.: Department of Rural Sociology, University of Wisconsin.

Rodefeld, Richard D.
1974 "The Changing Occupational and Organizational Structure of Farming and the Implications for Farm Work Force Individuals, Families, and Communities," unpublished Ph.D. Dissertation, University of Wisconsin, Madison Wis.

Rodefeld, Richard D.
1975 "Evidence, Issues, and Conclusions on the Current Status and Trends in U.S. Farm Types," unpublished paper presented at the 1975 annual meeting of the Rural Sociological Society.

Rohwer, Robert A.
1950 Family Factors in Tenure Experience: Hamilton County, Iowa, 1946. Ames, Iowa: Iowa State College, Agricultural Experiment Station, Research Bulletin No. 375.

Rushing, William A.
1970 "Class Differences in Goal Orientations and Aspirations: Rural Patterns," Rural Sociology 35(3): pp. 377-393.

Salter, Leonard A., Jr.
1943 Land Tenure In Process: A Study of Farm Ownership and Tenancy in a Lafayette County Township. Madison, Wis.: University of Wisconsin, Agricultural Experiment Station, Research Bulletin No. 146.

Schuler, E.A.
1938a Social Status and Farm Tenure - Attitudes and Social Conditions of Corn Belt and Cotton Belt Farmers. U.S.D.A., The Farm Security Administration and the Bureau of Agricultural Economics, Social Research Report No. IV, Washington, D.C.

Schuler, E.A.
1938b "The Present Social Status of American Farm Tenants," Rural Sociology 3(March)

Social Science Research Council
1933 Research in Agricultural Land Tenure Scope and Method. Bulletin No. 20

Spillman, W.J.
1919 "The Agriculture Ladder," American Economic Review, Supplement, March, pp. 170-179.

Sundquist, W.B. and H.D. Guither
1973 "The Current Situation and the Issues," Who Will Control U.S. Agriculture? A Series of Six Leaflets, ed. by H.D. Guither, North Central Regional Extension Publication 32-1. Urbana-Champaigne, Ill.: University of Illinois, College of Agriculture Special Publication 28.

Taylor, Paul S.
1943 "The American Hired Man: His Rise and Decline," Land Policy Review, U.S. Bureau of Agricultural Economics, USDA, 6(1): pp. 3-17.

Tetreau, E.D.
1931 "The 'Agricultural Ladder' in the Careers of 610 Ohio Farmers," Journal of Land Economics 7: pp. 237-248.

Tetreau, E.D.
1940 "The Location of Heirs and the Values of Their Inheritances: Farm and City Estates," Journal of Land Economics 16: pp. 416-429.

Timmons, John F. and Raleigh Barlowe
1949 Farm Ownership in the Midwest. Ames, Iowa: Iowa State University, Agricultural Experiment Station, Research Bulletin No. 361.

Von Tungeln, George H.
1927 "Some Observations On the So-Called Agricultural Ladder," Journal of Farm Economics 9: pp. 94-106.

Wehrwein, Carl F.
1928 "The Pre-Ownership Steps On The 'Agricultural Ladder' In a Low Tenancy Region," Journal of Land Economics 4: pp. 417-425.

Wehrwein, Carl F.
1930 "The Post-Ownership Steps On The 'Agricultural Ladder' In a Low Tenancy Region," Journal of Land Economics 6: pp. 65-73.

Wehrwein, Carl F.
1931 "The Agricultural Ladder in a High Tenancy Region," Journal of Land Economics 7: pp. 67-77.

Wehrwein, Carl F.
1958 "An Analysis of Agricultural Ladder Research," Journal of Land Economics 34: pp. 329-337.

Wilkening, E.A. and Richard Rodefeld
1971 Wisconsin Incorporated Farms II: Characteristics of Resident Owners, Hired Managers, and Hired Workers. Madison, Wis.: Department of Rural Sociology, University of Wisconsin.