THE ECONOMIC POSITION OF FARM FAMILIES IN THE UNITED STATES AND KANSAS

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by

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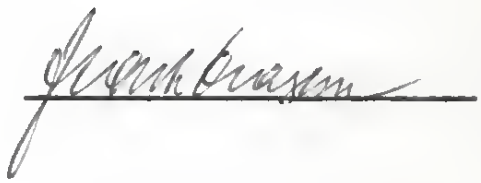

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INTRODUCTION

This report examines the economic position of farm families in the United States in general and of those in Kansas in particular. Since the economic well-being of any individual is usually assumed to be a function of two measures, income and net worth,[1] both of these components will be examined closely. In many instances, comparisons will be made between the agricultural sector of the economy and different segments of the non-agricultural sector. When such data are available, the position of Kansas farmers will be presented.

Since the 1930's the government has been vitally involved in programs designed to improve the economic situation of the farm population. The success which these programs have had is hotly debated and the ends which they have sought to accomplish are not agreed upon.

The February, 1966, issue of the Journal of Farm Economics contains a short article written by M. A. Jacobson and Don Paarlberg[2] which considers the question of whether farm support programs are justified in attempting to establish a parity of income between farm and nonfarm income

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[1]Alfred Marshall, Principles of Economics (New York: Macmillan Co., 1961), p. 77.

[2]M. A. Jacobson and Don Paarlberg, "Parity of Net Worth," Journal of Farm Economics, XLVIII, No. 1 (February, 1966), pp. 127-129.

earners.[3] Data are presented showing that the average farm family has a net worth considerably greater than the average nonfarm family, but that income comparisons strongly favor nonfarm people. Reasons why these two measures of economic well-being show a disparity are discussed briefly.

Jacobson and Paarlberg use the Paretian optimality concept[4] to conclude that farm and nonfarm families will always be in an unequal position in regard to both income and net worth when they are optimizing their economic position. The authors assume that for any given economic position, farm people will regard net worth more highly than will nonfarm people. On the basis of this assumption, it is concluded that a parity of net worth between farm and nonfarm people will never be reached and the possibility of income parity is seriously questioned.

This report considers some of the questions, most of them to some length, raised by the article. It examines and supplements the data the authors have used. The purpose here is not to attempt to refute the authors' conclusions. Rather it is hoped that in considering their arguments some new ideas and considerations will be raised which will help to better understand the economic situation of farmers.

The main conclusion reached in this report is that the economic position of farm families is not so poor in relationship to nonfarm families as is commonly supposed. A somewhat different picture of what farm incomes are is observed when the "noncommercial" farms (those selling

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[3]Parity income has several definitions. In this instance, the best probably would be that income which yields returns to persons employed in agriculture equivalent to those received by comparable workers engaged in nonagricultural production.

[4]The Paretian optimality concept states that the marginal rates of substitution between any two products must be the same for any two individuals that consume both.

less than $5,000 a year of farm products), and the "commercial" farms, (those selling more than $5,000), are looked at separately. It is true that problems of the noncommercial farms, which make up 55 per cent of all farms in the country, are part of the farm problem. However, a number of authorities argue that the income predicament of farms in the two classes represents a different type of problem and should be considered separately. The main interest of this report is the income and net worth position of the commercial farmers. The decision to so limit the study was arbitrary and does not necessarily imply that the problems of this group are more important or more serious.

The tendency to compare farm incomes with the average for all nonfarm people is questioned. Reasons are given why a more logical comparison would be between farmers and members of another working class which has about the same level of skill and education.

In considerations of net worth, the value of assets for farmers and nonfarmers is compared. It will be seen that the net worth holdings in the agricultural sector of the economy far exceed those of all other people. Reasons for the high net worth holding of farms are examined and some of the implications are studied.

Finally, the over-all economic position of farmers is considered by examining both the annual incomes and the increases in net worth. Reasons are given as to why it is perhaps logical to consider capital gains from assets as an addition to annual incomes.

CHAPTER 1

INCOME CONSIDERATIONS

Consideration of the economic condition of the farm and nonfarm population brings up one question. Does the agricultural segment of the economy merit the income support programs undertaken by the government in attempting to secure a parity of income between the two segments?

The predicament of American agriculture is rather common knowledge. Rapidly advancing technology has made it possible for the American farmer to greatly expand production. The government encouraged production during two world wars and the Korean conflict. Production after these wars exceeded the domestic demand because of agriculture's inability to promptly adjust resources and output. Farmers were confronted with relatively low market prices. At the same time, capital equipment prices and the cost of borrowing money remained high. Unlike some segments of the economy, agricultural producers have had very little control over the prices they received for output. Much of labor and nonfarm industry is able to obtain persistently favorable terms of trade by exercising market power. The competitive nature of their business has made this impossible for farmers. As a result, they generally have had to take the prices dictated by the market. They have improved their efficiency and increased their output many times, but their income position has not increased comparatively.

Agriculture has produced the food and fiber needed by the American people, and at relatively declining prices. Society has encouraged and applauded the advances in economic growth and agricultural productivity

and has benefitted directly from them. But for the most part, the farm population has suffered because a balance has not been maintained between output and demand for farm products at reasonable prices. Critics might argue that so long as farmers continue to stay in agriculture they must be receiving a satisfactory income or otherwise they would leave. This argument implies that "satisfactory" means the best one can get under the circumstances. However, this is not what is usually meant by a satisfactory income or return on investment. A satisfactory income usually implies that the income or return on investment is as much or more than was expected at the time an occupational or investment decision was made. Differences in income or returns do not in themselves prove whether they are satisfactory for individuals having different occupational and investment preferences. Preference for country or city living, manual or mental labor, more or less liquid investments or different risks may result in expected differential returns. If, however, having taken all these things into account and then making a decision, one finds the returns on investment substantially lower than expected because of sharp changes in income relationships, he would conclude that his income is unsatisfactory. It is in this way that incomes in agriculture have been unsatisfactory to many farm people.[5]

The predicament of agriculture raises the question of whether the nation as a whole, in view of the obvious national gains, should pay a share of the bill for increased efficiency in agriculture during periods

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[5]Dale E. Hathaway, Problems of Progress in the Agricultural Economy (Chicago: Scott, Foresman and Co., 1964), p. 26.

of relatively low farm income. Large funds are channeled into agriculture, evidently under public acceptance of the need for compensation to the industry for its broad contribution to economic progress. Such action is usually considered equitable since there is no economic basis for letting people in agriculture bear the major costs and sacrifices of the improved national welfare due to advances in agricultural productivity.[6]

Development of the Parity Income Concept

The search for income parity for agriculture has been going on a long time. In 1621 the Virginia Colony attempted to stabilize tobacco prices by limiting production and burning surpluses. On a national scale the search began at the close of the Civil War when it became evident that farm people would not long continue as a majority in the population and that agriculture would gradually wane as a clearly dominant segment of the economy.[7] Substantial efforts were also made during the 1920's to gain "equality" for agriculture. Grove has written of the development of the parity concept:

> . . .the concept as we now know it did not spring full blown from the brain of some economic Jupiter, but rather grew out of the continuous groping for a concrete measure of justice for the farmer, and was steadily modified by conditions prevailing in the economic life of farmers and the nation. In other words, parity did not develop as the practical application of an economic theory immaculately

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[6]Earl O. Heady, "Feasible Criteria and Programs," Problems and Policies of American Agriculture (Ames: Iowa State University, Center for Agricultural Adjustment, 1959), pp. 220-221.

[7]Murray Thompson, "The Search for Parity," After a Hundred Years: The Yearbook of Agriculture, 1962 (Washington, D. C.: U. S. Government Printing Office, 1962), p. 543.

> conceived, free from all taint of original sin in the form of class interest. On the contrary, parity, like Topsy, just growed; and whatever economic justification can be found for it in its present form may be considered largely a rationalization.[8]

Farm parity, as a goal under which farmers and nonfarms would enjoy equality of opportunity for income, however, is usually associated with the New Deal of the thirties. The first specific parity formula, which dealt with parity prices, was incorporated into the Agricultural Adjustment Act of 1933, the objective of which was:

> . . .re-establish prices to farmers at a level that will give agricultural commodities a purchasing power with respect to articles that farmers buy, equivalent to the purchasing power of agricultural commodities in the base period. The base period in the case of all agricultural commodities except tobacco shall be the pre-war period, August 1909--July 1914.[9]

Further congressional recognition of the farmers' plight resulted in a definition of parity income in the Soil Conservation and Domestic Allotment Act of 1936, which was revised in the Agricultural Act of 1938. Later it was replaced with a definition in the Agricultural Act of 1948 that was substantially different. This parity concept centers generally on the relation between the incomes of farm people and those of nonfarm people. Legislation enacted in 1936 and 1938 definied income parity in terms of the maintenance of an historical ratio between the per capita

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[8] E. W. Grove, "The Concept of Income Parity in Agriculture," Studies in Income and Wealth, Vol. 6 (New York: National Bureau of Economic Research, 1943), p. 109.

[9] Wayne Fuller, et al., An Alternative Parity Formula for Agriculture, Research Bulletin 476 (Ames: Iowa State University, Agricultural and Home Economics Experiment Station, February 1960), p. 693.

income of the farm population and that of the nonfarm population. Legislation in 1936 defined income parity in terms of the per capita income of the farm population from all sources, both farm and nonfarm, while 1938 legislation related parity to income from farming operations only.[10] The definition was changed again in the Agricultural Act of 1948, which read that:

> "Parity," as applied to income, shall be that gross income from agriculture which will provide the farm operator and his family with a standard of living equivalent to those afforded persons dependent upon other occupations.[11]

This new definition got away from the problems involved in any formula which includes a base period. It escaped, for example, the problem of what base period to use. It also eliminated the problem of comparing levels of living in different occupations. The new formula involved more than a simple comparison of farm and nonfarm dollar incomes. It also required the determination of differences in their purchasing power, as represented by their different levels of living.[12]

Even though the definition of income parity became effective on January 1, 1950, it has not yet been computed and put into actual use. While farm policy has been mostly concerned with parity prices, a number of agricultural economists have been critical of these programs.

> Up to the present time, farm policy has been directed chiefly at supporting prices of farm products. Prices have been supported directly by commodity loan and storage programs,

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[10] Robert H. Masucci, "Income Parity Standards for Agriculture," Agricultural Economics Research, U. S. Dept. of Agriculture, Economic Research Service, Vol. XIV, No. 4 (October, 1962), pp. 121-124.

[11] Ibid., p. 124.

[12] Fuller, op. cit., p. 696.

and indirectly by acreage reduction programs, including the soil bank.

These programs for supporting prices are based on the theory that supporting prices is the best way to support income per farmer--the thing that really counts.

This theory ignores the fact that prices are only one of the things that determine farm income; changes in quantities and costs can add to or can partly or more than completely offset the effects of changes in prices. Perhaps we could see the farm problem--which is basically a farm income problem--more clearly, and work out new and better solutions to it, if we were less preoccupied with prices, and concerned ourselves more directly with farm incomes.[13]

Proposed Parity Income Programs

Economists have suggested various ways of making an income parity workable. Masucci has proposed that income support programs be established so that resources in agriculture earn returns equal to those earned in other segments of the economy. He has chosen to place all farms in two classes: commercial farmers whose sales total $5,000 or more anually and noncommercial farmers with total sales of less than $5,000. For the noncommercial farmers, it is deemed appropriate to have an income goal equivalent to the average income of nonfarm families. The concept, when applied to commercial farmers, calls for returns of investment and operators' and family labor comparable to those received in the nonfarm economy. Specifically, Masucci would allow a 5 per cent return on investment, a wage of $1.25 an hour for hired labor and the average factory wage of $2.32 an hour for the labor of operators and their families. Using these rates, parity returns to commercial farmers are computed for 1961.

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[13]Geoffrey Shepherd, "Farm Programs for Farm Incomes," Journal of Farm Economics, XLII, No. 3 (August, 1960), p. 639.

The figure obtained is 9 per cent above actual returns to resources used in commercial agriculture in that year.[14]

Cochrane has updated the parity income analysis of Masucci to 1963 and developed estimates for more economic groupings. He finds that the average farm with sales of $20,000 and more fell short of the parity income goal by only 2 per cent in 1963. This means that with only a 2 per cent increase in gross income the average farm in this group would realize a parity of income by Masucci's standard. The average farm with annual sales between $10,000 and $19,999 would require a 10 per cent increase in gross income to realize the parity income goal; the average farm with sales between $5,000 and $9,999, a 34 per cent increase; and the average farm with sales of less than $5,000 a year a 129 per cent increase.[15]

An Iowa State University study uses a parity of returns standard which is similar in many aspects to that of Masucci.[16] In this study, parity returns to the capital resources used in agriculture are the same as those received by comparable capital used in nonagricultural production. Since capital is fairly mobile between the farm and nonfarm sector, comparable returns to farm working capital are approximated by using the interest rates paid by farmers on short term loans. The current value of land multiplied by the corresponding farm mortgage rate is used to approximate parity returns to land.

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[14]Masucci, op. cit., pp. 121-133.

[15]Willard W. Cochrane, The City Man's Guide to the Farm Problem, Minneapolis: University of Minnesota Press, 1965), p. 121.

[16]Fuller, op. cit., pp. 693-702.

The difficulties associated with selecting nonfarm occupations that are comparable to farming and the further difficulties of estimating comparable returns in rural and urban areas make it almost impossible to compute farm and nonfarm labor returns in units which can be compared directly. It becomes necessary, therefore, to compare farm and nonfarm returns relative to some base period. Once a period is selected it is possible to state that returns to resources engaged in farming are, for example, lower relative to nonfarm earnings than they were during the base period. According to this proposal then, parity farm-labor returns become the earnings which bear the same ratio to nonfarm labor earnings as that which existed during the base period. These criteria, thus, lead to the Iowa State study's specific definition of parity gross income as being that income which covers operating expenses and yields a rate of return to working capital and land equal to current interest rates. It also yields a return to the farm labor resource bearing the same ratio to nonfarm labor returns which existed during the base period. The parity returns price of a product is defined as the price which will yield a parity return to the resources used in the production of this product. Thus, if only one product is produced in an area, the parity price of this product could be obtained by dividing the parity gross income by the quantity produced. The study is concerned only with the methods for comparing incomes or resource returns in differing occupations. No absolute statements are made concerning the comparative magnitudes of these returns. Comparisons must be related to a base period. When a base period is selected, a computation of the gross income, defined in the study as

parity, and the prices necessary to yield parity of incomes becomes possible.[17]

Income Comparisons

In their article, Jacobson and Paarlberg make income comparisons but use the more common method of comparing per capita incomes between the farm and nonfarm population. Table 1 shows that the per capita income of farm people in 1964 was $1,381 and for nonfarm people it was $2,631. Farm per capita income was only 52.5 per cent of the income earned by nonfarm people. But this relative income position of farm people is still more favorable than in some years. In 1955, for example, the figure was only 46.2 per cent, which demonstrates how agricultural incomes tend to fluctuate. Another comparison often made is between income per farm and the average wage of employed factory workers. This comparison shows the farm family to be in a much better position. In 1964 the average farm family earned $5,420 while the average factory worker's wages amounted to $5,354. Farm families can be found to be in a better income position on the basis of this comparison for most years shown in Table 1. The farm income figures, however, do not include any charge to capital, i.e., part of this income should be imputed to capital.

Average farm income for Kansas has exceeded average net farm income for the nation every year since 1958. Only for 1964 are figures available for Kansas for the earnings of farmers from off-farm sources. Estimates for other years were made by comparing the 1964 Kansas figure to the na-

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[17] Ibid.

TABLE 1

FARM - NONFARM INCOME COMPARISONS

Year	Income Per Farm U. S. Total Net/ Farm[a]	Off Farm[b]	Total	Income Per Farm Kansas Total Net/ Farm[c]	Off Farm[d]	Total	Per Capita Farm Income U. S. Farm Sources[e]	Nonfarm Sources[e]	Total	Per Capita Nonfarm[f]	Ave. Ann. Wage Factory Worker[g]
1953	$2,626	$1,292	$3,918	$2,063	$1,886	$3,949	$672	$324	$996	$1,920	$3,664
1954	2,606	1,237	3,843	2,915	1,806	4,721	658	312	970	1,889	3,665
1955	2,463	1,332	3,795	1,684	1,945	3,629	597	325	922	1,996	3,936
1956	2,535	1,459	3,994	1,692	2,130	3,822	600	352	952	2,103	4,097
1957	2,590	1,513	4,103	1,889	2,209	4,098	625	375	1000	2,165	4,243
1958	3,189	1,578	4,767	4,474	2,304	6,778	747	390	1137	2,164	4,301
1959	2,795	1,721	4,516	3,143	2,513	5,656	664	425	1089	2,274	4,590
1960	3,043	1,826	4,869	4,086	2,666	6,752	733	461	1194	2,311	4,665
1961	3,389	1,817	5,206	4,386	2,653	7,039	819	468	1287	2,351	4,802
1962	3,562	1,897	5,459	4,193	2,770	6,963	850	490	1340	2,447	5,021
1963	3,671	1,882	5,553	4,051	2,748	6,799	899	504	1403	2,521	5,181
1964	3,479	1,941	5,420	3,754	2,833	6,587	860	521	1381	2,631	5,354
1965	4,493	2,020	6,513	4,897	2,949	7,846	1112	552	1664	N.A.	5,592

[a]Includes physical changes during the year in all livestock and crops on farms. Also includes government payments. Source: Farm Income Situation, U. S. D. A. E. R. S., FIS-203, July, 1966, p. 41.

[b]Computed from P. 42 of Farm Income Situation, July, 1966.

[c]Source: Farm Income Situation, U. S. D. A. E. R. S., FIS-203 Supplement, August, 1966, pp. 12-13.

[d]1964 figure is from 1964 Census of Agriculture. Other years are estimates.

[e]Source: Farm Income Situation, July, 1966, p. 44.

[f]Source: U. S. D. A. Agricultural Statistics 1965 (Washington: U. S. Government Printing Office), p. 482.

[g]Source: Farm Income Situation, July, 1966, p. 46.

tional figure and using the percentage obtained to compute the Kansas amount. On the basis of these estimates it can be seen that off-farm income is considerably greater for Kansas farmers than for farmers in the rest of the country. When net farm income and off-farm income are added, Kansas again is seen to be in a relatively good position. In 1965, Kansas ranked eighteenth in estimated net income among all states.[18]

It is a common practice to make comparisons using figures such as these but certain writers contend that comparing the earnings of all agricultural workers with all nonagricultural workers does not give an accurate picture of the real situation and is misleading. This is particularly true for statistics published in the Census of Agriculture. These estimates for the per farm average are relatively low because of the large number of holdings that are considered farms by the census but would not normally be so considered in the usual sense of the word "farm." The 1960 census classified a farm as any place of more than 10 acres from which $50 or more of farm products were sold in 1959 or places of less than 10 acres from which farm products of $250 or more were sold. Department of Agriculture data show that almost 1.5 million farms, or 42.9 per cent of the total number of farms in the United States, sold less than $2,500 worth of agricultural products in 1965. For this group, off-farm income was three times greater than the net farm income.[19]

Some authorities have given very convincing reasons why agriculture should not be considered as one large homogeneous industry and why,

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[18]U. S. Department of Agriculture, Farm Income Situation, Economic Research Service, FIS-201 (February, 1966), p. 19.

[19]U. S. Department of Agriculture, Farm Income Situation, Economic Research Service, FIS-203 (July, 1966), pp. 62-68.

therefore, a per farm income figure is not very meaningful. Cochrane, when he talks about the "two worlds of farming in the 1960's" perhaps makes the point most clear:

> ...There are two worlds of farming in the 1960's: a highly productive, commercial world, and a low-production, poverty world, with a transition zone in between. The characteristics of the two worlds are different, their problems are different. A useful analysis of one has no meaning for the other. The solutions for each are different. An effective solution for one has no meaning for the other.[20]

Recently the Economic Research Service has prepared figures showing the average net income of farm operator families by major economic classes.[21] Table 2 contains these figures for the year 1965. A better idea of the great amount of heterogeneity in the agricultural segment of the economy can be obtained by examining this table.

Shepherd has suggested considering net farm incomes from only commercial type farms as one way to avoid groupings of such widely diverse farming operations.[22] The Department of Agriculture publishes sets of figures which show income for each of 42 chief types of commercial family farms. The unweighted average for income before a capital charge was $12,618 in 1965, as shown in Table 3.[23]

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[20]Cochrane, op. cit., p. 20.

[21]U. S. Dept. of Agriculture, Farm Costs and Returns, Economic Research Service, Agriculture Information Bulletin No. 230 (Rev. August 1966), pp. 17-99.

[22]Shepherd, op. cit., p. 642.

[23]Shepherd also uses an unweighted average because data showing the number of farms in each group are not available. He believes that the lack of accuracy is small compared to the inaccuracy of averaging all farms in agriculture together.

TABLE 2

AVERAGE NET INCOME OF FARM OPERATOR FAMILIES, BY VALUE OF SALES CLASSES, U. S., 1965[a]

Class	Number of Farms (thousands)			Average Net Income		
Annual Sales	Total	Percentage of Total	Percentage of Total Cash Receipts	Realized Farm	Off Farm	Total Including Non-money (Farm, Food and Housing)
$20,000 and over	499	14.8	63.8	$13,547	$2,246	$15,793
10,000 - 19,999	519	15.4	18.5	5,952	1,590	7,542
5,000 - 9,999	498	14.8	9.5	3,741	1,904	5,645
2,500 - 4,999	410	12.1	3.9	2,383	2,220	4,603
50 - 2,499	1,448	42.9	4.3	1,095	3,402	4,497
All Farms	3,374	100.0	100.0	4,210	2,587	6,797

[a]Calculated from the U. S. Department of Agriculture, Economic Research Service, Farm Income Situation July, 1966, pp. 64-68.

TABLE 3

RETURNS TO OPERATOR AND FAMILY LABOR ON COMMERCIAL FAMILY-OPERATED FARMS BY TYPE AND LOCATION

Type of Farm and Location	Average 1957-1959 NET FARM INCOME			1964 NET FARM INCOME			1965[a] NET FARM INCOME		
	No Capital Charge	Capital Charge[b]	Hourly Return[c]	No Capital Charge	Capital Charge[b]	Hourly Return[c]	No Capital Charge	Capital Charge[b]	Hourly Return[c]
Dairy: Central NE	$4,299	$2,344	$0.66	$4,264	$1,648	$0.43	$4,271	$1,517	$0.40
Eastern Wisc.									
Grade A	5,317	2,679	0.69	6,731	2,771	0.65	6,265	2,114	0.50
Grade B	2,515	710	0.20	3,493	854	0.23	3,218	424	0.11
Western Wisc.									
Grade B	3,391	2,004	0.52	2,939	807	0.20	4,635	2,482	0.61
Dairy-hog, Minnesota	3,960	1,699	0.47	3,815	647	0.17	5,116	1,758	0.46
Egg producing									
New Jersey	1,742	(575)	(0.14)	2,438	(171)	(0.04)	4,400	1,618	0.40
Broiler:									
Maine	2,856	1,535	0.80	3,559	1,621	0.83	3,551	1,517	0.74
Delmarva:									
Broilers	1,144	531	0.60	2,433	1,228	0.77	2,743	1,485	0.88
Broiler-crop	4,332	2,590	1.29	5,998	2,872	1.21	8,653	5,190	2.07
Georgia	986	291	0.18	707	(348)	(0.24)	1,599	463	0.30
Corn Belt:									
Hog-dairy	7,212	4,334	1.20	6,703	2,605	0.78	10,543	6,262	1.93
Hog fattening-beef raising	3,974	1,604	0.50	4,262	498	0.17	7,927	3,773	1.28
Hog-beef fattening	9,401	4,472	1.40	9,349	2,144	0.71	16,488	8,768	3.02
Cash grain	7,212	2,120	0.92	12,992	4,459	2.18	13,522	3,648	1.78
Cotton: Southern piedmont	2,194	974	0.39	3,116	1,035	0.45	2,826	511	0.23

TABLE 3 - Continued

Type of Farm and Location	Average 1957-1959 NET FARM INCOME			1964 NET FARM INCOME			1965[a] NET FARM INCOME		
	No Capital Charge	Capital Charge[b]	Hourly Return[c]	No Capital Charge	Capital Charge[b]	Hourly Return[c]	No Capital Charge	Capital Charge[b]	Hourly Return[c]
Cotton:									
Mississippi Delta: Small	$1,667	$ 974	$0.39	$2,472	$1,461	$0.76	$2,374	$1,277	$0.84
Large	20,243	9,277	(d)	35,811	18,771	(d)	29,563	10,646	(d)
Texas:									
Black prairie	2,927	894	0.39	4,785	1,250	0.54	5,071	1,398	0.59
High plains, nonirrigated	7,459	4,511	2.51	1,877	(3,436)	(1.85)	9,857	4,460	2.30
Irrigated	12,972	7,345	3.15	13,034	4,311	1.76	17,679	8,686	3.41
San Joaquin Valley, Calif.:									
Cotton-specialty crop	32,877	18,828	(d)	68,006	49,277	(d)	83,655	64,012	(d)
Cotton-general crop, large	85,025	37,532	(d)	100,141	37,883	(d)	75,920	11,424	(d)
Cotton-general crop, med.	27,517	13,525	(d)	33,419	15,181	(d)	26,910	8,002	(d)
Peanut-cotton Southern Plains	2,760	1,866	0.70	5,525	3,992	1.60	6,583	4,822	1.94
Tobacco: Carolina Coastal Pl. Tobacco	4,003	2,075	0.82	6,425	3,779	1.56	5,296	2,539	1.27
Tobacco-cotton	3,960	1,880	0.72	6,343	3,463	1.33	4,960	1,935	0.91
Kentucky Bluegrass: Tobacco-lvsk. Inner area	7,111	2,489	0.95	6,756	474	0.18	7,977	1,536	0.59

TABLE 3 - Continued

Type of Farm and Location	Average 1957-1959 NET FARM INCOME No Capital Charge	Capital Charge[b]	Hourly Return[c]	1964 NET FARM INCOME No Capital Charge	Capital Charge[b]	Hourly Return[c]	1965[a] NET FARM INCOME No Capital Charge	Capital Charge[b]	Hourly Return[c]
Tobacco-dairy Intmt. area	$2,515	$1,026	$0.30	$2,672	$1,221	$0.38	$3,058	$1,609	$0.50
Spring wheat:									
Northern Plains									
Wheat-small grain-lvsk.	4,405	1,961	0.82	8,263	4,793	2.14	9,852	6,211	2.70
Wheat-corn-lvsk.	5,854	3,332	1.02	6,273	2,635	0.81	10,571	2,908	2.05
Wheat-fallow	2,908	539	0.25	8,166	4,453	1.77	9,770	5,789	2.24
Tobacco-dairy Outer area	4,547	2,652	0.69	5,352	2,480	0.59	6,139	3,192	0.80
Winter wheat:									
So. Plains:									
Wheat	9,135	4,892	2.00	8,363	2,030	0.79	9,938	3,303	1.20
Wheat-grain-Sorghum	6,858	1,998	0.74	7,925	482	0.18	12,138	4,750	1.70
Pacific NW:									
Wheat-pea	13,458	4,475	1.70	14,635	2,697	0.92	18,268	6,216	2.11
Wheat-fallow	15,797	8,894	3.11	13,863	4,564	1.40	13,982	4,141	1.23
Cattle ranches:									
No. Plains	5,249	1,442	0.45	6,043	1,073	0.33	7,599	2,613	0.77
Intmt. Region	11,409	7,727	1.93	6,829	1,751	0.44	8,548	3,568	0.89
Southwest	7,410	219	0.09	1,310	(9,041)	(3.93)	6,146	(4,161)	(1.73)

TABLE 3 - Concluded

Type of Farm and Location	Average 1957-1959 NET FARM INCOME			1964 NET FARM INCOME			1965[a] NET FARM INCOME		
	No Capital Charge	Capital Charge[b]	Hourly Return[c]	No Capital Charge	Capital Charge[b]	Hourly Return[c]	No Capital Charge	Capital Charge[b]	Hourly Return[c]
Sheep Ranches:									
No. Plains	$10,603	$5,909	$1.50	$11,731	$5,987	$1.69	$14,695	$8,570	$2.38
Utah-Nev.	18,414	10,510	2.84	14,915	6,032	1.63	18,335	9,027	2.44
Southwest	9,498	(230)	(0.09)	3,752	(8,509)	(3.15)	9,312	(3,625)	(1.37)
TOTAL	$397,116	$183,854	$36.66	$477,485	$181,724	$20.37	$529,953	$216,378	$44.47
AVERAGE	9,455	4,377	0.96	11,369	4,327	0.54	12,618	5,152	1.17

[a] Preliminary
[b] Charge for capital at current interest rates
[c] Return per hour to operator and family labor
[d] Not computed

Source: U. S. Dept. of Agriculture Farm Costs and Returns, Economic Research Service, Agriculture Information Bulletin No. 230 (Revised August, 1966), pp. 17-99.

The farm population has been considered as a dichotomy. Obviously the nonfarm population should not be considered homogeneous either. The only thing this group has in common is that the workers are not employed on farms. One of the most important differences among the occupational classes of the nonfarm group is their educational level. Table 4 shows the educational attainment of different occupational classes, including farmers.

From Table 4 it can be seen that the educational attainment of farmers and farm workers is low compared to most other groups. Income comparisons should take account of these differences in educational levels.

Shepherd believes that the earnings of commercial farms are most nearly comparable to those of employed factory workers. However, factory workers' earnings are not a perfect comparison with the labor and management returns to farm operators. Factory workers' earnings do not include returns to management as do farm returns. The fact that factory workers usually do not exercise much management and that income from other members of the family is not included in their earnings also makes an exact comparison difficult. A commercial farmer necessarily exercises a great deal of management and the earnings of his family are included in income if the work was done on the home operation. Even with these differences, however, Shepherd still believes that the factory worker group is the best one we have for direct income comparisons.[24]

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[24]Shepherd, op. cit., pp. 642-645.

TABLE 4

EDUCATIONAL ATTAINMENT BY OCCUPATION GROUP
FOR THOSE EMPLOYED IN THE UNITED STATES IN 1959

Occupational Group	Average Years Completed	Educational Attainment Levels Per cent with Less Than High School	High School Graduation	Some College
Professional and technical	16.2	6	19	75
Proprietors and managers	12.4	38	33	29
Clerical and sales	12.5	25	53	22
Skilled	11.0	59	33	8
Semi-skilled	9.9	70	26	4
Service	9.7	69	25	6
Unskilled	8.6	80	17	3
Farmers and farmworkers	8.6	76	19	5

Source: Manpower Challenge of the 1960's, U. S. Dept. of Labor, U. S. Government Printing Office, 1960.

The net farm income figures in Table 3 are not necessarily comparable with factory workers' incomes since the net farm income figure includes income which should be credited to capital. This charge is the current value of land and buildings multiplied by the current value of working assets (machinery and equipment, livestock and crops on hand as of January 1) times the interest rate on intermediate and short-term farm loans. If the charge for capital is deducted from net income, the sum remaining is the return to the operator and his family for their labor and management only.

Comparing these adjusted figures with the annual average earnings of employed factory workers (Table 1) shows that the factory workers are in a somewhat better income position. A greater difference is observed when hourly earnings are compared. The average earnings of the farm operator and his family was only $1.17 per hour in 1965 while the average for factory workers was $2.61. The reason annual earnings are approximately the same for the two groups while hourly earnings vary greatly may be explained by the fact that the farm family works many more hours than the factory worker.

Another important statistic to be noted from the data in Table 3 is the great variance in incomes, both between types of farms and between years. It can be seen, for example, that the return per hour of work was only $0.11 on Grade B eastern Wisconsin dairy farms in 1965, but it was $3.41 for irrigated cotton farms in the high plains of Texas. The average return per hour for all commercial farm operators was $1.17 an hour in 1965 as compared to a low $0.54 in 1964. Examination of the figures

for nonfarm per capita incomes and annual earnings of factory workers in Table 1 will show that these groups do not suffer from wide fluctuations in earnings between years.

A great variation between incomes for different years is also true for Kansas. Kansas Farm Management Associations have compiled income information from 2,121 Kansas farms.[25] Table 5 shows how widely farm incomes differ between certain years. An extremely good year was 1965, with southwest Kansas showing an average net income before capital charge of $13,720. However, 1955 and 1956 were very poor years, with the northwest section showing a net loss for 1956.

TABLE 5

NET FARM INCOME ON KANSAS ASSOCIATION FARMS BY AREAS - 1955-1965

Year	North Central	South Central	South-west	North-east	North-west	South-east
1955	$ 957	$ 133	$1,673	$2,208	$ 711	$1,263
1956	2,721	3,929	1,071	3,213	-820	2,867
1957	4,390	3,889	5,277	5,324	6,829	3,940
1958	7,726	7,835	9,640	5,837	10,270	5,830
1959	3,207	4,416	3,734	3,167	6,171	4,900
1960	5,719	6,223	11,746	5,213	12,661	5,685
1961	6,013	8,350	11,983	5,309	7,753	4,647
1962	7,486	7,428	11,816	5,951	12,197	5,729
1963	5,523	5,526	3,895	4,671	4,661	3,993
1964	5,249	6,127	5,457	4,758	2,319	5,319
1965	8,795	10,791	13,720	9,147	8,623	9,900

[25] Danny D. Trayer, et. al., Farm Management Summary and Analysis Report, Extension Service, Kansas State University, Manhattan, Kansas, 1965, p. 2.

Another way of comparing incomes has been suggested. A dollar's worth of income in agriculture represents a greater real income on the farm than in the city. Comparisons between rural and urban incomes should take into account differences in the purchasing power of income, differential income tax treatment, and differences in the education or skill, age, and sex composition of the two groups.

D. Gale Johnson has studied these adjustments that need to be considered in order to compare returns to human resources in agriculture with those in the rest of the economy.[26] He estimates that labor earnings in agriculture would represent equal returns for comparable labor if per capita incomes in agriculture were 65 to 70 per cent of nonfarm incomes. Hathaway, however, contends that the figure should be 88 per cent.[27] In other words, if the per capita farm income were 88 per cent as large as the per capita nonfarm income, the farm family would enjoy welfare equal to the average nonfarm family. Table 1, however, shows that, even after making the adjustments suggested by Johnson and Hathaway, farmers, as a group, would still suffer from low relative incomes. In 1964, for example, per capita farm income was only about 58 per cent of that for all nonfarm people.

This chapter began with a discussion as to why farmers deserve to have parity incomes. The historical development of the parity of income

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[26]D. Gale Johnson, "Labor Mobility and Agricultural Adjustment," Agricultural Adjustment Problems in a Growing Economy, ed. Earl O. Heady, et al. (Ames: The Iowa State College Press, 1956), p. 164.

[27]Dale E. Hathaway, "Improving and Extending Farm-Nonfarm Income Comparisons," Journal of Farm Economics, XLV, No. 2 (May, 1963), p. 368.

concept was presented and two proposals for farm programs using this concept were considered. The examination of these points set in focus the income comparisons which followed.

Reasons were given why a distorted picture results from the usual comparison of the average annual farm income to the average of all other income earners. It was noted that the farm income figure usually includes all types of farms, both commercial and noncommercial. Incomes from commercial farms were compared with those of factory workers. Finally, a comparison was made under the assumption that agricultural incomes need not be as high as those in the rest of the economy to represent equal welfare to the earner.

The figures indicate that when incomes per farm are compared to the average annual earnings of factory workers, the farmers are not suffering comparatively because of low incomes. These figures are deceiving, however, since they include all farms, regardless of size, and also because no adjustment is made for income which should be credited to capital equipment and real estate. An attempt was made to eliminate this problem by considering only commercial farmers and deducting a charge for capital. When this group was compared to factory workers, it was found that annual incomes were about the same for each group. The hourly rate of factory workers, however, was more than twice that for farmers.

Economic well-being is not determined solely by annual income, however. It is a function of net assets as well. The following chapter considers the net worth position of farmers and compares it with the net worth of nonfarm families.

CHAPTER II

NET WORTH COMPARISONS

Farm and Nonfarm Net Worth Positions

Using the United States Department of Agriculture figures and data from a study made by the Survey Research Center, Jacobson and Paarlberg compare the net worths of farm and nonfarm families. Figures used are from 1962, the latest year for which a net worth survey has been done on a nation-wide basis. The figures show that the average per-family net worth of all farm people was $51,600.[28] The Survey Research Center estimated that the average per-family net worth of the United States population, including both farm and nonfarm families, was $14,600.[29] Jacobson and Paarlberg derive a net worth estimate for nonfarm families by taking into account the influence of average farm-family net worth upon the total for the country and correcting for it. The estimated net worth for the average nonfarm family is $11,581. Net worth of nonfarm families is only 22 per cent as large as that of farm families.

As with income, it is possible to compare farmers with other occupational groups. These comparisons are not as accurate nor as easy to make as income comparisons, however, because of the lack of information available showing the net worths of nonfarm families. Table 6 shows a compari-

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[28] Agricultural Statistics 1965 (Washington, D. C.: U. S. Government Printing Office, 1965), p. 439.

[29] George Katona, C. A. Lininger, and R. F. Kosobud, 1962 Survey of Consumer Finances (Monograph 32, Survey Research Center; Ann Arbor: University of Michigan, 1963), p. 128.

[30] See appendix.

son of farm operators with certain other occupational groups for 1950. The comparisons are for total assets and not assets less liabilities as would be the case for net worth. However, it can probably be assumed that the relative positions of the various groups would be about the same in either case.

TABLE 6

DISTRIBUTION OF SPENDING UNITS BY TOTAL ASSETS WITHIN OCCUPATIONAL GROUPS, 1950

Occupational Group	(Total Assets) All Cases	Zero	$100 to 500	$500 to 1,000	$1,000 to 2,000	$2,000 to 5,000	$5,000 to 10,000	Over $10,000
					Percent			
Professional and semi-professional	100	1	4	4	11	21	17	42
Managerial	100	a	4	1	3	14	19	59
Self-employed	100	1	a	1	3	9	13	73
Clerical and sales	100	7	16	8	9	18	17	25
Skilled and semi-skilled	100	5	11	10	12	19	20	24
Unskilled and service	100	13	18	11	14	18	13	13
Farm operator	100	1	4	4	6	14	19	52
Retired	100	16	5	4	2	7	14	52
All other	100	16	15	9	11	12	19	18
All spending units	100	7	10	8	10	15	17	33

[a]No case reported or less than 0.5 per cent

Source: Robert J. Lampman, The Share of Top Wealth-Holders in National Wealth, 1922-56, Table 62, a study by the National Bureau of Economic Research, Princeton University Press, 1962.

It can be seen that not as many farm operators have total assets of more than $10,000 as do the managerial or self-employed groups. Retired persons have the same per cent of people with assets greater than $10,000 as do farmers. Farmers have a greater percentage with assets exceeding $10,000 than do all other spending units combined.

Table 7 shows a comparative balance sheet for United States agriculture for the years 1960 through 1965. Subtracting total assets from liabilities gives the net worth of agriculture. To determine net worth per farm, the net worth figure for each year has been divided by the total number of farms in the country. It should be kept in mind that these net worth figures include both commercial and noncommercial farms, which indicates that many commercial farms would have net worths much greater than the national average. Figures showing the net worth, including all assets and liabilities, of commercial farms are unavailable.

Examination of Table 7 will show that net worth per farm has increased considerably over a period of only five years. Part of this is due to a declining number of farms. There were 14.5 per cent fewer farms on January 1, 1965, than on the same date of 1960. Another part of the increase is due to a 12 per cent increase in total net worth from 1960 to 1965.

Information setting a specific figure for the net worth of Kansas farmers is not available from either the State Board of Agriculture or the United States Department of Agriculture. It was thought that it would be of interest to compute the net worth figure for the state. Some data needed for determining the net worth of Kansas farms are available only in aggregate for the United States while other components are available for each state. By combining those figures that are available for the state and making estimates for figures that are not available, the net worth of Kansas farms has been obtained and is shown in Table 8.[31]

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[31] See appendix for details on how computations were made.

TABLE 7

NET WORTH OF U. S. FARMS, IN BILLIONS OF DOLLARS, JANUARY 1, 1960-1966

Item	1960	1961	1962	1963	1964	1965	1966[c]
ASSETS[a]							
Real estate	129.9	131.4	137.4	142.8	150.7	159.4	170.0
Livestock	15.6	15.5	16.4	17.2	15.7	14.4)	
Machinery	22.3	22.0	22.5	23.3	24.1	25.2)	
Stored crops	7.8	8.0	8.7	9.2	9.8	8.9)	61.4
Household furnishings	9.6	8.9	9.1	8.7	8.8	8.8)	
Deposits and currency	9.2	8.7	8.8	9.2	9.2	9.6)	
U. S. savings bonds	4.7	4.6	4.5	4.4	4.2	4.2)	21.8
Investments in co-ops	4.8	5.2	5.6	6.2	6.2	7.3)	
Total	203.9	204.3	213.0	221.0	228.7	237.8	
CLAIMS[a]							
Real estate debt	12.1	12.8	13.9	15.2	16.8	18.9	21.1
Non-real estate debt to CCC	1.2	1.4	1.9	2.1	1.9	1.5	1.7
Other reporters	6.7	7.0	7.5	8.5	9.5	10.0)	18.3
Nonreporting creditors[b]	4.9	5.0	5.4	6.0	6.7	7.1)	
Total liabilities	24.9	26.2	28.7	31.8	34.9	37.5	41.1
Net Worth	179.0	178.1	184.3	189.2	193.8	200.3	212.1
No. of farms (thousands)	3,949	3,811	3,688	3,573	3,472	3,375	3,281
Net worth per farm	$45,328	$46,733	$49.973	$52,953	$55,818	$59,348	$64,645

[a]Source: U. S. D. A., Agricultural Finance Review, Economic Research Service (Feb. 1966), p. 69

[b]Loans and credits extended by dealers, merchants, finance companies, individuals and others.

[c]Preliminary

TABLE 8

ESTIMATED NET WORTH OF KANSAS FARMS, JANUARY 1, 1960-1965
(in millions of dollars)

Item	1960	1961	1962	1963	1964	1965
ASSETS						
Farm assets[a]:						
Real Estate	5,057	5,083	5,310	5,546	5,691	6,093
Livestock	595	616	710	765	677	582
Machinery	935	942	998	1,030	1,081	1,109
Grains and hay stocks	263	341	323	235	220	201
Total	6,850	6,982	7,341	7,576	7,669	7,985
Estimated value of non-farm assets[b]	1,106	1,080	1,107	1,122	1,096	1,151
Total	7,956	8,062	8,448	8,698	8,765	9,136
CIAIMS[c]						
Farm mortgage debt	338	352	377	389	429	488
Non-real estate debt	416	511	533	577	582	550
Non-reporting creditors	182	202	208	225	241	242
Total	936	1,065	1,118	1,191	1,252	1,280
Net Worth - Non-farm assets included	7,020	6,997	7,330	7,507	7,513	7,856
No. of farms (thousands)	110	107	105	103	101	99
Net worth per farm	63,818	65,393	69,810	72,883	74,386	79,354

[a]Source: Records of Statistical Division, State Board of Ag., Topeka, Ks.

[b]Includes house furnishings, deposits and currency, investments in co-ops. Estimates for Kansas computed by determining ratio of nonfarm to farm assets for U.S. each year, then using this ratio to calculate state estimates.

[c]See appendix for detailed breakdown and explanation of procedure for determining liabilities.

For farmers, net worth figures often cited pertain only to assets used in the agricultural operation. The value of the farmer's house, his car, government securities, and other assets not used in the business are not included. This report examines net worth which includes all assets and liabilities of farm families.

Net worth amounts for Kansas farmers are considerably higher than the national average. Net worth, including all types of assets, was almost $70,000 in 1962 as compared to the national average of about $50,000. Net worth for the state's farmers has continued to rise and was $79,354 on January 1, 1965. This is a 24 per cent increase over 1960, about double the rate at which the national figure has grown. During the same period, there was a 10 per cent decrease in the number of farms.

One reason why net worth amounts in Kansas are greater is that the state has a much lower percentage of subsistance type farms than the nation as a whole. Another reason is that farms are larger and operations require more machinery. Department of Agriculture figures show that the average value of total capital on winter wheat farms in the United States on January 1, 1965, was $118,790. Many Kansas farms are included in this category. Other types of farm operations in other parts of the United States require considerably less capital investment. Georgia broiler farms, for example, had an average investment of only $18,940.[32]

Explanations for Large Net Worths

Jacobson and Paarlberg explain the farmers' high net worth

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[32] Farm Costs and Returns, op. cit., pp. 34 and 80.

accumulations as a result of their tendency to hold back large sums from gross income to spend on equipment and land. If they are considering the individual farmer, their contention is less important for explaining large net worth accumulations than some other reasons. Several economists believe that farmers' net worths are large mainly because of increases in the market values of assets. Hathaway has stated that he suspects the wide divergence between farm-nonfarm asset comparisons is due largely to capital gains in agriculture.[33]

Numerous studies have been made which attempt to assess the amount of capital gains which have occurred in agriculture. Boyne has found that farm operators as a group experienced gains in real wealth through changes in asset prices of 25 billion in 1960 dollars from 1940 to 1960.[34]

Grove has found that increasing capital values in farm assets due to price changes averaged nearly $1,000 per farm per year during the two decades from 1940 to 1960. This amounted to 43 per cent of total net income from farming operations during this period.[35] Hathaway, in another study of capital gains, obtained figures that do not deviate too much from those of Grove.[36] Table 9 shows the values calculated by both economists.

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[33]Hathaway, "Improving Income Comparisons," op. cit., pp. 369-370.

[34]David H. Boyne, "Changes in the Real Wealth Position of Owners of Agricultural Assets, 1940-60," (Unpublished Ph. D. Dissertation, University of Chicago, 1962).

[35]Ernest W. Grove, "Farm Capital Gains--A Supplement to Farm Income?" Agricultural Economics Research, U.S. Department of Agriculture, Agricultural Marketing Service, Vol. XII, No. 2 (April, 1960), pp. 37-38.

[36]Dale P. Hathaway, "Agriculture and the Business Cycle," Policy For Commercial Agriculture, Its Relation to Economic Growth and Stability, 85th Cong., 1st Sess., Joint Committee Print, November 22, 1957, pp. 51-56.

TABLE 9

ESTIMATES OF PER FARM CAPITAL GAINS, 1950-1964

Year	Hathaway Estimate	Grove Estimate	Hoover Estimate[a]	Ireland Estimate	Net Income Per Farm[b]
1950	$2,840	$2,850	$2,386	$3,010	$2,421
1951	2,443	2,220	1,981	2,045	2,946
1952	-1,082	-1,100	- 942	- 558	2,896
1953	-1,116	-1,250	- 940	- 622	2,626
1954	496	600	625	271	2,606
1955	556	400	149	731	2,463
1956	1,828	1,700	1,533	2,105	2,535
1957		1,900	1,636	1,464	2,590
1958		2,750	2,476	2,481	3,189
1959		875	220	928	2,795
1960				684	3,043
1961				1,574	3,389
1962				1,790	3,562
1963				2,043	3,671
1964				2,592	3,479
Average for years calculated	845	1,093	912	1,369	2,948

[a]Includes only three-fourths of real estate.

[b]From Table 1.

Table 9 also shows estimates made by Hoover who has studied changes in the value of assets due to price changes.[37] He calculates what he terms "real capital" or "purchasing power" gains in contrast to the "current" or "absolute dollar" measures used by Hathaway and Grove. The price index of "price paid by farmers for commodities used in family living" is used as a standard of purchasing power. Real capital gains are computed by multiplying the percentage change in the price index for a given period by the value of farm capital assumed to be held at the first

[37]Dale M. Hoover, "The Measurement and Importance of Real Capital Gains in Unived States Agriculture, 1940 Through 1959, Journal of Farm Economics, XLIV, No. 4 (November, 1962), pp. 929-940.

of that period. This quantity is then substracted from the change in the value of farm assets due to changing prices during the period. The final result is the estimate of real capital gains.

Hoover's calculations show that, on the average, real capital gains and losses were about 18 per cent as large as farm income for the twenty-year period 1940-1959. But since gains and losses offset each other to a considerable degree, real capital gains for the two sub-periods, each covering a decade, were found to be equal to or less than 10 per cent of the average annual income. This is far less than the 43 per cent reported by Grove or the 34 per cent implied by Hathaway's figures for 1940 through 1956.[38]

Estimates of capital gains in agriculture for the years 1950 through 1964 have been made by the writer and are included in Table 9. The method used in obtaining these estimates is explained in the appendix. It was thought that this method was not much different from that used by Grove[39], but the figures in these two columns vary substantially. In any case, all estimates show that capital gains in agriculture have been considerable. Table 9 also compares per farm capital gains or losses with the net income per farm for each year from 1950 through 1964. Increasing capital values in farm assets due to price changes averaged $1,369 per farm per year during the last 15 years. The annual average of farm operators' net income per farm was $2,948. Capital gains, both realized and

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[38] Ibid., p. 939.

[39] Part of this difference is due to the fact that the Department of Agriculture has revised its figures since Grove's study was made.

unrealized, therefore, have averaged about 50 per cent of the total net income from farming operations.

Farm assets increased in value due to price changes in 13 of the last 15 years, with declines in 1952 and 1953. Capital gains were especially high during 1950 and 1951, the first two years of the Korean conflict. The two years of capital losses occurred after and at the close of the conflict. Capital gains were very high in 1958 mainly because of higher real estate values. The year 1964 also is shown to be one of large capital gains.

It is worth noting that the farm debt has no place in capital gains calculations. An increase in farm debt is an offset to saving or investment, not to higher land and other asset values.[40]

If Grove and Hathaway's figures are accurate, Jacobson and Paarlberg are probably overestimating farmers' tendency to invest, thus increasing their net worth. The individual farmer has watched his assets increase in value not only because of his investment but also because of increases in the price of capital assets.

If agriculture is considered as an aggregate of all farmers, however, Jacobson and Paarlberg may be close to the truth. Prices probably are rising mainly because farmers as a group are bidding them up. They force prices up because of their strong propensity to invest in land and equipment. There is, of course, also a good deal of pressure on prices coming from the nonfarm sector of the economy. Industry, the government and urban people are buying land, and industry competes in the market for capital equipment.

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[40]Grove, "Farm Capital Gains," op. cit., p. 41.

Capital gains in agriculture have been great over the past 25 years. The most important reason is because of increasing land prices, which have been explained in different ways. Jacobson and Paarlberg apparently believe that government support programs have contributed a great deal to the problem.

> It is clear that the efforts to lift the incomes of farm people in the direction of parity have been blunted by their propensity to convert this improved financial competence into added net worth. Rising land values are the major manifestation of this phenomenon.[41]

Whether the fault is with the support programs is debatable. One economist has stated, "The price-support and related programs have focused on land and on output; it is probable that their chief effect has been to bolster farmland values and maintain or increase land rents."[42] Fuller has considered the question at greater length. He points out that production allotments and marketing quotas generally have their eligibility in land rather than in people and program benefits thus tend to flow into the hands of land owners through capitalization rather than going into land returns. Land values doubled between 1950 and 1965 but during this time aggregate farm income did not rise. Yet during the period 1950 to 1962, as fewer recepients realized a fairly stable aggregate of net income, there was the opportunity for a significant rise in labor incomes. However, this rise was not experienced because the markets for land and labor operated such as to award the increment of income mainly to land

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[41]Jacobson and Paarlberg, op. cit., p. 127.

[42]Marion Clawson, "Aging Farmers and Agricultural Policy," Journal of Farm Economics, XLV, No. 1 (February, 1963), p. 13.

owners.[43]

Schmid puts it in this manner:

> Any increased residual stream, whether originating in or sustained by subsidies, increased demands, or new and more productive inputs, will be capitalized into the price of the fixed factor which controls access to the income stream whether the 'factor' be land, a marketing certificate, or a franchise.[44]

Wilcox takes issue with these conclusions, however, and cites figures which show that only about 2 per cent of the farm land in the United States has changed hands each year by voluntary sales and only about 1.1 per cent has been purchased by farmers for their own operation. When this 1.1 per cent rate is applied to the 10 year period 1953-1962, it is seen that only 10 to 15 per cent of the farmland operated by owners in 1962 had been purchased after 1953. Taking the cumulative aspects of these transfers into account, Wilcox estimated that no more than 5 to 10 per cent of the aggregate program benefits for the ten year period has been purchased at higher prices resulting from program benefits. Thus, for example, on land purchased by new owners in the ninth year of the period, 90 per cent of the increased income for the ten year period was received by the original owners. Wilcox contends that although land prices have increased each year since 1954, many factors other that the benefits of farm programs were responsible for the increase.

A large portion of farm land is rented on a crop-share basis. Changes in land value might be expected to cause the landlord to raise the rental price but Wilcox finds that rental terms and tenant's benefits

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[44] A. Allan Schmid, "Capitalization of Farm Program Benefits: Further Comment," Journal of Farm Economics, XLVI, No. 3 (August, 1964), p. 687.

have generally remained unchanged from years before government support programs.[45] There are certainly other reasons why land prices have increased. Cochrane puts the blame on technology:

> The greater return to all farmers from the technological advance will be taken into account in their thinking and acting--it will be capitalized into the value of the fixed assets of their farms, namely, real estate. Land values will rise to reflect the income gain from the technological advance; thus the gain from a technological advance will be converted into higher land values as farmers and nonfarmers compete for land in which to employ that technological advance.[46]

This argument may be unresolvable. A probable conclusion is that while farm support programs contributed to the great increase in land values in the last 25 years, it is impossible to say just how much of the increase they caused. Wilcox's findings that rental terms and tenant's benefits have remained generally unchanged while land values have gone up seems to be significant. However, the tenant's expenses have gone up considerably, too. It is possible that rental terms would have become even more favorable for the tenant had not land values increased to offset the increased cost of tenant-purchased inputs.

The assumption that farmers invest at a considerably greater rate than nonfarm families has been used by several writers. However, no study has actually shown that this is true. Hathaway is unaware of any such studies and stated:

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[45] Walter W. Wilcox, "How Much of Farm Program Benefits Are Lost to Farm Operators Via Capitalization into Land Values?" Journal of Farm Economics, XLVI, No. 1 (February, 1964), pp. 246-247.

[46] Cochrane, op. cit., p. 65.

> Another explanation of the asset accumulation by farmers, which appears extraordinary in light of their chronically low incomes, might be an extremely high saving rate for this occupational group. To my knowledge, no conclusive evidence is available on this point.[47]

Literature on the subject seems to assume that the savings rate is high among farm people. Studies with results like those of Tostlebe's perhaps have prompted such assumptions. Tostlebe has studied capital formation in agriculture since 1870 and has found that "To a remarkable degree, farmers have financed the increase in farm capital with their own incomes and savings."[48] These findings do not prove that farmers have saved amounts relatively greater than nonfarmers but they do give that impression, and the impression is probably an accurate one.

Several reasons why farmers invest so much in productive assets have been presented. Fuller maintains that it is due to capital gains consciousness:

> The American farmer has a long history of property and capital-gains consciousness. Alexis de Tocqueville noted in the 1830's: 'It seldom happens that an American farmer settles for good upon the land which he occupies: especially in the districts of the far West he brings land into tillage in order to sell it again and not to farm it: he builds a farm house on the speculation that, as the state of the country will soon be changed by the increase of population, a good price will be gotten for it. . .'
>
> Richard Hofstadter, 120 years later, concluded that the conflict between the agrarian myth and an environment of commercial realities was one which cherished not the land but land values.[49]

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[47]Hathaway, "Improving Income Comparisons," op. cit., p. 369.

[48]Alvin S. Tostlebe, Capital in Agriculture: Its Formation and Financing Since 1870 (New York: The National Bureau of Economic Research, 1957), p. 19.

[49]Fuller, op. cit., p. 1249.

Other writers believe that changes in investment are associated with changes in farm income. "...it appears that in general the hypothesia is substantiated that farmer's expenditures for capital goods items are associated with changes in farm income."[50] Investment increaaes when farm incomes are high.

> If dollars spent for durable capital inputs often lead to overspending on other inputs and therefore are not fully recovered, why do farmers spend so generoualy for them? One reason lies in the well-known phenomenon of cyclicality. Much overspending for durables takes place during the boom period of a cycle--or during any temporary good times. And to the extent that such new spending comes in waves, the fact that each farmer sees his output as not affecting price amplifiea the spending...[51]

If it is correct to assume that farmers have a high propensity to invest in further productive assets, what is the effect of thia tendency? Jacobson and Paarlberg conclude that it has prevented farmers from earning higher incomes. Again, it is not clear whether individual farmers are being considered or whether this ia for farmers as an aggregate. Therefore, it is necessary to consider this contention from the point of view both of individual farmers and of the agricultural industry as a whole.

Do individual farmers tend to invest too much in their farming operations? A wealth of information indicates they do not and that actually more investment is needed. Johnson and Bachman have found that total farm output increased 24 per cent from 1940 to 1951. This greater output waa produced on only 4 per cent more cropland and with 23 per cent fewer

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[50]Hathaway, "Agriculture and the Business Cycle," op. cit., p. 67.

[51]Harold F. Breimyer, "Why Do Farmers Overinvest?," Journal of Farm Economica, XLVIII, No. 2 (May, 1966), p. 477.

hour of work but with 192 per cent larger investment in land and other capital goods.[52] There is sufficient evidence to show that the trend toward more and more capital on individual farms is continuing. Kaldor states, "Unquestionably, capitalization per farm needs to be greatly increased."[53]

Table 10 summarizes the conclusions of various studies dealing with increased capital investments on different types of farms. These studies show that incomes on all farms studied can be improved by increasing capital investment and operating expenses.

It is not so certain what the capital requirements for agriculture as a whole are. As people move out of agriculture, the farms they leave are usually consolidated with other operations. Consolidated farms typically are operated by the remaining farmers with only a slight increase in labor and capital of their own, the total employed on the combined units being less than for the separate units. The remaining farmers do not duplicate the machine units of those who relinquish the land. Agriculture as a whole may require less capital than is now employed, but this is still a disputed question.

It can be concluded, therefore, that if Jacobson and Paarlberg were referring to individual farmers, they were overstating the case, i.e., that high propensities to invest in farm assets blunt efforts to raise incomes. Most farms, as has been pointed out, can use further inputs of

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[52]Sherman E. Johnson and Kenneth L. Bachman, "Recent Changes in Resource Use and Farm Income," Problems and Policies of American Agriculture (Ames: Iowa State University Press, 1960), p. 13.

[53]Don Kaldor, "Adjusting Resource Organization and Allocation," Problems and Policies of American Agriculture (Ames: Iowa State University Press, 1959), p. 329.

TABLE 10. RETURNS PER DOLIAR OF ADDED EXPENSES--A SUMMARY OF STUDIES BUDGETING ALTERNATIVE SYSTEMS OF ORGANIZING FARM PRODUCTION

Item	S. Car. dairy	Ind. dairy-hog	Ohio dairy-hog	Mich. dairy	Miss. dairy-poultry	Ind. feeder cattle-hogs	Iowa hogs-cash-grain	Ill. beef-grain
Size (acres)								
Present farm	132	160	180	160	160	168	160	185
Alternative farm	132	160	180	160	160	168	160	185
Increase	0	0	0	0	0	0	0	0
Investment($)								
Present farm	12,658	38,641	20,000	33,678	3,900	79,460	40,257	25,000
Alternative farm	27,116	55,299	31,350	40,195	9,850	89,706	37,671	35,000
Increase	14,458	16,658	11,350	6,516	5,950	10,246	-2,586	10,000
% change	⁄114	⁄43	⁄57	⁄19	⁄152	⁄13	-6	⁄40
Total Returns ($)								
Present farm	3,379	9,800	3,706	10,180	1,190	18,205	9,981	3,100
Alternative farm	15,247	15,651	8,194	14,187	8,090	28,347	14,079	14,550
Increase	11,868	5,851	4,488	4,007	6,900	10,142	4,098	11,450
% change	⁄351	⁄60	⁄121	⁄39	⁄579	⁄56	⁄41	⁄369
Total expenses ($)								
Present farm	3,938	8,956	3,595	9,368	670	15,806	6,319	3,563
Alternative farm	8,295	12,515	5,825	11,259	5,275	22,010	8,295	9,853
Increase	4,363	3,559	2,230	1,891	4,605	6,204	1,976	6,290
Family labor income ($)								
Present farm	-559	844	111	812	520	2,399	3,662	-463
Alternative farm	6,983	3,136	2,369	2,928	2,815	6,337	5,784	4,697
Increase	7,542	2,292	2,258	2,116	2,295	3,938	2,122	5,160

TABLE 10 - Continued

Item	S. Car. dairy	Ind. dairy-hog	Ohio dairy-hog	Mich. dairy	Miss. dairy-poultry	Ind. feeder cattle-hogs	Iowa hogs-cash-grain	Ill. beef-grain
Returns per dollar of added expense ($)	2.72	1.64	1.99	2.12	1.50	1.63	2.07	1.82
Approximate price ratio	90	90	90	84	85	90	88	85

Source: Sherman E. Johnson and Kenneth L. Bachman, "Recent Changes in Resource Use and Farm Income," Problems and Policies of American Agriculture (Ames: Iowa State University Press, 1960), p. 16.

capital to raise incomes. If they were referring to farmers as a group, however, they are correct. There may be sufficient or even too much capital invested in agriculture. Certainly the effect of many farmers buying capital equipment has caused prices for this equipment to rise. But it more capital is needed in agriculture, the buying will be justified even if it does cause prices to rise.

CHAPTER III

INCOME AND NET WORTH CONSIDERED TOGETHER

Economic theory holds that the economic well-being of an individual is a function of two measures, income and net worth.[54] In attempting to determine the economic condition of farmers, it would be advantageous if there were some rule of thumb for making comparisons between two people having different incomes and net worth values. No such rule exists but Grove and others have contended that gains in asset values should be considered as a supplement to income. Grove goes so far as to conclude that, "...for any farm operator, the whole of his asseta might well be added to his current income to indicate his purchasing power or 'control' over commodities and services."[55]

It was noted earlier that capital gains in agriculture have been considerable. Capital gains, however, have traditionally been excluded from measures of income. This may be partly because of lack of information, but it is mainly due to keeping theoretical considerations applicable at the national level of income measurement.[56]

National income is the measure of national output of commodities and services. There should be no double counting. Commodities have to be measured in terms of market values and dollar totals. No amount should be counted as income that does not have its counterpart in the production

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[54]Marshall, op. cit., p. 77.

[55]Grove, op. cit., p. 40.

[56]This discussion on considering capital gains as a supplement to income is taken largely from the article by Grove, Ibid., pp. 37-43.

flow of commodities or services. Changes in value of existing goods are not changes in national income so capital gains and losses, realized or not, are excluded. Changes in asset values are important to the owners of capital goods but have no bearing on the total amount of commodities and services available to the nation.

This same viewpoint is usually accepted in other types of income measurement. Estimates of farm operators' income for example have always excluded the effects of price changes on the value of crop and livestock inventories, one form of unrealized capital gain or loss. In the same manner, estimates of personal income seldom include any allowance for capital gains or losses.[57]

Recently there has been some shift of opinion on the question of income measurements. Cochrane has stated:

> It is true that a person cannot buy groceries with capital gains, or make monthly payments on a new tractor. But it is also true that when capital gains are realized through the sale of the asset such gains are better than earned income, because they are taxed at a much lower rate. Further, as assets appreciate in value, the credit base of a businessman is increased--very important in the modern business world. Farmers have been the beneficiaries of a very large gain over the past twenty-five years, call it what you will.[58]

Hoover and Hathaway have also contended that capital gains should be considered as a supplement to incomes. However, Hoover suggests caution in interpreting capital gains analyses.

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[57]Lawrence H. Sellizer makes a convincing argument of why capital gains are different from income in his book, The Nature and Tax Treatment of Capital Gains and Losses (New York: National Bureau of Economic Research, Inc., 1951), pp. 47-49.

[58]Cochrane, op. cit., p. 122.

> ...the fact that capital gains in one period may become income in future time periods should cause some restraints in interpreting capital gains analyses. The exact proportion of capital gains in one period which are represented by income in future periods cannot be known because of the many forces which may give rise to capital gains.[59]

The change in view reflected by the above statements has probably been accelerated by the increasing prevalence of stock options for corporate executives and other tax devices whereby compensation may be viewed as capital gains instead of current income.

Since income obviously will be increased by a realized capital gain and decreased by a realized capital loss, there is good reason to include these gains and losses in income estimates. Is it possible that this same line of reasoning should apply to a group of operators as large as all farm families? Grove believes that it should.

Probably it is not the size of the group so much as its degree of self-containment. If a family consumed only what it has produced itself, then capital gains and losses would be of no significance. For individuals in an exchange economy, however, a realized capital gain is a clear addition to purchasing power.

The country as a whole is so nearly self-contained that capital gains and losses may be safely ignored, but farmers as a group are not self-contained. Probably the more appropriate question is whether capital gains and losses can be ignored for farmers and nonfarmers alike on the assumption that they are about equal on the average. Aggragately, nonfarm capital gains have certainly been much larger than farm capital gains in the last 15 years but farm gains are much more widely distributed

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[59] Hoover, op. cit., p. 940.

among farmers than are nonfarm capital gains among nonfarmers. This fact probably justifies the consideration of capital gains as a supplement to incomes.

CHAPTER IV

CONCLUSION

Throughout this report an attempt has been made to study the economic condition of farm families. The study tried to answer some questions raised by Jacobson and Paarlberg in an article which is also concerned with the economic position of farmers.

One of the conclusions reached in this report is that it is not meaningful to make comparisons of all farmers versus all nonfarmers. In so doing, one is attempting to lump together all farmers who have little in common except that they sell more than $50 a year of farm products. Various ways of looking at the earnings of farm families are considered. No one method is deemed to be the best. Even when only commercial farms as a group were considered, it was found that incomes between various types of farms vary considerably. Nor is it very meaningful to consider as one group all persons who don't farm. This classification includes an even more heterogeneous group of individuals.

The emphasis of the Jacobson and Paarlberg article is on parity--both income parity and net worth parity and their implied opinion is that neither is obtainable. In order to test this conclusion, various income and net worth comparisons between the agricultural and nonagricultural segments of the economy were made in this respect. While Jacobson and Paarlberg's theses were not disproved, it does appear that their conclusions are questionable. Income comparisons, for example, sometimes showed the agricultural group to be in a better position than nonfarmers. In net worth comparisons, it was shown that, while in general the authors

are correct, some comparisons show certain occupational groups to have a superior net worth position.

Is income parity an inappropriate goal for farm policy, as the authors suggest? The conclusion that this report reaches is that at least for some groups of farm operators, parity of incomes is not only an appropriate goal, but is also one that can be attained and in some cases is one that has already been achieved.

APPENDIX

I. Computation of Estimated Net Worth of Nonfarm Families.

Department of Agriculture figures show that the average per-family net worth of all farm people in 1962 was $51,600. The Survey Research Center estimated that in 1962 the average per-family net worth of the United States population including both farm and nonfarm families was $14,600. Figuring that there were 3.5 million farm families and 42.9 million nonfarm families:

$$\begin{array}{rrl} & 46.4 \times \$14{,}600 & = \$677{,}440 \\ - & 3.5 \times \$51{,}600 & = \underline{\ 180{,}600} \\ & \underline{42.9} & \underline{\$496{,}840} \end{array}$$

$$\$496{,}840 \div 42.9 = \$11{,}581$$

II. Computation of Estimated Net Worth for Kansas Farmers.

Farm assets values for Kansas are available from the State Board of Agriculture. Values of nonfarm assets, which include household furnishings and equipment, deposits and currency, United States savings bonds, and investment in cooperatives, are not available for the state. An estimate was computed by determining what per cent nonfarm assets were of farm assets for the United States for each year and using this percentage to calculate state estimates. For example, in 1965 for the United States, nonfarm assets were 14.4 per cent of farm assets. In Kansas for the same year farm assets were $7,985 million; 14.4 per cent of this is $1,151, which is the estimated value of nonfarm assets for 1965 in Kansas.

The Agricultural Finance Review gives a greakdown by states of all farmers' liabilities except outstanding Commodity Credit Corporation

loans and nonreporting creditors. Figures for Commodity Credit Corporation loans outstanding were obtained from the Financial Analysis Branch, Fiscal Division, of the Agricultural Stabilization and Conservation Service, Washington, D. C.

Another estimate had to be made for the debt owed by farmers to nonreporting creditors. The same method was used for this as was used in estimating the value of nonfarm assets. The estimate was made by computing the per cent of the debt held by nonreporting creditors nationwide to the total national debt for farmers for each year and using this percentage to determine a figure for the state. Table 11 shows the liabilities of Kansas farmers by various categories.

III. Computation of Estimates of Capital Gains in Agriculture, 1950-64.

Increases in the value of assets are due to larger net investment and to changes in asset prices. The agriculture balance sheet shows the value of assets as of January 1 for each year (Column 8, Table 12). The difference between asset values for successive years (Column 9) is the gross change in asset values during the year. The gross change is the sum of the change due to net investment plus those due to a price difference (capital gains). The annual net investment figure has been subtracted from the gross change each year (Column 9 minus Column 10) and the difference is the capital gains for the year (Column 11).

The change in asset values due to net investment (Column 10) is the sum of net investment in six different types of assets. Column 1 through 6 in Table 12 show the net investment in each of these assets. Information showing the net investment in real estate as well as in

TABLE 11

TOTAL LIABILITIES OF KANSAS FARMERS 1960-1965[a]

	1960	1961	1962	1963	1964	1965
Farm mortgage debt	$338,159	$351,611	$377,168	$388,652	$428,792	$487,557
Non-real estate debt						
All operating banks including loans guaranteed by C.C.C.	304,116	418,317	420,678	459,638	438,704	438,595
Agencies supervised by Farm Credit Administration:						
Production credit associations including loans guaranteed by C.C.C.	39,735	37,124	42,479	47,062	51,178	46,689
Federal intermediate credit banks	766	1,199	1,413	1,592	1,240	1,466
Farmers Home Administration						
Operating loans	9,566	9,627	10,368	10,112	9,994	10,970
Emergency loans	2,717	1,850	1,392	1,418	884	902
Emergency crop and feed loans	185	148	113	95	80	71
C.C.C. loans outstanding[b]	58,881	42,911	56,830	57,044	79,975	50,880
Nonreporting creditors[c]	181,744	201,892	208,491	224,925	240,582	241,651
Total	935,869	1,064,679	1,118,932	1,190,268	1,251,429	1,278,781

[a]Calculated from: Agricultural Finance Review, U. S. Dept. of Agriculture, Economic Research Service, various years.

[b]Years 1960 through 1963 are estimates assuming that the loans held by Kansas farmers amount to 6 per cent of the national debt. Years 1964 and 1965 are from C. C. C. records supplied by the Financial Analysis Branch, Fiscal Division, Agricultural Stabilization and Conservation Service, U. S. D. A., Washington, D C.

[c]Estimate made by computing the per cent of the debt held by nonreporting creditors nation-wide to the total national debt for farmers for each year and using this percentage to arrive at a figure for the state.

TABLE 12

GROSS AND NET CHANGE IN VALUE OF FARM ASSETS, IN BILLIONS OF DOLLARS, 1950-64

Year	NET INVESTMENT							Value all assets Jan. 1[h]	Gross change during year[i]	Change due to investment[j]	Change due to price change[k]
	Real Estate[a]	Livestock[c]	Machinery & motor vehicles[d]	Crops stored on & off farm[e]	Household furnishings[f]	Financial assets[g]	Total				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1950	.5	1.3	1.3	-1.4	.1	.2	2.0	132.5	19.0	2.0	17.0
1951	.4	1.6	1.1	.3	.5	.5	4.4	151.5	15.5	4.4	11.1
1952	.5	-1.7	.5	1.0	-.2	.1	.2	167.0	-2.7	.2	-2.9
1953	.4	-2.3	.7	.9	b	.3	b	164.3	-3.1	b	-3.1
1954	.3	.9	.2	.4	.3	.5	2.6	161.2	3.9	2.6	1.3
1955	.3	b	.1	-.6	.8	.6	1.2	165.1	4.6	1.2	3.4
1956	.3	b	-.3	-.5	-.7	b	-1.2	169.7	8.3	-1.2	9.5
1957	.3	1.3	-.3	b	-.1	.4	1.6	178.0	8.0	1.6	6.4
1958	.2	3.2	.2	1.7	b	1.0	6.3	186.0	16.8	6.3	10.5
1959	.2	-.1	.1	-1.8	-.3	-.8	-2.7	202.8	1.1	-2.7	3.8
1960	.2	-1.5	-.4	.2	-.6	-.2	-2.3	203.9	.4	-2.3	2.7
1961	.2	1.4	-.1	.5	.3	.4	2.7	204.3	8.7	2.7	6.0
1962	.1	.5	b	.3	-.4	.9	1.4	213.0	8.0	1.4	6.6
1963	b	.1	.3	.1	.1	-.2	.4	221.0	7.7	.4	7.3
1964	b	-1.3	.4	-.6	.1	1.5	.1	228.7	9.1	.1	9.0

[a]Source: U. S. D. A., The Farm Cost Situation, E. R. S., FCS-37, November, 1965, p. 14. Net investment per farm multiplied by number of farms in U. S.

[b]Less than .1 billion dollars.

[c]From Table 13, column 7.

TABLE 12 - Continued

[d]Source: Farm Cost Situation, Nov., 1965, p. 12.

[e]From Table 14, column 7.

[f]From Table 15, column 5.

[g]Source: U. S. Dept. of Agriculture, Agricultural Finance Review, Economic Research Service, Farm Production Economics Division, February, 1966, pp. 78-79. Differences in values for successive years.

[h]Source: Agricultural Finance Review, pp. 78-79.

[i]Differences between successive numbers in Column 8.

[j]From Column 7.

[k]Column 9 minus Column 10.

machinery and motor vehicles is available from government publications. These figures are given in Columns 1 and 5. The financial assets held by farmers are not considered to increase greatly in value due to capital gains, so net investment in them is the same as the change in their total amount each year (Column 6).

Table 13 shows how net investment in livestock has been calculated. The value of livestock on January 1 for each year is shown in the first column. The change in the value of livestock during the year (Column 2) is the difference in the successive totals of Column 1. To determine how much of this change was due to change in prices, price indexes were consulted. Column 3 shows the price index number for December of each year. Column 4 shows the change in the price index number from December of one year to December of the next year. The change in the price level during a year (Column 4) divided by the index number (Column 3) at the start of the year gives the percentage of change in price level during the year (Column 5). The change in asset values due to changes in the price level (Column 6) is computed by multiplying the value of assets on hand on January 1 by the percentage change in the price level. The change in asset values due to price changes subtracted from the gross change in asset values during the year (Column 2 minus Column 6) gives the change due to net investment. The net investment figure for each year is transferred to Column 2 in Table 12. The same procedure was followed for computing net investment in crops (Table 14) and essentially the same method was followed for household furnishings and equipment in Table 15.

TABLE 13

CHANGES IN VALUE OF LIVESTOCK

Year	Value on Jan. 1[a] (billions)	Change during year[b] (billions)	Price index no. for December[c]	Change in price index during year	Percentage change in price	Change due to price change	Change due to net investment
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1950	12.9	4.2	313	57	22.3	2.9	1.3
1951	17.1	2.4	328	15	4.8	.8	1.6
1952	19.5	-4.7	277	-51	-15.5	-3.0	-1.7
1953	14.8	-3.1	263	-14	- 5.1	- .8	-2.3
1954	11.7	- .5	231	-32	-12.2	-1.4	.9
1955	11.2	- .6	218	-13	- 5.6	- .6	h
1956	10.6	.4	227	9	4.1	.4	h
1957	11.0	2.9	259	32	14.1	1.6	1.3
1958	13.9	3.8	271	12	4.6	.6	3.2
1959	17.7	-2.1	241	-30	-11.1	-2.0	- .1
1960	15.6	- .1	263	22	9.1	1.4	-1.5
1961	15.5	.9	254	- 9	- 3.4	- .5	1.4
1962	16.4	.8	259	5	2.0	.3	.5
1963	17.2	-1.5	235	-24	- 9.3	-1.6	.1
1964	15.7	-1.3	234	- 1	f	h	-1.3
1965	14.4		290	56	23.9	3.4	

[a]Agricultural Finance Review, U. S. D. A., Farm Production Economics Division, February, 1966, pp. 78-79.

[b]Difference between successive totals in Column 1.

TABLE 13 - Continued

[c]Source: Agricultural Prices, 1965 Annual Summary, U. S. Dept. of Agriculture, Crop Reporting Board, Statistical Reporting Service, June, 1966, p. 7.

[d]Difference between successive numbers in Column 3.

[e]Current figure in Column 4 divided by previous year's figure in Column 3.

[f]Less than 0.1 per cent.

[g]Column 5 times Column 1; both figures for the same year.

[h]Less than 0.1 billion dollars.

[i]Column 2 minus Column 6.

TABLE 14

CHANGES IN VALUE OF CROPS STORED ON AND OFF FARMS

Year	Value on Jan. 1[a] (billions) (1)	Change during year[b] (billions) (2)	Price index no. for Dec.[d] (3)	Change in price index during year[e] (4)	Percentage change in price[f] (5)	Change due to price change[h] (billions) (6)	Change due to investment (billions) (7)
1949	8.6		215				
1950	7.6	.3	262	47	21.9	1.7	-1.4
1951	7.9	.9	281	19	7.3	.6	.3
1952	8.8	.2	255	-26	- 9.3	- .8	1.0
1953	9.0	.2	235	-20	- 7.8	- .7	.9
1954	9.2	.4	237	2	.1	c	.4
1955	9.6	-1.3	219	-18	- 7.6	- .7	- .6
1956	8.3	c	232	13	5.9	.5	- .5
1957	8.3	- .7	212	-20	- 8.6	- .7	c
1958	7.6	1.7	213	1	g	c	1.7
1959	9.3	-1.5	219	6	2.8	.3	--1.8
1960	7.8	.2	218	- 1	g	c	.2
1961	8.0	.7	224	6	2.8	.2	.5
1962	8.7	.5	230	6	2.7	.2	.3
1963	9.2	.6	243	13	5.7	.5	.1
1964	9.8	- .9	236	- 7	- 2.9	- .3	- .6
1965	8.9		224	-12	- 5.1	- .5	

[a]Source: Agricultural Finance Review, U. S. Dept. of Agriculture, Economics Research Service, Farm Production Economics Division, February, 1966, pp. 78-79.

[b]Difference between successive totals in Column 1.

[c]Less than 0.1 billion dollars.

[d]Source: U. S. Dept. of Agriculture, Agricultural Prices, 1965 Annual Summary, Crop Reporting Board, Statistical Reporting Service, June, 1966, p. 7.

[e]Difference between successive numbers in Column 3.

[f]Current figure in Column 4 divided by previous year's figure in Column 3.

[g]Less than 0.1 per cent.

[h]Column 5 times Column 1; both figures for same year.

TABLE 15

CHANGES IN VALUE OF HOUSEHOLD FURNISHINGS AND EQUIPMENT

Year	Value on Jan. 1[a] (billions) (1)	Change during year[b] (billions) (2)	Percentage change in price during year[d] (3)	Change due to price change[e] (billions) (4)	Change due to investment (billions) (5)
1949	9.1				
1950	8.6	1.1	12.2	1.0	.0
1951	9.7	.6	.8	.1	.5
1952	10.3	- .4	- 2.3	- .2	-.2
1953	9.9	c	- .5	c	c
1954	9.9	.1	- 2.4	- .2	.3
1955	10.0	.5	- 2.5	- .3	.8
1956	10.5	- .5	2.0	.2	-.7
1957	10.0	- .1	.2	c	-.1
1958	9.9	- .1	- 1.1	- .1	c
1959	9.8	- .2	.8	.1	-.3
1960	9.6	- .7	- 1.0	- .1	-.6
1961	8.9	.2	- .6	- .1	.3
1962	9.1	- .4	- .2	c	-.4
1963	8.7	.1	.2	c	.1
1964	8.8	c	- .9	- .1	.1
1965	8.8				

[a]Source: U. S. Dept. of Agriculture, Agricultural Finance Review, Economic Research Service, Farm Production Economics Division, February, 1966, pp. 78-79.

[b]Difference between successive totals in Column 1.

[c]Less than 0.1 billion dollars.

[d]Source: U. S. Dept. of Labor, The Consumer Price Index, Bureau of Labor Statistics. January reports for 1951-66; household durables price index, 1960-66 and household furnishings price index, 1950-59.

[e]Column 5 times Column 1; both figures for the same year.

IV. Letter of Explanation of the Grove Method for Computing Capital Gains.

The following letter from the Economic Research Service explains the method used by Grove in determining estimates of capital gains.

UNITED STATES DEPARTMENT OF AGRICULTURE
ECONOMIC RESEARCH SERVICE

August 31, 1966

Mr. Robert E. Ireland, Research Assistant
Department of Economics, Waters Hall
Kansas State University
Manhattan, Kansas 66502

Dear Mr. Ireland:

The following paragraphs detail the procedures used in table 3 of the article "Farm Capital Gains--A Supplement to Farm Income?", by Ernest Grove in Agricultural Economics Research, April, 1960.

The columns on real estate and machinery and motor vehicles are based on estimates made in this division. They are essentially estimated annual gross capital expenditures less depreciation. Tables 18H and 19H of FIS-203 enclosed, will give you the overall and component parts of the farm capital expenditures sector.

The column on livestock reflects the net value of physical changes during the year in farm inventories of livestock. The changes in numbers during the year are valued at the simple average of values per head as of January 1 of the given year and January 1 of the following year.

The column on crops represents CCC loan transactions during the year plus our measure of the net value of the physical change during the year in farm inventories of crops. The loan transaction data are the difference between loans outstanding January 1 of the given year and January 1 of the following year. The net value of the physical change in farm held crop inventories reflects the change in individual crops valued at the weighted average price for all marketings during the year.

The column on household furnishings and equipment is based on annual data on expenditures and depreciation as estimated by the Consumer and Food Economics Research Division of the Agricultural Research Service.

The column on financial assets is based on the changes in deposits and currency, United States Savings Bonds, and investments in cooperatives.

I trust this will give you the general procedures used in the table. Please let me know if you need further amplification of the background of the data.

Sincerely yours,

Mardy Myers

Mardy Myers, Head
Farm Income Estimates Section
Economic and Statistical
Analysis Division

Enclosure

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THE ECONOMIC POSITION OF FARM FAMILIES IN KANSAS AND THE UNITED STATES

by

ROBERT ELLIS IRELAND

B. S., Kansas State University, 1964

AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Economics

KANSAS STATE UNIVERSITY

Manhattan, Kansas

1967

The February, 1966, issue of the Journal of Farm Economics contains a short article written by M. A. Jacobson and Don Paarlberg which considers the question of whether farm support programs are justified in attempting to establish a parity of income between farm and nonfarm income earners. Data are presented showing that the average farm family has a net worth considerably greater than the average nonfarm family, but that income comparisons strongly favor nonfarm people. Reasons why these two measures of economic well-being show a disparity are briefly discussed.

This report considers some of the questions, most of them to some length, raised by the article. It examines and supplements the data the authors have used. The main conclusion reached is that the economic position of farm families is not so poor in relationship to nonfarm families as is commonly supposed. A somewhat different picture of what farm incomes are is observed when the "noncommercial" farms (those selling less than $5,000 in farm products a year) and the "commercial" farms (those selling more than $5,000) are looked at separately. It is realized that problems of the noncommercial farms, which make up 55 per cent of all farms in the country, are part of the farm problem. However, it is thought that the income predicament of farms in the two classes represents a different type of problem and should be considered separately. The main interest of the report is the income and net worth position of the commercial farmers.

The tendency to compare farm incomes with the average for all nonfarm people is questioned. Reasons are given why a more logical comparison would be between farmers and members of another working class which has about the same level of skill and education.

In consideration of net worth, the value of assets for farmers and non-farmers is compared. It will be seen that the net worth holdings in the agricultural sector of the economy far exceed those of all other people. Reasons for the high net worth holdings of farms are examined and some of the implications involved are studied.

Finally, the over-all economic position of farmers is considered by examining both the annual incomes and the increases in net worth. Reasons are given as to why it is perhaps logical to consider capital gains from assets as an addition to annual incomes.