OASI DATA OF THE FARM LABOR FORCE

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Dale E. Hathaway

Dale E. Hathaway
Major professor

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OASI DATA OF THE FARM LABOR FORCE

By

Oscar Uel Blank

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ABSTRACT

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This study was an investigation of 1955 data of the United States Agricultural labor force that were newly generated from the program of Old Age and Survivor's Insurance. The first objective was to define the population included; farm entrepreneurs were the main focus, although hired farm workers also received treatment. An objective of equal importance was an examination of the basic characteristics and potential of these data that result from collection and handling procedures and from implicit definitions.

A special set of 33,469 punch cards was supplied to Michigan State University by the Social Security Administration for use in doing this research. These represented one percent of all with employment covered by the OASI program as farm entrepreneurs and/or farm wage workers. Numbers data of the 1954 Census of Agriculture and farm income estimates of the Agricultural Marketing Service were used as standards of comparison. Use was also made of data from the Current Population Survey of the Census Bureau and from the Internal Revenue Service in the development of various estimates.

There were only 39 percent as many OASI farm operators as the 4.8 million enumerated by the 1954 Census of Agriculture, but these

OASI operators accounted for an estimated 73 percent of the commercial agricultural production. Gross agricultural sales per OASI operator were estimated at $9,600 -- compared to $5,200 for Census operators. Net income from all sources was less strikingly different -- it was estimated at $3,110 and $2,890 respectively. An estimate of $15,064 million as the total net money income to the agricultural population was made using OASI data. This compares with the 1955 Agricultural Marketing Service estimate of $16,178 million. Some common statistical sources were utilized by both estimates but basic procedures differed.

The most unique feature of OASI data is that it is possible to trace the same individuals from year to year, thus operating as a continuous register. By contrast, all commonly used agricultural data series are cross-sectional with respect to individuals. A result is that many dynamic elements are not reflected in the data now in use. It was possible to make a test of this characteristic of OASI data because the cards used had information on covered employment for previous years. Among the results of this study of the time dimension of OASI data were the following tentative hypotheses: (1) OASI operators are less involved in off-farm jobs than farm operators are generally assumed to be, (2) OASI operators are less secure in nonfarm employment than the average nonfarm laborer, (3) opportunities in farm and nonfarm employment reflect in both present income and the employment pattern.

OASI farm operators are defined as largely comprising the decision-making system of commercial agriculture. The continuous register characteristic of OASI data is expected to make possible a decided advance in insights into the dynamics of the pattern and process by which change in this population comes about.

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CHAPTER I

INTRODUCTION

Old Age and Survivor's Insurance--A New Source of Farm Data

In 1955 farm entrepreneurs were included for the first time in the program of Old Age and Survivor's Insurance, hereafter referred to as OASI, which is operated by the United States Department of Health, Education, and Welfare. Hired farm workers, whether on wage or salary, had been included since 1951 although in a relatively limited manner. Some of these restrictions upon hired farm workers were reduced in 1955. This year was, then, the first in which the farm labor force was quantitatively represented in the OASI program. It ushered in a new potential source of data regarding farm workers.

United States agriculture is already acclaimed as the "best statisticed" in the world. The economist looking for data on farm population, the farm labor force and agricultural income will find what appears to be an embarrassment of riches. Numerous statistical series are published based upon the Population Census, the Census of Agriculture, compilations made from income tax reports to the Internal Revenue Service, the Current Population Survey, and the crop and livestock reporting system and special surveys of the Agricultural Marketing Service.

Why then consider another data series of farm population and income?

Grove answers this in a paper given at the Conference on Research in Income and Wealth in March, 1956 at Princeton, New Jersey: "My conclusion on farm income is that we are not yet out of the woods in determining for sure what its size distribution is or was at any one time, let alone determining what changes in the distribution may have taken place over time."[1] This was further amplified by Koffsky and Grove in a statement before the Subcommittee on Agricultural Policy of the Joint Economic Committee of Congress in 1957: "We have, however pieced together . . . a very preliminary and tentative set of data which roughly indicates the income levels and trends for the farm-operator families . . . . This points to the need for an expansion of our statistical program . . . ."[2]

These are only two examples of the problem familiar to all who look for anything more than superficial, gross data. The mirage of a plethora becomes in reality a famine. Ultimate purposes of the social sciences, prediction and direction, require an understanding of what is behind the aggregates--a delving into the why. Not only are statistics needed to give better resolution of the picture at a given time, but insights into the nature and process of change from one "snapshot" to the

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[1] E. W. Grove, "The Size Distribution of Farm Income," An Appraisal of the 1950 Census Income Data, Vol. XXIV, Studies in Income and Wealth, a report of the National Bureau of Economic Research (Princeton: Princeton University Press, 1958), pp. 307 ff.

[2] N. M. Koffsky, and E. W. Grove, "The Current Income Position of Commercial Farmers," Policy for Commercial Agriculture, papers submitted by panelists to the subcommittee on Agricultural Policy, (Washington: U. S. Government Printing Office, 1957), p. 79.

next are required. Present data series are especially lacking in their portrayal of dynamic elements; yet such insights are critical to decisions and actions, both public and private.[3]

Statistics of agricultural population and income assume importance for a number of reasons. Prime among these is the strong political position that farmers have occupied since the 1920's. This has brought agricultural legislation into being, requiring measures to base agricultural programs upon and comparative measurements to justify and evaluate them. For the long run, overall considerations of the national economy--relative inputs and outputs of each segment and the dynamic interaction between them--are primary. In the case of agriculture this is complexly interwoven with our legacy of an agrarian past; with our prime physical resource--land; and with the fact that the economic organization of agriculture--many small individual proprietorships--is unique in our commercial economy.

These then, are some of the justifications for yet another excursion in search of additional useful data relative to agriculture.

Purpose of the Study

The main purpose of this study is an objective exploration of the potential of OASI farm data. Means to this end are a definition of the

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[3]The problem of dynamics in the study of interactions between farm and nonfarm was recognized two decades ago by L. A. Salter Jr., and L. F. Diehl, "Part-Time Farming Research," Journal of Farm Economics Vol. XXII (1940), pp. 581-600. They pointed out that most existing studies were merely static descriptions.

population included and an examination of basic data characteristics that result from implicit definitions and collection and handling procedures.

Characteristics of the farm population included in OASI data are used in this study but are incidental--not the focus--except in Chapter VI. To report incomes, income distributions, and ages of a population without first having a clear understanding of what that population is would only add to the confusion felt by many and voiced by Weigmann.[4] He points out that much of the confusion in farm income comes about because of unsophisticated use of data and suggests a clarification of definitions of farm population and income that are in common use. The problem of definition is highlighted further by statistics of the labor force in agriculture. One series of the Census Bureau reports agricultural workers at 6,718,000 in 1955,[5] while Agricultural Marketing Service by collecting and treating its data differently arrives at a figure of 8,364,000.[6]

Farm entrepreneurs are the main focus. These are defined in the data as individuals reporting farm self-employment income to the Bureau of Old Age and Survivor's Insurance. They will usually be referred to as farm operators. This segment of the farm labor force is generally

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[4] F. H. Weigmann, "Farm Income--A Confused Picture," Journal of Farm Economics, Vol. XXXIX (May, 1957), pp. 490 ff.

[5] U. S. Bureau of the Census, Current Population Reports, Annual Reports of the Labor Force 1955, Series P-50, No. 67 (1956). The figure quoted is from a new definition reported in Economic Report of the President (January, 1960), Table D-17. Under the old definition the number in the agricultural labor force was 6,730,000.

[6] U. S. Department of Agriculture, Farm Employment, Statistical Bulletin 236 (September, 1958), pp. 12 f.

regarded as the most important from the viewpoint of both agricultural production and farm people. Farm hired laborers are fewer in number by most definitions, and hired farm work is considered only a temporary stage in the lives of most individuals who are thus employed.

Each set of statistics possesses its own distinctive characteristics that fit it for some purposes and limit it for others. In this objective look at the potential as well as the limitations of OASI data of farm operators certain features stand out:

1. Numbers of those included as farm operators are incomplete in terms of our customary way of defining farm operators, i.e., the definition of the Census of Agriculture. In addition, some are a part of the OASI farm operator group that are not so defined by the Census of Agriculture.

2. Income data of those included as farm operators by OASI are incomplete. There are maximum limits to the amount, and only money income from certain sources is considered. In general, these sources are the earnings from current economic contributions of the individual but in each case are specifically defined by statutes. [7]

3. Income data come from actual records--not memory surveys. Thus, for the range and kinds included, they are probably the most accurate available. [8]

4. The data are collected annually.

5. It is possible to identify the same individual from one year to the next. This continuous register characteristic of OASI data

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[7] This excludes income from investments, capital gains and retirement benefits.

[8] An exception is the Statistics of Income published by the U. S. Internal Revenue Service, which is largely from the same basic source. Statistics of Income are, however, aggregated to such an extent as to limit their usefulness in studies of a single industry.

is its outstanding distinction and offers potential for greatly expanded insights into the dynamics of the farm operator population, their income, and interaction with other parts of the economy.

This study aims at an appraisal of these and other less salient features of the OASI data.

Procedure

In cooperation with the staff of the Bureau of Old Age and Survivor's Insurance, the items of information that would be useful in a study of farm labor force and their income were selected.[9] These items were put into a special punch card that was provided to Michigan State University for research use. Data from a special one percent sample that is maintained continuously by OASI were employed. A tabulation program was set up, designed to explore aspects of these data and their use. Altogether about thirty tabulations were made to answer questions and test hypotheses.

Results of these tabulations are resynthesized into an integrated definition of the OASI farm operator population. The limits and potential to use of OASI data for this population are developed: qualitatively, by an expository treatment of factors influencing the data; both qualitatively and quantitatively, by comparison with other data series now in use; and by example, using the OASI data to test hypotheses.

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[9] Chapter II contains a detailed description of the data and the items of information used.

The population studied could be identified as farm operators in only a single year--1955. Despite this limitation, part of the potential of a study in time depth is demonstrated in the test of the data by use. A result is that this study provides new insights into farm and nonfarm interrelationships as well as serving principally to indicate possible areas of use for OASI farm operator data.

Data Series of the Farm Operator Population in Current Use

Reference has already been made to problems in the statistics of farm population and income posed by differences in definition and data treatment. Such diversity is not an unmitigated evil; some is justly occasioned by the varying purposes for which statistics are used. Others arise because of the manner of data collection. All occasion misgivings for the tyro, or even more probably, he is likely to be blissfully unaware that there are qualifications to statistics that are employed.[10] For the sophisticated user caution is required, often entailing a study of data collection procedure and treatment to ensure the meanings that are intended. In a sense these difficulties are inherent in the nature of a complex economy.

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[10] It is not intended to suggest that statistics of the farm population alone are plagued with such definitional difficulties. See: Selma Goldsmith, "The Relation of Census Income Distribution to Other Income Data," An Appraisal of the 1950 Census Income Data, op. cit., pp. 65 ff. She points out that there might have been as few as 8 million or as many as 14 1/2 million consumer units of our population in 1950 with under $2000 income, depending upon the particular set of figures used.

The Census of Agriculture, a cooperative undertaking of the departments of Commerce and Agriculture, is the standard measure of farm operators. It achieves this distinction rightfully; it is far more comprehensive than any other single farm data source and is the only one derived from an attempt at total enumeration. The procedure of the Census of Agriculture in determining the number of farm operators is to first define a farm, then one person and only one is designated as the operator of that farm. By definition, then, there are exactly as many farm operators as farms. In 1954 places having an annual value of sales of agricultural products of $150 or more were counted as farms. If the place had 3 acres or more it was counted whether the $150 worth of agricultural production, exclusive of a home garden, was sold or consumed at home. Places not meeting these requirements in 1954 could also be considered as farms if they might have normally been expected to produce the stated minimums. This procedure resulted in a count of 4,783,021 farm operators for 1954.[11]

Against this standard there is considerable diversity in the method of defining, hence in the number of the farm operator population and in statistics for other characteristics of this group. The 4,783,021 farm operators of the Census of Agriculture are counted without regard to

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[11] A special post-enumeration survey showed an underenumeration of 419,000 farms. See Introduction to Vol. II, Census of Agriculture, 1954, pp. xxxii to xxxiv.

place of residence,[12] while the figures for the farm population are determined from a count of all people living on farms regardless of occupation.[13]

Farm employment figures of the Agricultural Marketing Service and the Census Bureau are both determined from surveys in which the main basis for classification is the time spent at agricultural employment.[14] Despite this, the 1955 figures for the agriculture labor force from the two sources differ widely; 6,718,000 (Census Bureau) and 8,364,000 (Agricultural Marketing Service) as was previously noted.

The Current Population Survey produces three sets of figures that are an approach to the number of farm operators.[15] One is based upon place of residence--rural farm families and unrelated individuals (5,376,000 in 1955); one classifies by the occupation in which the most

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[12] 8.8% of operators were estimated to be living in urban or rural nonfarm in 1950. See: D. A. Johnson, "An Appraisal of the Data for Farm Families," An Appraisal of the 1950 Census Income Data, op. cit., pp. 287 ff.

[13] This was the procedure of both the Population Census in 1950 and the Current Population Survey since 1950. Those living on farms but paying cash rent for their dwelling are excepted.

[14] In the AMS figures farm operators were counted as part of the agricultural labor force if they worked one hour on the farm during the survey week; unpaid family laborers were counted as in the agricultural labor force if they worked 15 hours a week; any period of work qualified hired farm laborers for enumeration. A major difference between the AMS figure of the agricultural labor force and that generated by the Current Population Survey of the Census Bureau is that the Census Bureau only counts as agricultural labor those spending more time at farming than at any other occupation. There are also differences in treatment of workers under 14 years, and AMS may double count cases of multiple employment.

[15] U. S. Bureau of the Census, Current Population Reports, Consumer Income, Series P-60.

time is spent--farmers and farm managers (3, 552, 000 in 1955); another counts all those receiving self-employment income from farming (4, 792, 000 in 1955).

A less-used source of data on farm operators is contained in the Statistics of Income published by the U. S. Treasury Department, Internal Revenue Service. It is important to this study since current OASI data of farm operators depend upon the income tax collection system. Gross sales of agricultural products and/or expenditures for agricultural production are the classification criterion employed in this data series.[16]

Methods used for enumerating farm entrepreneurs may be summarized: On the basis of one each per farm (Census of Agriculture); those working at least one hour a week (Census Bureau, Current Population Survey, and Agricultural Marketing Service in the determination of farm labor force); the occupation at which the greatest number of hours is spent (Census Bureau, Current Population Survey); head of a family residing on a rural farm (Current Population Survey); and the receipt of farm self-employment income, or loss (Current Population Survey and Internal Revenue Service). Some of these closely approximate each other. All series include a substantial number that would be identified as farm operators by most definitions. It is from the marginal limits of definitions implicit in each series that differences arise.

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[16] An estimate of farm operator numbers according to this source is made in Chapter IV.

Farm Income Statistics

Just as the Census of Agriculture is the standard for the number of farm operators, statistical estimates of the United States Department of Agriculture occupy this position among series relating to farm income. Four major series are available from these estimates: (1) realized net income of farm operators from their farms, (2) total net income of farm operators from their farms (including the values of the net change in farm inventories of crops and livestock), (3) net income of the farm population from all sources, and (4) net income originating in agriculture considered as a single industry.[17] The estimates of agricultural income are built up as aggregates from data on production, marketings, prices, and costs. Net income is determined by subtracting total costs from the gross value of production. Included in gross value of production is non-money income to the farm population from the value of owned housing, and the value of home consumption of agricultural commodities produced on the same farm.

Series such as that of the income to farmers from all sources draw upon additional material. The special cooperative survey of Farmers' Expenditures for Farm Living and Production[18] is one of these.

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[17] U. S. Department of Agriculture, Major Statistical Series of the U. S. Department of Agriculture, Agri. Handbook 118, Vol. III, Gross and Net Farm Income (1957).

[18] U. S. Bureau of Census, U. S. Census of Agriculture: 1954, Vol. III, part 11, Farmers' Expenditures (1956), tables 8 to 12.

It gathered information on production expenses and off-farm sources of income to the farm operator and his family. These items are used in the Agricultural Marketing Service estimates and for other general purposes. The statistics on off-farm income are especially useful in this study to supplement OASI income data.

Data from the Internal Revenue Service list gross incomes, and production expenditures by industries reporting.[19] Like estimates of the United States Department of Agriculture, only aggregated figures are given by source. No attempt is made to classify individuals by industry, as farmers, and report their total personal income.

Each of the three series of Current Population Survey data, already discussed as possible measures of the farm operator population, give both the mean income and an income distribution for the population that is included.[20] Two of these, by farm residence and by the industry having the most time devoted to it, are distributions of total income. The series of those receiving self-employment income from the farm has a distribution by farm self-employment income only. A distribution of total income for this Current Population Survey group, receiving farm self-employment income, was obtained from the Census Bureau for use in this study, but such a distribution is not available in a published series.

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[19] U. S. Internal Revenue Service, Statistics of Income, for individuals, corporations and partnerships.

[20] U. S. Bureau of Census, Consumer Population Reports, Consumer Income, Series P-60.

Some Special Considerations Relating to the Number of Farm Operators and Their Income

Some of the problems attending data of farmers are briefly illustrated in preceeding sections. The most common current use of these data, but not necessarily the most important possible use, is in welfare comparisons between farm and nonfarm people. Despite extensive study, agreement appears to be general with regard to only one point--that we are not able at the present time to make satisfactory comparisons between farm and nonfarm incomes.[21] Such an indicated state of

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[21] A brief review of some of the range of thought in this area follows: Hazel Kirk, "Income Distribution as a Measure of Economic Welfare," American Economic Review, Vol. XL (May, 1950), pp. 342 ff., concludes that income even between nonfarm peoples is an imperfect measure of economic welfare. N. M. Koffsky, "Farm and Urban Purchasing Power," Studies in Income and Wealth, Vol. XI, part II, A Report of the National Bureau of Economic Research (Baltimore: Waverly Press Inc., 1949), notes particularly differences in living standards, prices paid and home production between farm and urban families. J. R. Bellerby, Agriculture and Industry Relative Incomes (New York: St. Martin's Press, 1956), argues that a comparison of farm and nonfarm personal incomes should include only the return to human effort and enterprise, and should exclude return to capital. He devotes a full chapter to reasons for a supply price to the human factor in agriculture that is only 60 percent of the level in other industries. D. Gale Johnson, "Comparison of Farm and Nonfarm Income," Farm Policy Forum (Spring, 1956), p. 2, adds a consideration of age distribution, taxes paid, economic class of farm and regional differences. N. M. Koffsky and E. W. Grove, "The Current Income Position of Commercial Farmers," Policy for Commercial Agriculture, op. cit., pp. 79 ff., separate out as commercial all those farms that sell over $2,500 worth of agricultural commodities annually. They also consider the return to owned equity in capital assets. A discussion of the USDA income series in, USDA, Major Statistical Series of the U. S. Department of Agriculture, Vol. III, Agricultural Handbook No. 118, "Gross and Net Farm Income," 1957, p. 9, recognizes factors such as psychic incomes to farmers as well as allowing quantitatively for other items.

Taken together, the overall effect of this abridged sketch is to indicate the complicated nature of the farm income and comparative welfare problem.

inadequacy demands further developments in our statistics of farmers. In order to help focus thinking upon the data development needs, three broad questions concerning farm population and income are raised below.

The first question deals with both the data and our approach to the problem. How adequately do static measurements of population and income provide the insights needed for decision-making? These may be either public or private decisions aimed at directing problem solutions. Public policies that are involved may focus upon the agricultural sector or may require information about agriculture as it contributes to and is a part of the entire economy.

Each of the data series discussed in the subsections immediately preceeding this one might be called time series of the agricultural industry but they are static, cross-section data with respect to the individuals within agriculture. So far as the individual operators are concerned there is no necessary relationship between their position in year A and year B compared to that of the aggregate agricultural industry in these two periods. The data in present use, even though they give only a static image, are essential to the study of United States agriculture. The most important elements, however, are the dynamics of the patterns and processes by which changes come about. Much of this is now missed because individuals cannot be identified from one period to the other.

An improved view of the dynamics of change may well bring about a re-interpretation of comparative welfare concepts between farm and

nonfarm peoples and between different segments of the farm population.

A real need exists for insights into the reactions and adjustments of individuals in the farm economy: To policy measures; stages of the business cycle; national economic deviations (as wartime); and to the changing relationships in the commercial economy. Aggregate statistics for all of agriculture mask these. An understanding of such individual adaptations is needed not only for comparisons between farm and nonfarm but among groups of the agricultural industry itself. These insights into the dynamics of change may not only prove supplemental to present welfare comparisons but be of even greater relevance in policy direction.

The second broad question is: What is the relevant farm population?

An approach to this might be by means of the concept of classification of the population into decision-making systems. One such system can be readily identified in agriculture, although its lower limits can be disputed. It consists of the farm entrepreneurs responsible for the bulk of commercial agricultural production--the commercial farm operators. In a given year this is the most important agricultural group so far as our commercial economy is concerned, yet, depending upon definitions, they probably comprise less than one-half of the agricultural population. The central feature of this group--their commercial contribution--is an approach that is more useful for purposes of overall national welfare than the comparative, inter-industry, welfare approach commonly used in studies of the farm population. Knowledge of individual patterns for this group will also be specific to an understanding of the responses and welfare of commercial agriculture.

Another less well-defined group consists of those who are more properly part of nonfarm industry, although they have interests in agriculture. These are residential farmers, some part-time farmers, and others. One way to define them is by means of their dependence upon agriculture as Ducoff has done.[22] Those with more than half of their realized income from other sources may be part of a nonfarm decision-making system, but not necessarily. Some may, by definition, be part of the commercial agricultural sector even though they receive more income off-farm than from their farming operation. In fact, in the complexly interrelated economic and social system of today most people are parts of many decision-making systems. This is complicated, in the case of agriculture, by a nostalgia for the bucolic past and a sentimental attachment to the land. Harry Truman, while President, was reported to have listed his occupation as "retired farmer" on occasion.

Most of our present farm operator statistics not only include some with their primary economic dependence outside of agriculture, but also many others who contribute little to commercial agricultural production even though this is their major source of income. In what decision-system do these subsistence farms fit? This group lacks representation in organized farm groups. The Farm Bureau and Grange clearly speak for commercial agriculture, and while the Farmer's Union gives more

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[22] L. J. Ducoff, "Classification of the Agricultural Population in the U. S.," Journal of Farm Economics, Vol. XXXVII (August, 1955), pp. 511 ff.

lip service to small farmers' problems, its recommendations are in terms of commercial agriculture. A result is a scarcity of spokesmen for low-income farms within such vestiges as remain in Congress of the Farm Bloc. Would it be better to consider such farmers as special problems in welfare, and in economic growth and development rather than as a part of the agricultural decision-making system? Rural development programs show some progress in this direction, but the needs for mustering support of agricultural programs will almost certainly guarantee pressure to continue consideration of both subsistence farmers and part-time farmers as part of the agricultural decision-making system.

The third major question concerns the concept of income: What does it measure? What is the relevant income to study?

Income is a conglomerate of a number of factors and can be measured on a number of different bases. The specific use determines the approach that is appropriate. Comparisons require that components of income be measured, yet these may be constituted differently for different individuals and industries.

On an industry basis net money income or value added, may be used as a partial measure of the productive contribution of that industry to the commercial economy. The economic organization of the industry, the structure of markets that the industry faces (both buying and selling markets), and relative rates of growth are some of the more important modifying elements. Because of these elements, the meaning of net

money income must be interpreted with care as it applies in any given industry case.

Individual incomes from a given source reflect something of the industry situation plus individual productivity or what might be more broadly characterized as relative opportunity. Among the items that may cause personal opportunity to vary are location, control of capital, education and personal abilities, soil fertility, distance to population centers, and a wide complex of other social and individual factors.

The measurement of all components of income present other special problems in inter-industry comparisons. Money income does not bear the same relationship to total income in every case. American agriculture, for all the tremendous technological advancement, still views the commercial economy as a maiden feels toward her suitor--yielding, yet half afraid! Developing commercialization, transportation, and communications cause the nonfarm economy to impinge upon the farm economy. Farm living standards have responded to the demonstration effect, demanding large cash incomes for support. Over the recent past output per man hour has advanced faster in agriculture than in nonfarm industries.[23] Despite this, 45 percent of the retail value of food consumed by rural

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[23] From 1950 to 1956 output per man hour increased 2.1% per year in manufacturing industries, 3.5% per year in agriculture (calculated from the following sources: (1) U. S. Department of Agriculture, Changes in Farm Production and Efficiency; (2) U. S. Bureau of Labor Statistics, Employment and Earnings annual supplements; (3) Board of Governors of the Federal Reserve System, Federal Reserve Bulletin).

farm families of two persons or more in 1955 was home produced.[24] Psychic income from farming, compared to a wage job, and rural values that are still held by many are admitted factors that defy quantification. A common experience for one who has assisted farm families with the appraisal of their opportunities in recent years has been a declaration on the part of some families that they planned to farm despite a knowledge of higher dollar incomes available in other industries. United States Department of Agriculture estimates consider some of these factors;[25] they will be mitigated over time, but large problem areas remain.

Welfare comparison between farm and nonfarm peoples requires the use of total incomes. It is thus subject to the difficulty of measuring income components just discussed. Where incomes to the family unit are derived from more than one source, there is also a question of the validity of classifying by a single industry for welfare comparisons.

A comparison of money incomes alone encounters fewer difficulties in measurement but it is not considered valid for welfare comparisons between farm and nonfarm peoples. Can money income be interpreted in any manner to show relative productivity? Non-money components and market imperfections have already been discussed as complications

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[24] U. S. Department of Agriculture, Household Food Consumption Survey, 1955, Report No. 1 (December, 1956), and Report No. 12 (January, 1958). Average annual food consumption of these families was valued at $1521 at retail. That produced at home had a retail value of $615.

[25] Specifically: Value of home produced food and fuel, rental value of dwellings, and differences in prices paid. See: Major Statistical Series of the U. S. D. A., Vol. III, op. cit., p. 9.

to the treatment of money income as the simple sum of the marginal value products of management, labor, and capital for agricultural entrepreneurs. Money income does measure the extent of involvement in the commercial economy, however. It can thus be used to measure relative contributions to commercial production between individuals in the same industry. Depending upon the factor of market imperfection, it may also be a measure of the relative commercial contributions of individuals in different industries.

CHAPTER II

OLD AGE AND SURVIVOR'S INSURANCE DATA OF THE FARM LABOR FORCE--A QUALITATIVE ANALYSIS

It is only rarely that a new data source for the United States farm labor force becomes available. OASI farm data are totally new in content and character even though derived from the same primal sources as the Statistics of Income. The privilege of being the first to use these new data carries with it an obligation for blazing an easily visable trail through the labyrinth of detail. Accordingly this chapter is a qualitative treatment. It purports to lay the foundation for an understanding of OASI data of farmers, and to set up guides for their use.

An effort has been made to go beyond simple description. The rationale of the OASI program and brief historical background is included where it is pertinent to understanding and use of OASI data. Implicit definitions and data characteristics result from the rules and procedures by which the program operates. These provide a framework within which the social scientist, who would use OASI data to draw inferences about farmers, must work.

Background and Rationale of OASI Farm Data

Income maintenance is the basic rationale of the OASI program. Its purpose is to enhance personal economic security. This is accomplished

by replacing a part of current earnings that may be lost due to disability, old age, or death of the breadwinner. Only money income that results from current productive effort--labor and management--is taken into consideration. Taxes are collected upon this current income to finance benefit payments and resulting records generate statistics of income and employment for the United States' labor force.

Old Age and Survivor's Insurance is administered by the Social Security Administration (a part of the United States Department of Health, Education and Welfare) and by the United States Treasury Department. The Bureau of Old Age and Survivor's Insurance, abbreviated BOASI, in the Social Security Administration keeps the earnings records on which benefits are based, and handles claims for benefit payments. The Internal Revenue Service collects the social security taxes and the Treasury Department makes the benefit payments due on claims certified by the Social Security Administration.

The Social Security Act of 1935 provided for old age insurance with an extension in 1939 adding measures for protection for dependents and survivors of insured workers. Coverage under the program was at first limited to nonfarm wage earners. This restricted coverage permitted those who were responsible to gain administrative experience at collecting data, maintaining records, and processing claims for benefits using information reported by urban employers. These latter were more experienced at maintaining accurate employee records, and were thus the group that would be easiest to work with during the difficulties of beginning a new program.

Preliminary discussions of social security in the 1930's reached a measure of agreement that both farm laborers and self-employed farmers should be included in the program. It was not until 1951, however, that sufficient experience was felt to have been accumulated to justify expanding coverage of OASI to members of the labor force in addition to nonfarm wage earners. Self-employed nonfarm businessmen, hired farm laborers and a number of others were included in 1951. Farm entrepreneurs were not covered by OASI until 1955, and were one of the last large segments to be included. Many self-employed professional occupations were also first covered in 1955 and 1956. The delay in including these was occasioned by an anticipated difficulty in the reporting of earnings by these occupations; obviously self-employed individuals must report for themselves. There were other additional reasons. The farming occupation had long been looked upon as one offering security in old age. Rural values also were a factor; studies of farmers' attitudes as recently as the early 1950's showed some who were unwilling to admit that a factory workers' program (OASI) would also work for farmers.[1] These same studies also indicated a substantial number who would be unable to meet retirement needs; and, above-mentioned values to the contrary, the majority looked favorably upon extension of OASI

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[1] W. E. Adkins, and J. R. Motheral, The Farmer Looks at His Economic Security, Texas Agriculture Experiment Station Bulletin 774 (College Station, Texas, 1954); and R. E. Galloway, Farmers' Plans for Economic Security in Old Age, Ky. Exp. Station Bulletin 626 (Lexington, Ky., 1955).

to them.[2] Findings of these studies were influential in the decision to include farm entrepreneurs in 1955.

In a strict sense OASI may not be regarded as covering certain occupational groups; rather, the relevant concept is that of covered employment. Anyone receiving income from employment defined as covered, receives credits under OASI depending upon the way that their income conforms to the specifications of the program.

An important part of the concept of eligibility under OASI, in addition to the kind of employment, is the extent and continuity of involvement as a member of the labor force. This is justified on the grounds that individuals who only work a small amount of time--as a high school youth on an occasional Saturday--are not dependent upon the given income source for a livelihood. Hence they do not have an income to be maintained. For this reason minimums of days worked and/or dollars received are set up as a condition for being considered in the labor force by OASI. Eligibility to receive benefits is a function of time and continuity in the labor force, as determined by quarters of coverage. The limits and their rationale are discussed in detail in the next section.

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[2] Ibid; also: I. M. Baill, The Farmer and Old-Age Security: A Summary Analysis of Four Studies, 1951-54, Agriculture Information Bulletin 151 (Washington: U. S. Government Printing Office, 1955); W. C. McKain, E. D. Baldwin, and L. J. Ducoff, Old Age and Retirement in Rural Connecticut, Storrs Agriculture Experiment Station Bulletin 299 (Storrs, Conn., 1953); and W. H. Sewell, C. E. Ramsey, and L. J. Ducoff, Farmers' Conceptions and Plans for Economic Security in Old Age, Wisc. Agriculture Experiment Station Bulletin 182 (Madison, Wisc., 1953).

Since OASI covers only that part of current income coming from current productive effort, there are certain conceptual difficulties in the income to farm entrepreneurs from capital gains and investments. These come about, partly, because the income tax reporting system is used as the means of collecting OASI taxes for self-employed individuals. This attachment to an already going collection system was a matter of administrative practicality. Thus the definitions employed by the Internal Revenue Service for income tax purposes carry over to OASI.

Profits from real estate sales clearly do not fit into the OASI concept of current income; they are reported separately under income tax rules and not counted as farm income. At this point the concepts agree. The Internal Revenue Service also separates, as capital gains, income from the sale of livestock kept for dairy, breeding or draft purposes. This is a much less clear-cut case than that of sales from real estate or securities. From most views income from the sale of a cull dairy cow or beef brood cow that had been raised on the same farm represents production and should count toward OASI. Unfortunately a workable reporting system demands standardized treatment that is almost certain to yield some injustices.

Problems of a somewhat similar nature attend the treatment of income from investment. Rental income or the interest from bonds theoretically continues in terms of disability or even death. Hence there is no need for insurance against its loss when a worker is incapacitated. Investment income is therefore not considered as one of the sources of

covered income for purposes of OASI. However, self-employed individuals receive income that is a composite of returns to labor, entrepreneural ability and equity in their business. The proportions vary for each individual, with no simple way to separate the return to investment in the business from others. Thus a farm operator may receive some coverage credits from investment, while an individual receiving wage or salary income plus returns from investment in property in the form of interest, dividends, or rents could count only the wages or salary toward his OASI. A defense of the inclusion of return to equity in an owner-operated business may be made on the grounds that this income is more closely bound up with management ability and industriousness than that from other kinds of investment. Again, the overriding consideration is the practical problem of a reporting system.

Definitions

This section is logically a part of the discussion of background and rationale. Its purpose is to bring together in one place terms used in the discussion of OASI data of farmers that may not be generally understood. A distinct separation from other sections permits easier location for reference by the reader.

Coverage is used here to indicate income in a given year and/or from a given source. It always means that there was enough of the right kind of income reported to qualify as counting toward OASI benefits.

Coverage Credits are the amounts of income earned at covered employment to be taken into account in calculating benefits to an individual under the OASI program. Since the intent of OASI is to replace only part of the income that may be lost, an upper limit was placed on earnings credits in a given year, except in 1937-39 when the limit was $3,000 per employer. In 1940-50 a maximum of $3,000 of the income from all covered sources combined could be credited to the account of any individual in one year. This was raised to $3,600 in 1951 and to $4,200 in 1955. There were also minimums to the amounts that could be credited to an individual OASI account. These are discussed under Covered Employment and Quarter of Coverage.

Covered Employment is employment in which credit may be earned to qualify an individual for benefits under OASI. The definition specifies kinds of employment and the minimum income that must be earned in a given time period.

Minimums differed in 1955 among kinds of covered employment, largely because of compromises resulting from collection problems. Because of the generally adequate bookkeeping and clerical services maintained by nonfarm employers, wage earners in these industries could receive a quarter of coverage credit by earning $50 from one or more nonfarm employers during a calendar quarter. A compromise was made in the case of farm hired workers as a concession to bookkeeping problems of farm employers. Farm employers were not required to withhold OASI tax or to report it for workers earning less than $100 in

a year. Thus farm wage workers had to earn at least $100 from one employer to be considered as working at covered employment but they were not restricted to a given part of the year and could earn four quarters of coverage in a single calendar quarter. As a compensating feature, it was necessary for them to have twice the amount of earnings required of nonfarm wage earners for each quarter of coverage. Farm hired workers could receive credit for one quarter of coverage if they had $100 from one employer in a calendar year and up to, but not over, four quarters if they earned $400 or more.

The nature of self employment income made impractical an accounting by calendar quarters. They received coverage from self-employment income without regard to time of receipt during the year, but unlike wage earners they were required to be involved in their self-employment at least to the extent of receiving a year's coverage credit. They received four quarters of coverage for a net self-employment income of $400 or more, but none at all if net income was under $400. There was an exception in the case of self-employed farmers, they could report one-half of a gross income between $800 and $1800 in lieu of net. These minimums for farm entrepreneurs eliminate large numbers sometimes defined as farm operators. Farmers having above these minimum money incomes from farming may be regarded as the group who contribute significantly to commercial agricultural production.

The requirement of $400 net income from self-employment at farming is only partly the result of a scientific inquiry into what constitutes

significant involvement in and dependence upon farming as a source of income. It is actually a compromise between attempts of the Internal Revenue Service to set a high minimum, the Social Security Administration to set it low, and whatever additional considerations may have prevailed upon legislators. As a matter of practicality the collection of the tax was taken over by an already operating system available through the Internal Revenue Service. To avoid an added strain on their facilities the Internal Revenue Service was interested in keeping the minimums for OASI as near as possible to the $600 minimum income required for income tax reporting. The Social Security Administration, having a stronger welfare orientation, wished to include as many people as practicable in the OASI program. Hence they wanted the minimums lower.

Earnings Credits, see coverage credits.

Kind of Coverage refers to the nature of the employment from which coverage credits were received. The data used in this study reported four basic types: (1) farm self-employment, (2) nonfarm self-employment, (3) farm wage and/or salary (referred to in the text as farm wages), and (4) nonfarm wage and/or salary (referred to in the text as nonfarm wages). Combinations of these are discussed in the section treating classification of the sample by employment.

Optional Reporting Method is allowed to farm operators only. In 1955 it permitted them to report 50 percent of gross income as their net for OASI purposes when net income was below $900, and gross income

above $800. The maximum "net" that could be reported by this method in 1955 was one-half of $1,800 or $900.

This was actually a concession to the bookkeeping problems of small farmers, and to the year to year variability of farm net income. It was felt that smaller farmers would accept the reporting requirement better if only gross income needed to be calculated. The determination of net as one-half of gross income originated from farm statistics that showed this to be approximately the ratio of net to gross in 1955.

A change in the optional reporting method for 1956 illustrates the manner in which considerations, other than precise economic relationships, may enter into a system such as that of the OASI. Although the trend was for net to become a smaller proportion of gross, Congress changed the law to allow farmers to report two-thirds of their gross income as the net for OASI purposes. This was largely the result of a desire on the part of legislators to "do something for the farmers."

A little-advertised feature of the optional reporting method is that farmers might "option out" as well as "option in." This was possible for those having $400 or more net income from farming but less than $800 gross income.

Quarter of Coverage is any calendar quarter in which $50 in wages was earned at covered nonfarm employment in 1955. In farm wage employment one quarter's coverage is credited for each $100 earned from one employer at any time during the year, except that not over four quarters can be earned in one calendar year. Anyone having only self-employment

earnings either receives a full four quarters per year or none depending upon whether or not they receive the minimum income required--$400 per year.

Quarters of coverage are an indication of the degree of continuity of employment and the extent of involvement in the labor force. BOASI uses them to determine eligibility for benefits; individuals are required to have had coverage in six of the last thirteen quarters or a total of at least forty quarters of coverage.

Taxable Earnings include income up to the maximums stated for coverage credits from any one employer earned in covered employment. Since each nonfarm employer is required to report and pay taxes quarterly on wages or salary earned from him up to these limits, total taxable earnings may exceed the stated limits if an individual draws wages and salaries from more than one employer during the year. Where income is from self-employment only, limits will not be exceeded since self-employment income is reported to the Internal Revenue Service at the end of the year, and the total year's income from all sources is known at the time of reporting. Neither will taxable earnings be above the maximum for coverage credits in cases where there is income both from self-employment and wages and salaries but where wage and salary income totals less than the top limits. If covered wage and salary income totaled $3,600 in 1951-54 or $4,200 in 1955, there would have been no indication to the BOASI of self-employment, even though this may have been an important source of income in addition to wages. In some instances

taxable earnings are reported to the BOASI but do not total the minimums for covered employment. This results in the individual appearing in the data as employed but not having a quarter of credit for the given year.

Total Earnings include all income from all sources whether covered employment or other origin.

Sources of OASI Data

Both fixed and varying data for each individual are maintained in OASI records.

The first source of OASI data and the principal source of that which is "fixed" arises from the application for an identifying social security number. Each individual must have such a number assigned before earnings can be credited to him. Items recorded here are sex, race, date and place of birth, parents' names, and place of issue of the number.

"Varying" data include those items of information that may change from year to year throughout the individual's work history. The most important of these for research purposes are earnings, and kind, place, and pattern of employment.

Sources of Varying Data for Wage Earners. --Quarterly reports are filed with the Collector of Internal Revenue by all nonfarm employers listing employees, their taxable incomes, and the industry in which they work. Farm employers report on an annual basis. This is forwarded by Internal Revenue Service to BOASI and thus becomes almost the sole

source of varying data for wage earners who have not applied for OASI benefits.

These reports are supplemented by employer information obtained at the time he applies for an employer identifying number. In this application the employer gives the nature of his business, number of employees, and type of organization, e. g., individual proprietorship, partnership, or corporation. If operating in more than one place, the nature of the business in each location is given. While this information may be fixed for a given employer, it is variable for an employee to the extent of his mobility from job to job. Each year these data are recorded separately for each employer with whom an individual had covered employment. These detailed employer-employee records are not utilized in this study but are expected to be available later.

Sources of Varying Data for Self Employed Persons. --Varying data for self-employed persons originate with their report of income tax and OASI tax due to the Internal Revenue Service. Individuals, whose only self-employment income was from farming, reported on schedule 1040F. Attached to 1040F was a tear sheet, summarizing information pertinent to OASI, that was forwarded to the BOASI by the Internal Revenue Service. Persons having nonfarm self-employment reported all income from self-employment on schedule C. This form also has a tear sheet that is forwarded to the BOASI. In addition to reporting the amount of income, the tear sheet on schedule C asks the taxpayer to indicate the type of business.

His answer to this question determines his classification as to industry and whether he has farm self-employment income; for example, an answer might be: "Retail grocery and farming." Should farming be unimportant relatively, it could conceivably be omitted by the taxpayer from the description of type of business.

Reporting of Income from Both Wages and Self-Employment. -- Should an individual have income from both wages and self-employment, the wage income up to $4, 200 was counted first as earnings credits toward OASI benefits. Self-employment income is considered only after all wage income received from covered employment. This results from the fact that employers are responsible for reporting and paying all the OASI tax of wage earners.[3] The wage earner makes his individual report to the Internal Revenue Service, using as a partial basis a report of wages earned and taxes withheld that is supplied him by his employer. A report of self-employment earnings is added for which the individual alone is responsible and these, with other income liable to income taxes, make up his report of total income taxable by the Internal Revenue Service.

Application for Retirement Benefits. --These are another source of OASI data. No use is made of this source in the current study but it

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[3]One-half the OASI tax is withheld from wages and one-half is paid by the employer, but the employer is responsible for withholding, reporting and paying the entire OASI tax on his payroll.

will be increasingly important in securing the complete work history of individuals covered by OASI.

The Continuous Work History Sample[4]

As already noted in the introductory chapter, a one percent sample of that part of the 1955 labor force receiving self-employment income from farming or wages and salaries from farm work was used in this study. This is actually part of a permanent one-percent sample of all individuals, who are issued social security numbers, that is maintained by the Social Security Administration and that is referred to as the Continuous Work History Sample. Its purpose is to provide statistical information to the United States Department of Health, Education and Welfare for use in guiding social security programs. The same individuals remain in the sample continuously and may be identified from one year to the next. This gives the Continuous Work History Sample the characteristics of a continuous register. Its value is thereby greatly enhanced for many types of social science research.[5]

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[4] B. J. Mandel, The Continuous Work History Sample Under Old Age and Survivor's Insurance in the USA, A paper presented at the First International Conference of Social Security Actuaries and Statisticians, Brussels (Rome: Societa Grafica Romana, November, 1956); and B. J. Mandel, "Sampling the Federal Old-Age and Survivor's Insurance Records," Journal of the American Statistical Association, Vol. XLVIII (September, 1953), pp. 462-475.

[5] Donald J. Bogue, A Methodological Study of Migration and Labor Mobility in Michigan and Ohio in 1947, Scripps Foundation Studies in Population Distribution, No. 4 (Oxford Ohio: Scripps Foundation for Research in Population Problems, June, 1952), shows that mobility within a single year can be studied as well as between years. Such an intra-year study can only be made for nonfarm employment.

Whether or not an individual is a part of the Continuous Work History Sample depends solely upon the number that is issued to him when he applies for an identifying social security number. Once in, an individual remains a part of the sample throughout his life with further additions accruing to the sample as more numbers are issued.

The account number contains nine digits arranged in three groups as follows:

000	00	0000
Geographic area of issuance (identifies states).	A group or sequence that can be issued in any area.	The serial number. 10,000 numbers can be issued for each group in any area.

Selection of the Continuous Work History Sample is through a process making use of the "serial," or sixth to ninth digits, of the account number. Only numbers in the 2000 and 7000 blocks of the serial are used.[6] This produces a 20 percent sample that is reduced further to 1 percent of the total population by the selection of certain digits within these blocks. Numbers issued to district offices for assignment to new applicants are controlled by the central headquarters at Baltimore to ensure each applicant an equal chance of being included in the sample. This procedure, then, produces a sample that is stratified by area and then selected in two stages.

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[6] Posting of earnings to accounts is organized to be carried on throughout the year. The 2000 and 7000 blocks have their earnings posted for a calendar year and are thus used for the Continuous Work History Sample. Other blocks of the serial are divided into 3 groups, each having earnings posted for a four-quarter period but including parts of two calendar years.

The actual universe of the Continuous Work History Sample consists of social security account numbers. These numbers represent members of the labor force and it is this latter that constitutes the real universe of interest.

Specific Information Available

The information on the punch cards that were used for this study is shown in the list at the end of this section. This included all pertinent information available from the continuous work history records, for the period 1937 to 1955. There is additional 1955 information available for those who had wage employment. This is contained in employer-employee cards and gives, among other items, type and locations of industries in which the individuals worked during a given year. This is not recorded as a part of the continuous work history and was not used. An example of its use is given by Bogue.[7]

It was possible to put together various combinations of the information because of the versatility of punch card procedure. Also some added information was obtained, e. g., wage income could be found by subtracting self-employment earnings from taxable earnings.

Some items were included that later proved of little value. This was the case for items 15, 16 and 17 on the list. It is conceivable that these may be more useful in the future when a wider span of lifetimes will be available from the data.

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[7] Bogue, op. cit.

Items of Information from Continuous Work History Records Contained in the Punch Card Used for Study of OASI Farm Data. --

	Item and Description	Number of Columns Used
1.	Account number	9
2.	Year of birth (first digit omitted)	3
3.	Sex indication--male, female	1
4.	Race indication--Negro, other than Negro	1
5.	Coverage indication for 1955 This includes: Nonfarm self-employment (abbreviated SEF) Nonfarm wage and/or salary employment (abbreviated WSO) Farm wage and/or salary employment (abbreviated WSF)	4
6.	Coverage indication for each year 1951-1954. Indicated whether coverage was from self-employment, wages and salary, or combinations of these.	4
7.	Taxable earnings each year of 1951-55 (tens of dollars)	15
8.	Self-employment taxable income each year of 1951-55 (tens of dollars)	15
9.	Cumulative earnings credits (1937-1955 (tens of dollars)	5
10.	First year employed	2
11.	Number of years employed during 1937-55	2
12.	Pattern of years employed during 1950-55 (an additive code)	2
13.	Number of quarters of coverage each year of 1951-55	5

Item and Description	Number of Columns Used
14. Indication of continuous or intermittent employment since first year of employment	1
15. Insurance status--indicates whether or not insured and status of entitlement for insurance benefits	1
16. Benefit states--indicates benefits received	1
17. Year of entitlement or death	2

Some spaces of the card were left blank intentionally to receive special punches for use in sorting. Those used were:

1. Employment combinations or groups.
2. 1955 taxable earnings.
3. 1955 age.

The various pertinent characteristics of these items of information are discussed throughout the balance of this study.

Classification by Employment

An important hypothesis was that interrelationships between farm and nonfarm incomes could be studied to advantage using OASI data. This made it important to classify the population according to their kinds of employment. The 1955 coverage indication made this possible by showing four basic types of employment. For self-employed farmers this can be expanded into eight groups by considering all possible combinations.

The group having coverage only from farm operations in 1955 was further subdivided into those with previous coverage and those without previous coverage. This was a significant subclassification, since any coverage received prior to 1955 would have been from off-farm employment.

Combinations of Present and Past Employment for Persons Reporting as Farm Operators to the BOASI in 1955.--The numbers and symbols used to represent the nine groups of self-employed farmers are given below:[8]

Group No.	Abbreviation	Description
1.	SEF	Received income from farm self-employment only. No coverage prior to 1955.
2.	SEF-PC	Received income from farm self-employment only but had been employed at covered employment in prior years. Such prior employment would necessarily be off-farm since income from farm self-employment was not covered prior to 1955.
3.	SEF, SEO	Received income from farm self-employment and from other self-employment in 1955.
4.	SEF, WSO	Received income from farm self-employment and from nonfarm wages and/or salaries.
5.	SEF, WSF	Received income from farm self-employment and from farm wages and/or salaries.

[8] In the 1955 data there were a large number of factors that could operate to distort a classification of farm operators by past or present off-farm employment. Among these were: kinds of employment not covered (mainly Civil Service, railroad employment and some self-employed professionals), minimums required for coverage, reporting problems, and length of time that the program has operated (some may have worked off-farm prior to 1937).

Group No.	Abbreviation	Description
6.	SEF, SEO, WSO	Received income from farm self-employment and nonfarm wages and/or salaries from farm self-employment plus other self-employment.
7.	SEF, SEO WSF	Received income from farm self-employment plus other self-employment and farm wages and/or salaries.
8.	SEF, WSF, WSO	Received income from farm self-employment plus wages and/or salaries from both farm and nonfarm sources.
9.	SEF, SEO, WSF, WSO	Received income from self-employment both at farming and other business plus wages and/or salaries from both farm and nonfarm sources.

Combination of Employment for Persons Reporting as Hired Farm Workers, Without Self-employment Farm Income, to the BOASI in 1955.--Although statistics of hired workers, who were not also farm operators, are only used as total figures in this study, a breakdown by 1955 income that was consistent with the classification of farm operators was made. A subdivision comparable to that of farm operators with only farm income into those with and without prior coverage was not made. There was a group with only coverage from farm wages, but since farm wages were also covered prior to 1955 a subdivision of this group according to prior coverage would not have the same implications as it had for the operator group in 1955. Employment groups of hired workers are as follows:

Group No.	Abbreviation	Description
10.	WSF	Received income from farm wages and/or salaries only.
11.	WSF, WSO	Received taxable income from both farm and nonfarm wages and/or salaries.

Group No.	Abbreviation	Description
12.	WSF, SEO	Received taxable income from farm wages and/or salaries plus from nonfarm self-employment.
13.	WSF, WSO, SEO	Received taxable income from both farm and nonfarm wages and/or salaries plus nonfarm self-employment.

Basic data for both farm operators and hired farm workers, by employment groups are included in Appendix B.

Factors Affecting the Farm Data Obtained from the One-Percent Continuous Work History Sample of the Old Age and Survivor's Insurance Program

As is the case with all statistics, data obtained from the Continuous Work History Sample of the OASI program have certain inherent features. These must be assessed before generalizations are made from the data. This section specifies the more important of these factors.

Factors Related to Program Administration. --Many of the distortions related to administration will be mitigated with the passage of time and the accumulation of administrative experience, for example, about 3 percent of the participants in OASI have had multiple account numbers. By 1951 this was reported to have been reduced to . 3 percent.[9] Possibly a number of self-employed farmers, who had been previously assigned a number, reapplied in 1955. This would distort the study of previous work histories

[9] B. J. Mandel, The Continuous Work History Sample Under OASI in the USA, op. cit., p. 18.

of farmers, but no means for measuring the distortion are available.

Reporting difficulties--late reports, accuracy of reports and reporting failure--are other administrative problems. These may also be expected to be reduced over time. Reporting irregularities are thought to be of relatively greater consequence in the case of the farm population than for nonfarm workers. The industrial employer is well equipped to maintain records and accustomed to reporting. This is less true for farm employers. Self-employed farmers report their own incomes and substantial numbers of these are unfamiliar with income tax reporting and are poorly equipped with knowledge of OASI.[10] Later sections treat these problems in greater detail.

Limitations Due to Sampling. --Since a sample is used, rather than the entire universe of OASI numbers having earnings credits, it is necessary to reckon with sampling variability. Note has already been taken of the fact that the sample is stratified by area, this is expected to reduce sampling variability. The procedure of using only blocks of the serial part of the OASI number may give an effect somewhat different from random samples. Pending results of investigation on the part of BOASI of the variation resulting from such sampling procedure, the data are treated as though the sampling variations are the same as would be expected in random samples. A guide to the probable sampling error is contained in Appendix A.

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[10] J. R. Christiansen, C. M. Coughenour, L. J. Ducoff and A. L. Coleman, Social Security and the Farmer in Kentucky, Ky. Agri. Exp. Sta. Bul. 654 (Lexington, Ky.: January, 1958).

Farmers Defined on the Basis of Money Income. --Problems inherent in the use of Census enumerations of farm workers or farm population are brought into bold relief when a special statistical source as that of OASI is used. Any numbers count must have its own explicit and implicit definitions. Hence a data set may have limited value in a given use without regard to its reliability.

The universe of the sample of OASI farm data consists of those receiving money income whether as self-employed farmers or hired workers. It is not a measure of the entire farm population as this term is commonly used. Nor are all those with money income included. Minimum income limits for coverage in a given type of employment exist; these further reduce the OASI farm group.

Comparison of OASI and Census of Agriculture Definitions of Farm Operators as These Affect Numbers in the Respective Operator Populations. --The most important factor causing numbers of farm operators to vary between these two data sources is in the lower limits of their farm operator definitions. In 1954 an individual could have been considered a farm operator by the Census if he had as little as three acres of land or produced $150 worth of agricultural commodities. These commodities need not have been sold. In 1955 OASI required $400 net income or $800 gross sales of agricultural commodities. There was also a restriction in items that could be counted as agricultural income under OASI that further widened the difference in numbers between the two.

Another difference between the Census of Agriculture and OASI data of self-employed farmers is in the number of operators per farm. The Census of Agriculture defined a farm as described, in part, above. The number of Census operators is determined by identifying one person, and only one, with each farm. In this way there are exactly the same number of operators as farms. Since OASI data are on a "per-income-receiver" basis of self-employment income from farming, the number of farm units has no relevance. In a large majority of situations the two will indicate the same individuals as operators. In other cases OASI may designate a number of individuals who are attached to a single farm as farm operators, while the Census of Agriculture selects only one. Multiple operators are considered most likely in two types of circumstances: (1) where there are adult partners of various kinds;[11] (2) where there are minor children on the farm who have a project, as with FFA, 4-H, or independently and from which they derive substantial self-employment income. For larger farms the differences in definitions would be expected to increase the OASI farm operator population compared to that of the Census. It is possible, for smaller farms, that the splitting of income could result in putting all operators on a farm below OASI limits and hence reduce the operator population as defined by OASI.

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[11] Some of these may be related as brothers, or father and son. Others may consist of an owner as a non-operating partner who shares the decision-making function with the individual doing the farm work. Some are hired managers sharing in profits.

Differences in Territory Covered. --The 1954 Census of Agriculture statistics apply only to the 48 states of continental United States.[12] OASI data include all territories and possessions of the United States. This is another difference requiring correction in order to have strict numerical comparability. The sole location indication in the data used is that from the OASI number. This only tells place of issue and its accuracy as an indication of present location is certain to have been impaired by worker mobility. It was used, since it was the best available.[13] The general rule followed is to use only OASI data from the continental United States when direct comparisons of operator numbers are made with the Census of Agriculture as in Chapter IV, but to use OASI data from all areas when special characteristics are studied as in Chapters III and VI.

The Entire Farm Labor Force. --The entire farm labor force is customarily thought of as including farm hired laborers and unpaid family laborers as well as farm operators.

Anyone receiving farm wages as of a given date is regarded as a member of the hired farm labor force according to most practices. This fails to count the total number who were in the farm wage force throughout

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[12] Except for a special report: U. S. Bureau of the Census, Census of Agriculture: (1954), Vol. III, Special Reports, part 3, Alaska, Hawaii, Puerto Rico, District of Columbia and U. S. Possessions (September, 1956).

[13] The location problem appears temporary. In 1957 OASI data indicated the location of the farm on which self-employment farm income was earned.

the year, because of mobility of workers. OASI, by contrast, considers all having farm wages at any time in the year, as long as they received $100 or more from one employer in 1955. The first of these factors tends to cause the OASI hired farm worker population to be more comprehensive relative to both Census Bureau and Agricultural Marketing Service data, the other restricts it.

OASI farm data may be represented as seriously understating the labor force in agriculture because all farm income is often attributed to the family head and unpaid family laborers are not counted. By the more traditional approaches this is true. There are, however, some offsetting factors that should be considered. One is that there is not the clear-cut distinction between the farm business and the home that exists in most other industries. The wife may sometimes work in the fields and do chores, but how much time does the husband spend working in the garden, on the dwelling, in trips to town for groceries, in preparation of food and fuel and in other activities for which he would not have received pay in a commercial situation? Similarly children may work on the farm, but often the limitation is capital and managerial skill rather than simply labor. There is no knowledge of careful inquiries into the added production resulting from the added manpower--yet this is crucial to the entire unpaid family labor accounting problem. Does the "old man" simply loaf while the boys are working?

In a commercial agricultural area, older sons may be counted by OASI since they often develop paying projects of their own. Unpaid

family laborers will not be counted by OASI on low income or subsistence farms but these are not producing so far as the commercial economy is concerned.

These arguments are not to deny that there are cases of substantial production resulting from unpaid family labor. The purpose is to raise a question as to the real meaning of present enumerations of unpaid family labor. What is their significance in terms of measuring human resources in agriculture?

Distortions to Numbers of OASI Farm Operators Because of Special Rules. --If the definition of farm operators implied by the lower limits of the OASI--$400 net from self-employment or $800 gross--is accepted, there still remains some distortion of numbers.

One of these is the loss from the OASI farm operator population of individuals having total wage incomes of $4, 200 or more in 1955. This occurs because income from self-employment is reported after wage income. Self-employment income is not recorded by OASI if income from other covered employment exceeds the maximum taxable earnings allowable under the program.

The optional reporting method resulted in some individuals being included on the basis of their gross incomes who had insufficient net incomes to qualify. It was also possible for those having a net of over $400 but less than $800 gross income to "option out" and avoid paying the tax. They would not appear in the OASI farm operator population.

In one set of conditions OASI may include as farm operators, individuals with less than either $400 net from farming or $800 gross value of sales. Farm operators, who also have other self-employment income, may add self-employment net income from all covered sources together to attain the $400 minimum. They were also permitted to use the optional method of reporting one-half of gross, even though gross was under $800, if this was added to other self-employment incomes. The data do not permit a separation of farm and nonfarm self-employment income, so estimates of the effect of this factor must rely on other means.

OASI Income Data of the Farm Population. --OASI income data includes only money income from current labor, entrepreneural or professional effort. It thus is a measure of the extent to which members of the work force are currently contributing to the commercial economy. This is a relevant concept in studies of commercial production and of the human resources involved in this production.

Most studies of farm personal income have had as a major purpose the comparison of real incomes between farmers and non-farmers. OASI data would need to be heavily supplemented if used for this purpose.

Important items of money income excluded from OASI farm data because it considers only return to current productive effort are those from capital gains, interest, dividends, rents, annuities, retirement pay, and transfer payments. Some kinds of farm income are excluded such as farm rental income, and sales of breeding, dairy, and draft

livestock. These are required to be handled as sales of capital items.

There are still other factors that may modify both an income distribution and an income average. These are: (1) the fact that OASI does not take into account income above $4, 200, (2) the optional reporting procedure, (3) types of employment not covered in 1955,[14] (4) income in amounts too small to qualify as covered employment.

The above, plus the problem of non-money income to farmers, pose formidable limitations in the use of OASI data for welfare comparisons. Even within agriculture itself, direct welfare comparisons based upon OASI income figures might be subject to question. These doubts arise because of expected variations in the components of excluded income between groups, e. g., subsistence farmers have a larger proportion of their income in non-money form; residential farmers average relatively large retirement payments.

For income types that are included, an income distribution derived from OASI is regarded as more accurate than others available. OASI data originate from actual records to the extent that farmers' income tax reports are so based. In this respect it enjoys a distinct advantage over most income statistics of farmers currently in use, since the latter are derived from surveys depending upon recall. The range is truncated on the upper end by the $4, 200 limit, and the distribution is probably

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[14] Mainly self-employed professionals as lawyers, dentists, optometrists, chiropractors, osteopaths, naturopaths, veterinarians, doctors of medicine, plus railroad employment, and Civil Service Employees.

biased upward below $900 by the optional reporting feature. Where off-farm income is a factor, optional reporting may effect income throughout the range from $400 to $4, 200, but this affect is not regarded as large. This suggests that there is a wide range for certain kinds of income that is reliably reported in OASI data.

Distortions in income-age relationships are produced by the recent extension of OASI to farmers and provisions for retirement with minimum years of coverage by older people. Individuals who are a number of years from retirement are likely to look upon the tax assessed by the program as an added cost to be reduced as much as possible or avoided altogether. Those in the age group with prospects of early returns from the program are more likely to report as much taxable income as possible--in some cases even altering their business to produce more income--in order to qualify for larger benefits. Expected results of such differences in viewpoint would be the reporting of relatively larger incomes by the "over 60" age group. It could conceivably result in a disproportionate representation of those "over 60" in the OASI farm operator population. In any event, this is a temporary distortion that should be mitigated as the program matures.

Time of Availability

Annual collection of OASI statistics is thought to enhance its usefulness. At least part of the value of this feature depends upon how promptly data from this source can be made available.

Punch cards used in this study from the year 1955 were not available for research purposes until the spring of 1959. There were certain extenuating circumstances not expected to recur: This was a new program, and BOASI was involved in shifting over to a different system of record keeping. Perhaps a better indicator is the appearance of Farm Coverage Statistics 1955 by the Bureau of Old Age and Survivor's Insurance in November, 1957. This was only 19 months after the deadline for filing income tax returns for the year 1955 to the Internal Revenue Service.

Factors that will determine time of availability are: Completeness desired in the data, i. e., the cutoff date of the data; the processing timetable of the Internal Revenue Service and the Bureau of Old Age and Survivor's Insurance, and programming by whatever agency tabulates the data. It is too early to assess these properly, at the present time.

Anticipated Future Changes

It is already possible to predict changes in OASI farm data between 1955 and subsequent years. These will come about due to statutory changes in the laws governing OASI and to the manner in which people react to the program.

Statutory changes already on the books include: (1) a change in the optional reporting procedure for farmers; two-thirds of gross income within a range may be reported instead of only one-half. This

became effective in 1956 and will operate to include more of the lower income farmers. (2) "Materially participating" farm landlords could be covered in 1956. The operation did not have to be a bona fide partnership as was true in 1955. (3) There was an expansion in coverage of self-employed professional workers in 1956. (4) The maximum covered income was increased to $4,800 in 1959. (5) The minimum income for farm workers from one employer was increased to $150 per year in 1957; or alternatively they might qualify with 20 days of farm work for one employer. The effect of all of these, except the last, is to enlarge the number of those who will be included as the farm population. There is an advantage in greater inclusiveness, but year to year comparability is rendered more difficult.

Changes resulting from reaction of people to OASI will come about mainly: (1) because of growing knowledge concerning reporting on the part of many who failed to report in 1955; (2) by reduction of temporary distortions brought about in initiating a new program. Among these are the age-income distortion suggested in the previous section. A preliminary report suggested that large numbers of older farmers were dropping out of OASI in 1957, having met the special requirements to receive retirement benefits. After some maturity has developed for the OASI program, changes of this nature might be expected to be less abrupt. At the present stage they will need to be kept under careful surveillance.

Summary

The Continuous Work History Sample of OASI data provides a sampling of major segments of the labor force and measures their contributions to the commercial economy from labor, and entrepreneural or professional services. OASI has now been expanded to cover nearly all major forms of employment but does not include those who are not significantly involved in the given form of employment. This exclusion may be interpreted as resulting in the inclusion in OASI data of only those who contribute significantly to the commercial economy.

In addition to data showing sex, age, and race for each individual, OASI furnishes statistics on kinds of employment and income. A unique feature is that income and employment data are potentially available for the entire working history of each individual, subject to limits of what is included.

Omissions and distortions in OASI data apparently limit their usefulness in making direct welfare comparisons. They do measure, within limits, the money income of an individual from participation in current production in the economy.

CHAPTER III

A COMPARISON OF OASI FARM OPERATOR DATA WITH STATISTICS FROM OTHER SOURCES: AGE, RACE, AND LOCATION

This chapter continues the definitive treatment of OASI farm operator data begun in Chapter II. Quantitative comparisons are begun here with commonly used data sources; principally those of the Census of Agriculture, the Current Population Survey, and estimates made by the Agricultural Marketing Service.[1] General familiarity with statistics from these sources makes it possible to use them as standards of comparison. It is not intended, at this point, to set up OASI data as the means to a rival quantitative estimate of the various farm population characteristics; rather, comparison provides the most direct means to an accurate evaluation.

Age, race, and location characteristics are considered in this chapter to the extent that they contribute insights into the nature of OASI farm operator data. This quantitative analysis is continued in the two following chapters with an examination of the total number of farm operators and their income.

Age

Only the Census of Agriculture provides a distribution of farm operators by age. This is compared with that of the OASI farm operator

[1] Agricultural Marketing Service, Farm Income Situation, issued four times yearly. This contains estimates of income to the farm population.

population in Table III-1. Average ages will be observed as close--.4 of a year difference. Also, the two distributions are not widely different, with that of the OASI somewhat flatter and exhibiting a slight bi-modality.

TABLE III-1. Percentage distribution of OASI and 1954 Census of Agriculture farm operators, by age

Age group (years)	Census of Agriculture[a] (%)	OASI farm operators[b] (%)
Under 25	1.9	2.7
25 - 34	13.2	14.1
35 - 44	23.4	21.3
45 - 54	24.6	21.1
55 - 64	20.3	22.6
65 and over	16.6	18.2
Total	100.0	100.0
Number in category (1000's)[c]	4,695.6	1,887.8
Mean age (years)	49.6	50.0

[a]Source: U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. II, Chapter 2 (1956). This includes all classed as operators by the Census of Agriculture, who reported their age in a total enumeration.

[b]Source: A tabulation of 1955 data from the Continuous Work History Sample supplied by BOASI. It included all with known ages who received covered income from farm self-employment.

[c]Census figures include only the 48 states of continental USA. OASI figures include in addition those from Alaska, Hawaii and all other territories but these are only .6% of the total number.

Distribution by age is often a distinctive feature of a given population. The close similarity observed here might lead one to the conclusion that OASI data are a random sample of that of the Census of Agriculture. This conclusion will be shown untenable in succeeding sections, but two indications of its fallacy are readily at hand. In the first place a chi-square test of differences between the distributions show them to be highly significant--beyond the one-tenth percent level. Secondly, a preliminary consideration of components of each of the sets of data emphasizes substantial differences in their character.

Multiple operators per farm, included in OASI data but not in the Census of Agriculture population, could contribute to the flatter age distribution of the OASI data. Relatively more young farmers would appear as OASI farm operators in cases of father-son partnerships where the father was of middle age. The Census would designate only the father as operator, OASI could include both. OASI would also include youths, not bona fide partners, who were operating a substantial farm project. In partnerships having one member advanced in age, the Census of Agriculture would be likely to count only the younger. OASI could include both, with a result that relatively more older operators appear in these data.

Another factor operates to increase the proportion in the older age brackets in OASI data. This results from the prospects of benefits in the near future to older farmers. They would have incentive to attempt

to qualify as "covered" under the program. Men under fifty-five would be ten years or more away from benefits and thus feel little need to make a special effort to become covered immediately--if indeed they did not make a positive effort to avoid the OASI tax.

Field studies in Kentucky and Texas indicate that circumstances will affect the relationship of age to participation in the OASI program.[2] Both studies agreed that younger farmers were better informed about OASI, at least in its earlier stages. Part of the reason for a difference in knowledge came about because younger farmers had obtained cards incidental to recent off-farm employment. In the Texas study the local availability of state old age assistance reduced desire for participating in OASI. In Kentucky older farmers in the poorer agricultural sections were participating in OASI in a relatively high proportion. Age was a less important factor in better farming areas. This suggests the relative situation with regard to economic security to be an important determining factor in interest and participation of older farmers in the OASI program.

OASI data in general confirm the Kentucky observation that older farmers made a special effort to participate in the OASI program.

It will be noted in Table III-2 that those with only farm self-employment and no previous covered employment, the SEF group, were

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[2] J. R. Christianson et al., op. cit.; and R. L. Skrabanek et al., Texas Farmers and Old Age and Survivor's Insurance, Texas Agri. Exp. Sta. Bul. 886 (College Station, Texas: January, 1958).

TABLE III-2. Percentage distribution of subgroups of OASI and 1954 Census of Agriculture farm operator populations, by age

Age (years)	Census of Agriculture operators of commercial and "other" farms[a]		OASI operators[b] by employment groups[c]					
	Operators of commercial farms	Operators of "other" farms[d]	Farm income only in 1955[e]	SEF	SEF-PC	SEF, SEO	SEF, WSO	SEF, WSF
Under 25	2.2%	1.3%	2.1%	2.0%	2.1%	2.3%	5.1%	7.0%
25 - 34	14.1	11.2	12.1	7.6	18.2	14.6	21.2	18.1
35 - 44	23.8	22.5	19.9	14.0	28.0	18.4	28.8	23.3
45 - 54	24.8	24.1	20.6	19.5	22.1	22.8	22.3	22.0
55 - 64	20.5	19.8	24.1	27.2	19.8	22.9	16.5	18.8
65 and over	14.6	21.1	21.3	29.7	9.8	19.0	6.2	10.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. in category (1000's)[f]	3,267.7	1,427.9	1,301.2	751.8	549.4	226.7	271.5	28.7

[a]Source: U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. II, Chapter 2 (1956).

[b]Source: A tabulation of 1955 data from the Continuous Work History Sample supplied by BOASI.

[c]See description of 1955 Employment groups in Chapter II.

[d]Includes operators of residential, part-time and abnormal farms.

[e]Includes all whose only covered income was from farm self-employment. These are the SEF and SEF-PC groups.

[f]Census figures include only the 48 states of continental USA. OASI figures include in addition those from Alaska, Hawaii and all other territories but these are only .6% of the total number.

over sixty-five years of age in the highest proportion.[3] The relevant question is: Does the 30 percent shown to be over sixty-five in the SEF group represent the true distribution, or how much is it biased downward by lack of knowledge and/or biased upward by desire to be included in the OASI program? This matter is pursued further because it is a means of demonstrating the data use and because there is wide interest in the incentive effect upon older farmers of the rules that permitted them to qualify for benefits in only two years.

A direct measure of the probable relationship of age to OASI participation of farm operators is contained in Table III-3. In the 65-69 age range it is calculated that 108 percent of the potential operators, computed on the basis of net income receipts, participated in OASI. This compares with 70 percent in the 35-44 age class. For individuals not eligible to participate in OASI as farm operators on the basis of net income, at least four other avenues were available: (1) optional reporting; (2) adding farm self-employment income to other self-employment income, (3) farm owners receiving rent reporting as partners, this is part of the problem of multiple operators per farm; (4) reporting of capital sales as ordinary income. The last two of these were outside OASI rules in 1955 but were probably employed by some older farmers.

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[3] Parenthetically, it should be noted that the cause of the bimodality of the OASI age distribution is from the greatly different distributions of the two largest groups composing it, the SEF and the SEF-PC groups. Both had only farm self-employment income in 1955, but this suggests that they differ markedly in other respects. This receives attention in Chapter VI.

TABLE III-3. Distribution of farm operators filing Social Security Tax Reports, and individuals reporting $400 or more of self-employment farm earnings in the Current Population Survey, by age, 1955[a]

Age group (years)	Self-employed farmers[b] with $400 or more net earnings from farming (1000's)	Self-employed farmers filing[c] Social Security Tax Reports (1000's)	Percent filing (%)
Under 20	33	13	39
20 - 24	103	63	61
25 - 34	488	315	65
35 - 44	696	488	70
45 - 54	573	460	80
55 - 59	277	204	74
60 - 64	273	272	100
65 - 69	200	216	108
70 and over	208	201	97
Total	2, 851	2, 232	78

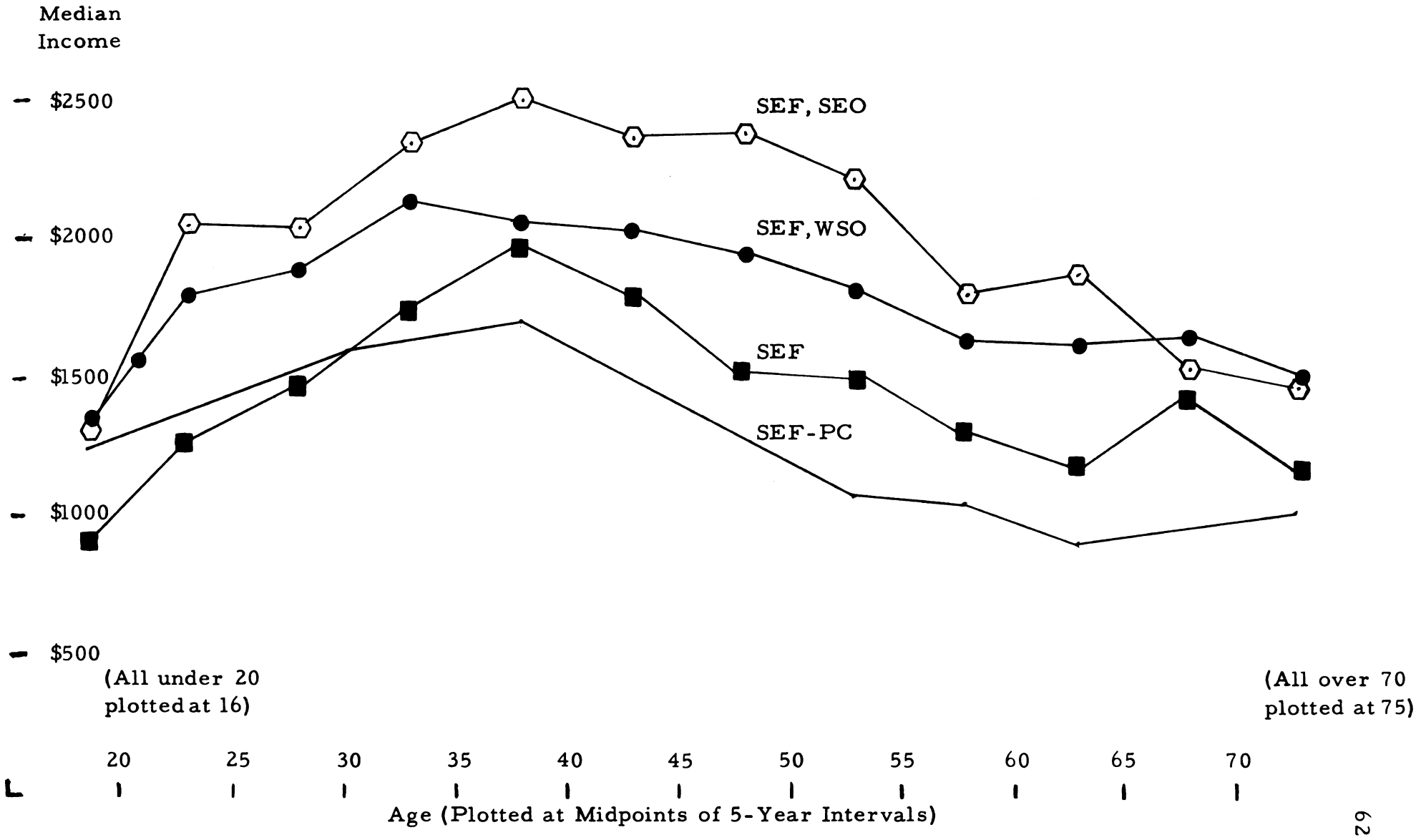
[a]Adapted from an internal memorandum of BOASI.

[b]Source: U. S. Bureau of the Census, Current Population Reports Series P-60. Income data from the 1955 survey is distributed on the basis of age data from the 1954 survey.

[c]Estimated by BOASI on the basis of a 0. 1 percent sample of returns received before tabulation cut-off date. Approximately 75 percent of returns had been received by that data.

Other measures provide supporting evidence of the effort of older farmers to participate in OASI. One of these measures is shown in Figure III-1. Median income is noted to rise above age sixty-five for all groups charted except those with other self-employment income, the

FIGURE III-1. Median income of male, OASI farm operators by age and employment indication, 1955



Source: A tabulation of data from the Continuous Work History Sample supplied by BOASI.

SEF, SEO group.[4] Median income, for the SEF group, follows a reasonably regular curve throughout the age range except for a sudden jump of $230 between ages 60-64 to ages 65-70. This suggests that many of those in the 65-70 age bracket who knew about OASI attempted to take full advantage of it by increasing their reported income. It cannot be directly inferred from this that relatively more who were over sixty-five attempted to become covered, but this hypothesis is not inconsistent with such an unusual income-age distribution.

Another possible measure of the extent of increased reporting by older age groups is the use of optional reporting methods. The only indication of optional reporting in the data was the number reporting exactly $900 income. This is incomplete since almost exactly 10 percent of the farm operators reported $900 income while BOASI estimates that 16 percent used the optional method.[5] Those having only income from farm self-employment could be most reliably detected in this way as reporting by the optional method, but only optional reporters with $1800 gross or more would be discovered. A special tabulation of the SEF group revealed that 43 percent were sixty or over but that 49 percent,

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[4]The SEF, SEO group will be noted to have the highest average incomes at middle age, hence they are less in need of old age security. They are probably also less dependent upon farming than the others, although data at hand could not be used to definitely quantify this.

[5]The tear sheet received by BOASI from the Internal Revenue Service indicates if the optional method of reporting farm income was used but this information was not available to put into the punch cards used in this study.

having a taxable income of exactly $900, were sixty or over. Statistical significance of these figures is not large; such a result could occur by chance 1 time out of 4. It is a positive result, however, showing that a disproportionate number of older individuals attempted to either get or increase OASI covered income by means of the optional method. It indicates a substantial degree of sophistication in reporting on the part of those over sixty. This must be tempered with knowledge of the below-average incomes for those over sixty--relatively more would be in a position to use the option.

Differences between the Census of Agriculture and OASI farm operator statistics are revealed more strikingly by a comparison of components of each. In Table III-2 the similarity between age distributions of operators of "other" Census farms and that of those receiving self-employment farm income only of the OASI population will be noted. They differ only in the age distributions between ages forty-five and sixty-four. But the definitions of these two subgroups are widely divergent. Over 70 percent of the Census of Agriculture subgroup was working off-farm, and almost 65 percent were working off-farm 100 days or more. The OASI subgroup, by contrast, had no covered employment off-farm. The Census of Agriculture subgroup of "Other" farm operators has a high proportion of operators who are over sixty-five because of retired people, in the residential class. Farms in the residential class had sales of farm products not exceeding $250 in value, but this class comprises 60 percent

of "other" farms. Operators of these farms could not have qualified for the OASI subgroups having farm self-employment as its only income.

This comparison could be extended into much greater detail but the point should have been made: Wide dissimilarities are present between the Census and OASI farm operator populations despite some resemblance in age distribution.

Racial Composition

Racial composition of farm operator populations from OASI and Census of Agriculture sources provides further means for comparison and definition.

Slightly different categories of race are employed by the two sources. The Census of Agriculture classifies operators as "white" and "non-white." Non-whites are further subdivided into "Negro" and "other non-white."[6] In OASI data individuals are classified by race as "Negro" and "other than Negro." It is possible in this section to compare "Negro" operators enumerated by the Census with "Negro" in the OASI data of farm operators. Many general tables of the Census only list "white" and "non-white" operators. In this case OASI "Negroes" must be compared against Census "non-whites." For approximate comparisons this is satisfactory since "other non-whites" comprise only 3.2 percent of the "non-white" Census of Agriculture category of farm operators.

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[6]U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. II, Chapter X (1956), p. 948. "Other non-whites" include Indians, Chinese, Japanese, plus others.

Table III-4 reveals a decided difference in the proportion of Negroes in the OASI population of farm operators compared with the Census of Agriculture. In OASI data only 1.3 percent are Negroes while Negroes make up 9.8 percent of the Census enumeration of operators. The total number of operators in the OASI population is equal to 39.5 percent of all those in the Census but OASI data have only 5.3 percent as many Negroes as the Census of Agriculture. In spite of the conclusion of some attitudinal surveys that Negroes were most likely to approve OASI,[7] these findings suggest that there were factors operating to largely exclude them.

TABLE III-4. Racial composition of OASI and 1954 Census of Agriculture farm operator populations

	Census[a]	OASI[b]	
		Numbers	OASI as percent of Census
All farm operators	4,783,021	1,888,400	39.4%
Negro operators	467,656[c]	24,600	5.3
	Census	OASI	
Negro operators (as percent of their respective totals)	9.8%	1.3%	

[a]Source: U.S. Bureau of the Census, Census of Agriculture: 1954, Vol. II, Chapter 10 (1956).

[b]Source: A tabulation of 1955 data from the Continuous Work History Sample supplied by BOASI. Includes territories of the U.S.

[c]All non-white operators totaled 483,650. These were broken into: Negroes 467,656, and other non-whites 15,994.

[7]W.C. Adkins and J.R. Motheral, op. cit.

The low socio-economic position of Negroes is proposed here as the principal reason for the small proportion of this race having income covered under OASI from farm self-employment. A low socio-economic state operates in two general ways: The minimum dollars required for coverage would become a barrier more often to a group with lower-than-average incomes. Such people are also less likely to have acquired the habit of systematic reporting of income to the Internal Revenue Service. This latter may cause them to be excluded, even when they had a tax liability under OASI, because of failure to report.[8]

Statistical comparisons give support to this hypothesis. Figures from the 1955 Current Population Survey show rural farm male non-whites to have a median income of $600. This was only 40 percent of the $1,484 median income of white males.[9] This may be compared with two sets of figures from the OASI data: Mean taxable income of all OASI Negro farm operators was 63 percent of non-Negroes' mean taxable incomes, $1,170 compared to $1,870. A figure that may be more comparable to that of the Current Population Survey is that of median incomes for males in the OASI farm labor force. For Negroes

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[8] J. R. Christiansen et al., op. cit.

[9] U. S. Bureau of the Census, Current Population Reports, Series P-60, No. 23 (November, 1956). Income figures are for rural farm males over 14 having income.

this was $790 and for non-Negroes $1,380.[10]

Data from both OASI and the Current Population Survey show Negroes' incomes substantially lower than those of non-Negroes. But Negroes' incomes are relatively much higher in the statistics from OASI, 57 percent and 63 percent compared to 40 percent. The low incomes of Negroes would cause more of them to be excluded from OASI because of minimum income requirements. Relatively higher incomes for Negroes in the OASI data, suggest that as a group they have less access to information about OASI and that Negroes whose incomes barely qualify for OASI coverage are more likely to violate reporting rules by failing to report, or less likely to take full advantage of provisions that permit them to come under OASI provisions.

Regional Variations

The overall United States farm operator population is the primary concern of this study. Regional comparisons are introduced as an added means of gaining understanding of the OASI data for farm operators. A considerable body of information about regional differences is available from the Census of Agriculture and other studies. This is brought into

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[10] Neither of the OASI figures is strictly comparable with that used from the Current Population Survey. Current Population Survey data are classified on the basis of residence; OASI are on a per-income-receiver basis. Current Population Survey is an estimate of total money income from all sources; OASI includes only taxable income as defined in Chapter II. Effects of these and other smaller differences cannot be fully specified, but they are regarded as not invalidating the general comparison made here.

use to help explain observed differences between OASI data and that of the Census of Agriculture.

Total Numbers. --OASI and Census of Agriculture farm operator populations are compared by a six-region breakdown in Table III-5. The two distributions show differences that are significant at the .001 level. OASI data have relatively fewer operators in Southern regions and relatively more in the North Central Regions.

Observed differences agree with the already expressed hypothesis of income as an important factor in the determination of operators who are a part of the OASI population. In 1954 the South Central Region had the lowest average sales per farm, $3,020 compared with an average of $6,690 in the West North Central region, see Table III-6. This apparently obvious explanation encounters difficulties when it is also observed that average income per farm in the North Atlantic Region is $6,050, close to the average of the West North Central Region, and that of the Western Region is $11,630! The hypothesis would lead us to expect a larger proportion of the Census population in the Western region to appear in the OASI data than for any other region, but this is not the case.

A table of the distribution of farms by economic class within each region provides at least a partial clarification of this problem, Table III-7. The Western region has by far the largest proportion of farms with sales of $25,000 or over, this weights the average gross per farm upward.

TABLE III-5. Distribution of OASI and 1954 Census of Agriculture farm operator population, by United States regions

Region[c]	Census of Agriculture[a]		OASI[b]		
	Number	Percent distribution	Number	Percent distribution	OASI as percent of Census
	(1,000's)	(%)	(1,000's)	(%)	(%)
North Atlantic	339	7	130	7	38
South Atlantic	859	18	171	9	20
E. N. Central	799	17	429	23	54
W. N. Central	905	19	597	32	66
South Central	1458	30	328	18	23
Western	423	9	210	11	50
Total[d]	4783	100	1864	100	39

[a]Source: U. S. Bureau of Census, Census of Agriculture: 1954, Vol. II, Chapter 1 (1956).

[b]Source: A tabulation of 1955 data from the Continuous Work History sample supplied by BOASI. Regional breakdown made on the basis of place of issue of OASI number and is inaccurate to the extent of farm operator mobility. Does not include 12,300 issued numbers outside continental U. S., or 12,100 who had railroad employment at time of first employment. (Those issued a number as a railroad employee could not be identified with a region.)

[c]Regional divisions include the same states as Vol. II, Chapter 1 of Census of Agriculture: 1954. The North Atlantic region combines New England and Middle Atlantic regions. The South Central combines East and West South Central regions. The Western region combines Mountain and Pacific regions.

[d]Detail does not always add to total because of rounding.

TABLE III-6. Distribution of OASI and 1954 Census of Agriculture farm operators having the specified off-farm work, by United States regions

Region[c]	Census of Agriculture[a]			OASI[b]	
		Working off-farm 100 days or more		Other covered income besides farm self-employment	
	Average sales per farm	Number	Percent of all Census operators	Number	Percent of all OASI operators
	($)	(1000's)	(%)	(1000's)	(%)
North Atlantic	6,050	126	37	43	34
South Atlantic	3,260	271	32	52	32
E. N. Central	5,750	235	29	117	29
W. N. Central	6,690	140	16	147	26
South Central	3,020	414	28	111	35
Western	11,630	148	35	82	41
All continental U.S.	5,153	1,334	28	551[d]	31

[a]Source: U. S. Bureau of the Census, Census of Agriculture: 1954,

[b]Source: A tabulation of 1955 data from the Continuous Work History sample supplied by BOASI. Regional breakdown is made on the basis of place of issue of OASI number and is inaccurate to the extent of farm operator mobility.

[c]Regional divisions include the same states as Vol. II, Chapter 1, of the Census of Agriculture: 1954. The North Atlantic Region combines New England and Middle Atlantic Regions. The South Central combines East and West South Central Regions. The Western Region combines the Mountain and Pacific Regions.

[d]Detail does not always add to totals because of rounding.

TABLE III-7. Percentage distribution of United States farms, by economic class and region, 1954[a]

Region[c]	Economic class of farm[b]				
	Total[d]	Class I	Class II	Classes III to V	Classes VI to VIII
	(%)	(%)	(%)	(%)	(%)
North Atlantic	100	4	13	45	38
South Atlantic	100	1	4	42	43
E. N. Central	100	3	14	55	28
W. N. Central	100	3	16	62	20
South Central	100	2	4	37	58
Western	100	10	15	43	33

[a]Source: U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. II, Chapter 11 (1956).

[b]See source for description of classes.

[c]Regional divisions include the same states as Vol. II, Chapter 1, of the Census of Agriculture: 1954. The North Atlantic Region combines the New England and Middle Atlantic Region. The South Central Region combines East and West South Central Regions. The Western Region combines the Mountain and Pacific Regions.

[d]Detail does not necessarily add to totals because of rounding.

At the same time it has more farms in Economic Classes VI, VII and VIII than either the East or West Central regions. As will be shown later, operators of Class VI and smaller farms are most likely to be those excluded from the OASI data, hence the Western region has proportionally fewer farm operators in OASI data compared with the Census. A similar argument could be advanced concerning the North Atlantic region. There the proportion of operators in Classes VI to VIII is second only to that of the Southern regions.

Work Off-farm. --Regional differences in factors associated with off-farm work further highlight characteristics of the OASI farm operator population. The focus of the subsection is upon OASI operators having off-farm taxable income compared with Census of Agriculture operators working 100 days or more off the farm. The two definitions of off-farm work are not the same, but they are sufficiently similar to justify broad inferences on the basis of their inter-regional variations.

A region by region comparison, of the proportion that each of these groups with off-farm work is of its respective total, gives surprising agreement, Table III-6. Exceptions to this agreement between OASI and Census data are noted in the cases of the South Central and West North Central regions. In both regions OASI operators with off-farm income are more numerous relative to all OASI operators than Census operators with 100 days or more off-farm work are of all Census of

Agriculture farm operators. An investigation of this reveals not only regional differences but important facts about the composition of the OASI farm population. Different sets of factors appear responsible in each case.

A suggested explanation for the high proportion of OASI farm operators with off-farm work in the South Central region arises, paradoxically, from the fact that OASI operators are so low a proportion of Census operators in this area. There is relatively little industrialization in the South Central--reflected in the fact that it is second lowest in the proportion of operators working off-farm 100 days or more. However, those farmers who are employed off-farm are more likely to have come into contact with the income tax system. For this reason those who have both covered farm income and other taxable income make up a large proportion of the total farm operators reporting to OASI in the South because large numbers, defined as farmers by the Census of Agriculture, are not included in OASI. This conclusion received support from the Kentucky study where farmers in poorer areas were found to have been assigned social security numbers most often while doing nonfarm work.[11] In the poorer areas there was relatively less cooperation with the OASI program on the part of those without off-farm experience, with the exception of farm operators who were over sixty-five. The factors of exposure to compulsory reporting, and low income levels are thus assumed

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[11] J. R. Christiansen, et al., op. cit.

to influence the composition of the OASI farm operator population in the South.

In the West North Central region a very different set of conditions holds. There are more absolutely with off-farm income who had coverage under OASI than the number that the Census reported with 100 days or more of off-farm work. This is in spite of the fact that there are fewer than two-thirds as many operators in the OASI population for this region as that of the Census of Agriculture. Farm incomes are relatively good in the West North Central region and industrialization low. For this reason the proportion of farm operators working off-farm would be expected to be low. This is the observed situation regarding the Census statistics. OASI, however, does not limit the number of operators per farm. A 1946 study of farm ownership showed the proportion of landlords to be twice as high in the West North Central region as in any other; over 30 percent compared with 15 percent in the West and only 9 percent in the Northeast.[12] Although nine years old, data from this study are used under the assumption that while the percentages may have changed, something of the same relationships continue between them. Introspection involving the relatively large proportion of landlords in the West North Central region, its ruralness, and the close ties between businessmen in smaller towns of the area and the surrounding farm land leads to the

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[12] B. T. Inman and W. H. Fippin, Land Ownership in the United States, U. S. Department of Agriculture, Miscellaneous Pub. No. 699 (December, 1949).

tentative conclusion that a large number of farm partners were defined as farm operators by the OASI.

Potential and Actual Numbers with OASI Coverage. --Table III-8 provides further insights into the operator population of the OASI data. This table assumes that all farmers with $600 or more gross sales were eligible for coverage under Social Security.[13] The estimated number of final returns for 1956 from each region is compared against this number.

Again attention is directed toward the Southern and North Central regions. Not only are these the most important numerically, but they exhibit the greatest differences. The two Southern regions have the lowest proportion of the "potential" number of operators reporting, while the two North Central regions have the highest proportion. Regional comparisons conceal even larger extremes in the case of individual states; Mississippi and Louisiana are 29 and 30 percent respectively contrasting with over 100 percent for Illinois, Iowa and the Dakotas!

Like most regional comparisons between OASI and Census of Agriculture data there are qualifications. These do not invalidate the comparisons made; useful insights are obtained. Some of the more important qualifications may be noted: 1954 figures of the Census are compared against 1956 OASI data; the number of farms is believed to have dropped over 200,000 between the two years. The 1956 OASI data

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[13] In 1956 the gross income minimum for OASI coverage as farm operators was lowered to $600 from $800 in 1955.

TABLE III-8. Distribution of 1954 Census of Agriculture farms with $600 gross sales and 1956 OASI operators, by United States regions[a]

Region[b]	Farms with sales of $600 or more from farm products, 1954[c]	Individuals reporting taxable self-employment income from farming to BOASI, 1956[d]	
		Number	Percent of Census farms with sales of $600 or more in 1954
	(1000's)	(1000's)	(%)
North Atlantic	248	164	66
South Atlantic	545	273	50
E. N. Central	656	585	89
W. N. Central	797	780	98
South Central	954	475	50
Western	320	262	82
Continental U. S.	3, 520	2, 539	72

[a]General source: BOASI table for internal use, 1958.

[b]Regional divisions include the same states as the Census of Agriculture: 1954, Vol. II. The North Atlantic region combines the New England and Middle Atlantic regions. The South Central region combines the East and West South Central regions. The Western region combines the Mountain and Pacific regions.

[c]Source: Census of Agriculture: 1954. An interpolation that assumes a linear distribution in the $250 to $1, 199 range of gross sales.

[d]A total estimate for 1956 made by BOASI. Includes only those in continental United States.

are projections of the estimated final number from an early cut-off date, not those actually received. A straight-line distribution for the $250 - $1,199 gross sales class is assumed. This straight-line assumption causes a bias in numbers with gross sales of $600 and above when there are regional differences in the mode of the income distribution. When the distribution is heavily weighted to the lower side, as in the South, too many are shown as eligible for OASI coverage. The proportion of tenancy is another factor that may have a different relative impact upon operator numbers in different areas. Gross production, reported by the Census, includes all production of the farm unit whether accruing to the owner or operator. A crop-share operator would actually have a much smaller gross than the total production of the farm unit. The South Central region has a somewhat higher proportion of tenant farmers--30 percent compared to 27 percent for the West North Central region. In addition, tenant operated farms in the South average smaller relative to other Southern farms compared to those in the North Central region.[14] All of these operate to influence the regional differences noted in Table III-8, but it is not possible to give them quantitative values.

The complex of factors presumed most important in contributing to differences between potential and actual in Table III-8, are those related to reporting of income to the Internal Revenue Service. These were discussed in Chapter II and again in the subsection on race in this

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[14] U. S. Bureau of Census, Census of Agriculture: 1954, Vol. II, Chapter 10 (1956).

chapter. Among these are access to information, familiarity with accounting and reporting procedures plus others closely allied to socio-economic and education levels. It would be expected that these would operate to reduce reporting in the South since socio-economic and educational levels are lowest there.

Four North Central States were observed to have an OASI operator population over 100 percent of the potential by the method employed in Table III-8. This serves to reinforce the argument previously employed in treating the numbers having off-farm employment. It is a partial measure of the extent to which more than one individual receives self-employment income from one farm. One class of these would be partnerships, with a sub-class--but by no means all--of landlord-tenant partners. Another would consist of youth with a small enterprise. In the better agricultural areas these enterprises would be expected to be sufficiently large to surpass the OASI minimums. In poorer agricultural areas multiple operators per farm are less likely to occur.

Summary

Chapter III begins a quantitative investigation into the nature of the farm operator population of the OASI data. Other commonly used statistical series are employed as a comparison, particularly the 1954 Census of Agriculture. A comparison of the age distribution of OASI operators with Census operators shows surprising similarity. In spite of this, implicit definitions of the two populations raise questions that

OASI is actually a random sample of operators from the Census. As an example, "other" Census farmers are found to have the same proportion in the higher age brackets as OASI operators having only self-employment from the farm. But 60 percent of the operators of Census of Agriculture "other" farms were so defined as to bar them from being a part of the OASI operator group having only self-employment income from farming.

OASI data have a very small proportion of Negro farm operators. This, together with regional comparisons, points to the importance of socio-economic factors in determining those farm operators who are included in the OASI population. Regions with the lowest average value of sales per farm are found to have the lowest proportionate representation in the OASI farm operator population. Not only is sufficient income to qualify a factor, but knowledge and advice concerning reporting procedures has an influence. Definitional differences between the Census of Agriculture and OASI permit more than one operator per farm in OASI data. This also acts to include relatively more in the OASI farm operator population in the more economically advantaged areas.

CHAPTER IV

THE SIGNIFICANCE OF OASI FARM OPERATORS IN THE AGRICULTURAL ECONOMY--A COMPARISON OF NUMBERS AND AGRICULTURAL PRODUCTION

This chapter proceeds further with the quantitative definition of the farm operator population from OASI data. Its main objective is to determine their importance in the agricultural economy. Knowledge of the contribution made by OASI farm operators is essential to the usefulness of OASI statistics in policy decisions concerning farmers.

A somewhat involved mechanism is employed in this determination. The Census of Agriculture classification of farms by economic classes is used as the immediate means for computing the agricultural production accounted for by OASI operators. Assignment to economic classes is, in turn, made on the basis of cross-comparisons between OASI, Census of Agriculture and other data sources. Findings from other studies and concepts from preceeding chapters are used liberally. It is necessary to compare total populations from the several data sources in some detail. This comparison yields a substantial harvest of insights into inter-relationships between the different farm operator populations.

Such a translation of data from BOASI into terms of a Census of Agriculture classification necessarily involves subjective treatment. Direct empirical facts are lacking for a number of items that must be

assigned a numerical value. Where this is necessary, estimates are made on the basis of the best available knowledge of the true relationships. Occasionally figures must be designated somewhat arbitrarily, but an outline of the mental process used is included wherever the estimate may have a substantial influence on the result. This is done in full knowledge of the risk involved; later studies may--almost certainly will--expose errors of judgment. At the same time details are included with the hope that they will serve as stepping stones to urgently needed improvements in the confidence that can be placed in our agricultural data.

A Comparison of Farm Operator Populations

Sources of data for the farm operator population were discussed briefly in the introductory chapter. It is now necessary to consider these in detail. Each bears a particular relationship to OASI farm operator data, and because of characteristics that are distinctive each data series can contribute insights into the makeup of the farm operator population derived from OASI.

A brief overall look at the total numbers of farm operators as defined by each data source will be useful:

	Data Source	Total No. of Operators (To Nearest 1000)
1.	Old Age and Survivor's Insurance, 1955[1]	1,876,000
2.	Census of Agriculture, 1954[2]	4,780,000
3.	Current Population Survey, 1955[3]	4,792,000
4.	Internal Revenue Service, 1955[4]	3,700,000

The total number of farm operators in the OASI data, as indicated by the one percent Continuous Work History Sample, is 1,888,400. There were 12,300 of these found to be in territories and possessions of the United States. This is subtracted from the total number to make it comparable with the Census of Agriculture, which only includes operators in the 48 states of the continental United States.

All farm operators of the Census of Agriculture totaled 4,783,021. Operators of abnormal farms comprised 2,693 of these. After their elimination and rounding of the figures, the result was 4,780,000 operators. Census of Agriculture data are for 1954 whereas all others used here are for 1955. This raises the question of adjusting for the reporting period. Farm numbers are thought to have fallen between 1954 and 1955 by about 100,000.[5] The Census of Agriculture was taken in October of

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[1] From a tabulation of data supplied by BOASI.

[2] U. S. Bureau of Census, Census of Agriculture, 1954, Vol. II (1956).

[3] U. S. Bureau of Census, Current Population Reports, Consumer Income Series P-60, No. 23 (November, 1956), p. 23, table 10.

[4] U. S. Internal Revenue Service, Statistics of Income, Individual Income Tax Returns for 1955, Internal Revenue Service Pub. No. 79 (1958); Corporate Income Tax Returns, July, 1955 to June, 1956, Internal Revenue Service Pub. No. 16 (June, 1958); Partnership Returns, 1953, Internal Revenue Service Pub., No. 369 (1957); plus Partnership Reports for 1945 and 1947.

[5] U. S. Agricultural Marketing Service, Farm Income Situation (July, 1959), estimates 5,201,000 farms in 1954, 5,087,000 in 1955.

Farm population estimates behaved qualitatively like the numbers of individuals receiving farm self-employment income as estimated by the C. P. S. (See also footnote No. 6.) Farm populations, estimated by A. M. S. were: 1953 -- 22,679,000; 1954 -- 22,099,000; 1955 -- 22,438,000.

Source: U. S. Agricultural Marketing Service, Farm Population Estimates for 1950-1959, AMS-80 (February, 1960).

1954 and counted operators on farms. All the other data sources use receipt of income from farm self-employment in 1955 as the basis for determining an operator. No clear procedure was available to allow for these factors and any change because of time would appear to be small. For these reasons no adjustment for time is made to data of the Census of Agriculture.

The Current Population Survey statistic is useful in this study because it defines farm operators in the same manner as the OASI--on the basis of the receipt of income from farm self-employment. Since it does not have the institutional restrictions of either OASI or the Internal Revenue Service data, it gives the full range the farm operator population on the basis of the net income or loss criterion. Its one definitional restriction--that it only includes individuals 14 years of age or over--is not serious. Only two of the 18, 884 farm operators in the OASI sample were younger than 14. A more serious fault is its sampling error. Current Population Survey data come from a survey that involved only 15, 000 households to represent the entire United States population. The 1955 figure is used under the assumption that it is the best estimate available despite possible sampling variations.[6]

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[6]See data source for discussion of its sampling error. This is also indicated in the year to year variations of Current Population Survey farm operator population:

1953 -- 4, 766, 000
1954 -- 4, 425, 000
1955 -- 4, 792, 000

OASI data of self-employed farmers are derived from the income tax reporting system of the Internal Revenue Service. For this reason data from Statistics of Income play an important role; they can be used to indicate those who reported farm self-employment income to the Internal Revenue Service but were not counted as farm operators by the BOASI. In most cases insufficient income is the reason for these omissions. The Internal Revenue Service statistics also have a number of less important uses in defining the OASI data of farm operators.

Three types of business organizations report self-employment income to the Internal Revenue Service: sole proprietorships, partnerships and corporations. Some adjustments involving these are necessary to arrive at a figure comparable to that of farm operators from the OASI data. There were 3,417,000 sole proprietors reporting farm income in 1955. To this, 302,000 individuals reporting through farm partnerships are added.[7] The sum, 3,719,000, is reduced by .5 percent to eliminate

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Total farm population estimates exhibited similar change but of less magnitude. Farm population (estimated on basis of residence) fell in 1954 and then rose 1.5 percent, compared to the 8 percent rise in 1955 in numbers of C. P. S. farm operators noted here. This suggests that not all the year-to-year variation in C. P. S. farm operator numbers was due to sampling.

[7] There were estimated to be 140,000 partnerships reporting farm income in 1955. This is made on the basis of the following numbers reported:

Year	Number of Partnerships
1945	97,000
1947	114,000
1953	135,000

In 1953 there were 2.4 partners per partnership; 2.4 x 140,000 = 336,000.

numbers of those in territories outside the continental United States.[8] Nine thousand corporations reported farm income but individuals working for them, except as renters, would not fall in the category of those receiving self-employment income. Corporations are thus not included in the number. All above sums and adjustments total 3,700,000 individuals reporting self-employment income from farming to the Internal Revenue Service. This is used as the number of Internal Revenue Service operators comparable to the 1955 OASI data although there may be some need for further adjustments because of different cut-off dates that cannot be specified.[9]

An adjustment to this number was thought necessary to allow for cases of one individual reporting in two or more partnerships or as both a partner and a sole proprietor. No empirical data could be found to serve as a basis for such an adjustment--unfortunately data on U. S. farm partnerships hardly exist. An arbitrary assumption of one case in ten was made. This reduced the net number reporting through farm partnerships to 302,000.

[8] Statistics of Income for 1955 reports .4 percent of all sole proprietorships to be outside the continental United States; OASI data has .6 percent. The .5 percent factor is used as a compromise.

[9] The cut-off date of the OASI data used in this study is May, 1957. This is over a year past the filing deadline for 1955 income that is reported on a calendar year basis. A three-year statute of limitations was in effect making April, 1959 the last date on which self-employed farmers could report 1955 income and be included as part of the OASI operator population. The cut-off date of the OASI data is five months later than that of Internal Revenue Service data. This latter source included as 1955 farm operators, all returns received in calendar 1956, making December, 1956 its cut-off date.

Next to the OASI data itself, statistics from the Census of Agriculture are the most important in this comparison. Far more use is made of Census of Agriculture data than any other, and they are much more comprehensive. Other data series are used by this section because they aid in translating OASI data into terms of the Census rather than as standards for comparisons. It is useful to compare Current Population Survey farm operator data to the Census, and OASI data to that of the Internal Revenue Service and the Current Population Survey in the development of quantitative factors to enable a reasonable transposition of OASI farm operators into Census terms.

Numbers of Farm Operators of the Census of Agriculture and the Current Population Survey

Since Current Population Survey farm operators are regarded as containing the full range of the population from which OASI farmers are drawn, they can be used to give an overall comparison with the Census farm operators.

Numbers of Census and Current Population Survey farm operator populations are nearly the same, 4,792,000 and 4,780,000 respectively. However, there are actually substantial differences. A post-enumerative check of the 1954 Census of Agriculture revealed 419,000 farms missed in the original count.[10] These would increase the number, as defined

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[10] U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. II (1956), Introduction, pp. xxxiii and xxxiv.

by the Census of Agriculture. This 419,000 who were missed is employed here to expand the conception of the Current Population Survey-Census distinctions. It is not used in later comparisons.

A comparison of total farm numbers between the Current Population Survey and Census of Agriculture, requires an allowance for cases where two or more individuals received self-employment income from the same farm unit. This is accomplished by using an 8 percent adjustment, estimated later in the chapter,[11] as the increase in numbers of Current Population Survey farmers due to multiple operators per farm.

The comparison of farm numbers in the Current Population Survey and Census can be summarized:

Census of Agriculture	4,780,000	
plus number of undernumeration	420,000	
less estimated reduction 1954-55	100,000	
Total farms, Census of Agriculture		5,100,000
Current Population Survey, operators	4,790,000	
less multiple operators per farm	380,000	
Total farms, Current Population Survey		4,410,000
Discrepancy		690,000

[11] This estimate is made for the OASI data and there can be question that it applies equally to the full range of the Current Population Survey operator population, since the latter includes more than twice as many. It is thought that there may be some compensating factors operating to reduce error. In any event the estimate made at this point is used only for conceptual purposes, not to provide figures for computation.

An interpretation of the almost 700,000 discrepancy suggests that there were this number of farms as defined by the Census with little or no actual farm operations being performed upon them. In some cases, individuals with small farm operations may have ignored farm income when reporting in the Current Population Survey.[12] The sampling error of the Current Population Survey must also be kept in mind. This is, however, a measure of Census farm units that were relatively unimportant in the agricultural economy.

Quantitative Comparisons between OASI and Current Population Survey Statistics

Minimum income requirements are assumed an important reason for the difference between numbers in the OASI farm operator population and those in the Current Population Survey data. There are also other differences that result from the institutional framework of OASI. Finally there remains another important item--apparent failure to report properly. These factors are assigned numerical values in this section.

Minimum Net Income Restrictions. --Basically, individuals with a net income below $400 from farm self-employment should not be in the OASI farm operator population. This segment of the Current

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[12] Income information was incomplete on about 5 percent of the persons in the Current Population Survey. Also see Table IV-5. A much higher proportion of operators of small farms failed to report income in 1950.

Population Survey operators is easily calculated from the distribution in Table IV-1. Those with less than $400 net from farm self-employment comprise 40.5 percent of the Current Population Survey operator population, or 1,941,000 operators.[13]

This leaves 2,851,000 who were apparently eligible for OASI. This number is almost a million larger than the actual OASI figure. Whence this large discrepancy? The following are suggested as areas for further exploration:

1. Possible differences in income definitions.
2. Those adding self-employment income from other sources to farm self-employment income.
3. Effects of optional reporting procedures.
4. Individuals with wages and/or salaries of $4,200 or over.
5. Reporting failure and late reporting.

Differences in Income Definitions. --It has already been noted that OASI excluded consideration of certain items of income that might properly be regarded as actual farm production. These were mainly livestock kept for breeding or dairy purposes; income from their sale is treated as capital sales. Such income, rightly accountable as farm

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[13] Estimated by adding four-fifths of the 34.3 percent with income in the $1 to $499 range to the 13.1 percent reporting a loss. This does not necessarily assume a linear distribution, and it is obvious that such cannot be the case. An examination of the two classes immediately above $500 suggests that not over 5 percent can be in the $500-$599 range, and probably there are not over 4.5 percent. This is assumed to place the mode below $400 so that an estimate of 6.9 percent in the $400-$499 range would not be unreasonable. It also suggests that there are more with incomes closer to $400 than to $500.

TABLE IV-1. Distribution of persons 14 years of age and over, by farm self-employment income, 1955[a]

	Percentage distribution (%)
Loss	13.1
$1 to $499	34.3
$500 to $999	15.6
$1,000 to $1,499	10.7
$1,500 to $1,999	6.8
$2,000 to $2,499	6.7
$2,500 to $2,999	2.9
$3,000 to $3,499	3.0
$3,500 to $3,999	1.2
$4,000 to $4,499	1.5
$4,500 to $4,999	0.8
$5,000 to $5,999	1.0
$6,000 to $6,999	0.6
$7,000 to $9,999	0.8
$10,000 to $14,000	0.3
$15,000 to $24,999	0.4
$25,000 and over	0.2
Total	100.0
Total number receiving farm self-employment income = 4,792,000	

[a]Source: U. S. Bureau of Census, Current Population Reports, Consumer Income, Series P-60, No. 23 (November, 1956), Table 10.

production, is estimated at 10 to 12 percent of net farm income.[14] This means that those reporting $450 and below of net self-employment farm income in the Current Population Survey would be excluded by the $400 net income rule of OASI. An estimate of 6.9 percent of the Current Population Survey farm operator population in the $400 to $499 net farm income range has been made. Since the mode of the Current Population Survey distribution is assumed to be below $400, more than half of those in the $400 to $499 range or 4 percent are estimated to be in the $400 to $499 income range. This reduces the number in the Current Population Survey eligible for OASI coverage from net farm income by 192,000.

Receipt of Other Self-Employment Income. --An estimate of the number of farm operators with nonfarm self-employment income is given by the Farm Expenditure Survey as 440,000 in 1955.[15] Operators in this survey were defined according to the Census of Agriculture. OASI data indicated 275,000 operators with nonfarm self-employment

[14] Details of the value of sales that are farm production but required to be handled as capital sales are given in Chapter V, Table V-2. The $1,049 million estimated there is 13 percent of the $8.1 billion net cash income from farming in 1955. This assumes Current Population Survey farm income to be reported differently than Internal Revenue Service income. See: U. S. Department of Agriculture, Major Statistical Series of the USDA, Vol. III, op. cit.

[15] U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. III, part 11, Farmers' Expenditures (1956). Estimated from Tables 10 and 12. This survey was actually done in 1955, although it is included as part of the 1954 Census of Agriculture. The possibility of errors in the data from this survey must be noted: (1) Due to sampling error--fewer than 5,000 farms were involved; (2) The survey depended upon memory.

income. This is 63 percent of the 440,000 reported by the Census and compares with the proportion of 40 percent that all OASI farm operators are of all Census operators. There are reasons why a higher proportion of operators with nonfarm businesses might appear in the OASI data: (1) They are thought more likely to be acquainted with the income tax reporting system; (2) They may be counted as the second operator per farm in relatively more cases, and (3) they are not subject to the $400 minimum from a farm operation in order to be considered as farm operators by the OASI.

Self-employment income from two or more sources may be added together to make the OASI minimum of $400 net. Thus farm operators may report farm net incomes of under $400 if it is added to other self-employment income. They may even have used the optional method to report one-half of a gross farm income of under $800 as long as this amount, less than $400, plus the other self-employment income totaled $400 or more.

The data used in this study did not separate farm and nonfarm self-employment income. This necessitates an estimate of those reporting net farm income below $400 by adding other self-employment income with it. The number falling in this category is estimated at 55,000 or 20 percent of the total of all OASI operators receiving other self-employment income. There remain 220,000 in the OASI group with nonfarm self-employment having net incomes over $400; a number equal to 50 percent of the Census of Agriculture category

having nonfarm self-employment income. This is still a larger proportion than all OASI operators are of all Census operators. The arguments given above indicate that such should be the case thus supporting the estimate of 20 percent, with under $400 net from farming, as being within the proper order.

Optional Reporting Procedures. --Those who used the optional procedures to report farm income could have: (1) been eligible by reason of a net self-employment farm income of $400, but used the option to increase taxable income up to $900 or (2) been ineligible on the basis of net income but reported one-half of gross income of $800 to $1,800 in order to receive coverage from farm self-employment. An estimate of this second group, is needed in the reconciliation of Census of Agriculture and OASI operator numbers.

BOASI reports 16 percent to be using the optional method in 1955.[16] Assuming the same percentage to apply to the data used in this study, 300,000 reported farm income by the optional procedure. This, of course, represents the top limit of the increase to the numbers occurring from use of the option. Specific clues to guide an estimate of those in the OASI farm population because of the option are sparse. One consideration was the author's experience in assisting farmers in

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[16] U. S. Department of Health, Education and Welfare, Farm Coverage Statistics (November, 1957), Table 7 Revised (November 5, 1958).

reporting to the Internal Revenue Service in 1956. Those who optioned out are thought to be of little consequence. Another indication is given in Table III-3. It will be noted there that a 25 to 35 percent higher proportion of those in the "sixty and above" age group reported in comparison with younger age groups. If we assume two-thirds of this higher proportion as due to optional reporting, a result is about 150,000 from this age group alone who used the option to become eligible. Those over sixty are thought to have used the option in substantially greater proportions in their eagerness to qualify under OASI. This is at least partly supported by the fact that farmers throughout the age categories between twenty and fifty-nine reported in similar proportions. Farmers under sixty might have also qualified optionally but a rough assumption is that those doing so just balance the number who are sixty and over who changed farming operations or used other devices to qualify on the basis of net income.

The figure of 150,000 is equal to exactly 50 percent of all estimated to be reporting optionally. This makes it a suitable compromise choice as the net increase because of optional reporting, in addition to the crude evidence marshalled in its support.[17]

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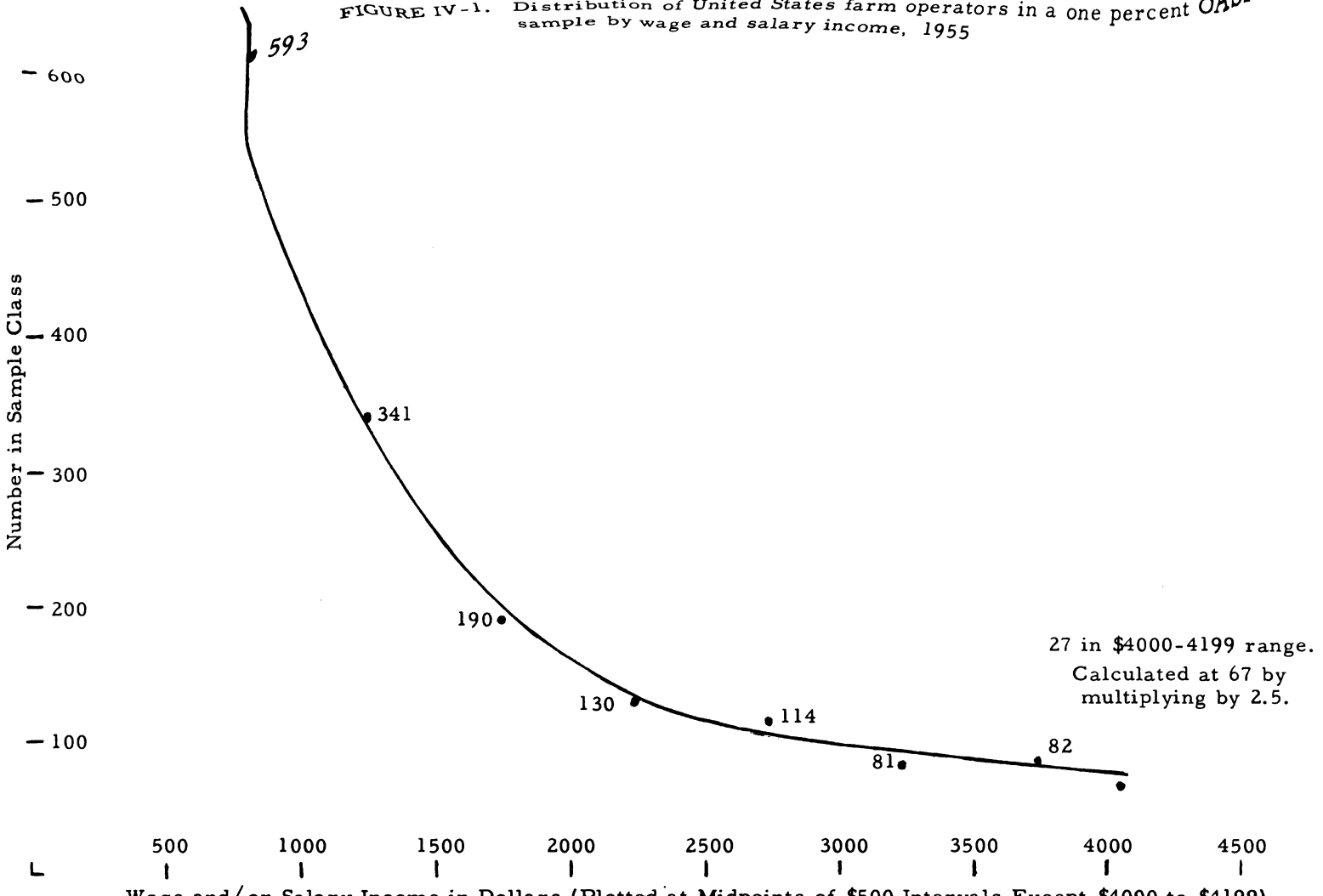
[17] An interesting aside on the optional problem is that BOASI loosely estimated the number who were eligible because of gross income but ineligible because of net at 300,000; from an internal memorandum of the BOASI, "Estimated Coverage and Compliance by Self-employed Farm Operators." A categorical study of the Census of Agriculture farm operators by Economic Class of farms suggests the number may be 500,000 to 600,000 (see latter sections of Chapter IV).

Receipt of Wage and Salary Income of $4, 200 and Over. --The distribution by wage and salary income of all farm operators receiving it is plotted in Figure IV-1. This serves to verify the hypothesis that those who received over $4, 200 from this source were almost entirely excluded from the farm operator population. Of the 3, 604 in the 1 percent sample, 4 had exactly $4, 200 from wages and salaries and one reported receiving above this figure. The curve of the distribution thus drops abruptly to zero at $4, 200. Those receiving above $4, 200 are estimated by assuming that the distribution of wage and salary incomes is proportionately the same for this group as for all United States wage and salary receivers. Details are given in Table IV-2. According to this method of estimation, OASI farm operator population is smaller by 27. 000 because of the $4, 200 maximum on taxable income.[18]

[18] A note is in order concerning the method of extrapolating beyond the known distribution as shown in Figure IV-1, and in Table IV-2. It would be possible to fit a mathematical curve to the data, however this amounts to assuming a shape for the distribution that would be determined by the particular equation employed. An empirical guide is thought better even though there are likely to be differences in the distribution of wage income of all wage earners and that of the wage earners in the farm operator population.

The strong right skewness observed in the income distribution curve, Figure IV-1, suggests a hypothesis that supports the method of estimation used. Possibly two populations are involved in the group of OASI farm operators who have off-farm wages. These could be composed as follows: The almost vertical part of the curve on the left is made up mostly of those who are basically not wage earners and/or whose total income is low; the flat right segment of the curve is made up of those who are more properly wage earners, rather than farmers. Chapter VI supports this contention by showing that farm operators with relatively high sustained wage incomes have substantially lower incomes than average from farm self-employment. To the extent that this part of the farm operator population is composed of those who are basically wage earners, the use of a general distribution of wage earners by income as a guide for extrapolation is not in error.

FIGURE IV-1. Distribution of *United States farm operators* in a one percent OASI sample by wage and *salary income, 1955*



Source: A tabulation of data from BOASI.

TABLE IV-2. Summary of estimate of farm operators excluded from OASI farm operator population because of $4,200 maximum OASI taxable income, 1955

Income category ($)	Distribution of income received from wages and salaries in the U.S. in 1955[a] (%)	Distribution of wage and salary incomes of farm operators from OASI data: In OASI population[b] (1000's)	Distribution of wage and salary incomes of farm operators from OASI data: Estimated[c] (1000's)
Under 1,000	25.8	263.4	
1,000 to 1,999	14.0	53.1	
2,000 to 2,499	8.1	13.0	
2,500 to 2,999	7.0	11.4	
3,000 to 3,499	9.0	8.1	
3,500 to 3,999	7.8	8.2	
4,000 to 4,499	7.6	3.2[d]	4.8[d]
4,500 to 4,999	5.3		5.7
5,000 to 5,999	7.7		8.1
6,000 to 9,999	6.8		7.2
10,000 and over	1.1		1.2
Totals	100.0	380.4	27.0

[a]Source: U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 23 (November, 1956), Table 10.

[b]Numbers in this column are from tabulations of data from the Continuous Work History sample supplied by BOASI. Data are for all United States territories but this is regarded as introducing an error of less than 1 percent.

[c]Figures in this column are those parts of the distribution missing because of the $4,200 limit on reporting of taxable income to BOASI. These are farmers who did not report farm self-employment income to BOASI because their wages were $4,200 or higher. The estimate is made by assuming that the distribution above $4,000 is proportionately the same as that of wages and salary incomes for all wage and salary receivers as reported by the Current Population Survey.

[d]Actual data only include incomes from wages and salaries to $4,200. It stops abruptly at this point with only one individual reporting wage and salary income over $4,200. This is regarded as proof of the hypothesis that a number with wage and salary income above $4,200 were excluded. In the $4,000-$4,499 income category the "actual" and "estimated" columns together total 8,000.

Reporting Failure and Late Reporting. --The preceeding discussion of various segments of the Current Population Survey farm operator population can now be summarized. A result is an estimate of those apparently eligible for coverage who failed to report:

			Thousands
1.	Total 1955 CPS farm operator population		4,792
	A. Exclusions:		
	(1) Of net farm self-employment income below $400	1,941	
	(2) Added exclusions because of differences in OASI and CPS farm income definitions	192	
	(3) Over $4,200 wage income	27	
	B. In OASI population but with net income from farm self-employment below $400:		
	(1) Net because of optional reporting	150	
	(2) Adding farm income below $400 to other self-employment income	55	
	C. Net number excluded from OASI (A minus B)		1,955
2.	Total eligible for coverage under OASI from farm self-employment net income		2,837
3.	Less OASI farm operators		1,876
4.	Discrepancy		961

The discrepancy of 961,000 farm operators is interpreted as those who failed to report--either an outright failure, or who reported late. All of these were required to report farm self-employment income on the basis of their net incomes. This does not include those who might have reported optionally had they chosen to do so, but who did not exercise the option.

BOASI estimates a total of 2,336,000 in the farm operator

population of continental United States when all reports are in.[19] According to this, 380,000 of the 961,000 indicated as reporting failures, will eventually report farm self-employment income to BOASI. This is the result of the cut-off date of the data that are used in this study. "Late reporters" are treated here in the same manner as reporting failure. In many cases data from an earlier cut-off date will be more timely and thus more useful. Later studies should be able to determine the nature of distortions resulting from use of such data.

Failure to report has already been treated to some extent. More thorough discussion will follow in this chapter. For this reason there is no further elaboration at this point.

Multiple Operators per Farm

In computing the total number of individuals in the Internal Revenue Service farm operator group, data of partnerships were used. This provides a starting point for an estimate of the cases of multiple operators per farm for use in comparing OASI and Census of Agriculture data. The added number estimated to result from two or more operators on one farm unit is 161,000 operators,[20] or 4.4 percent of the total

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[19] U. S. Department of Health, Education and Welfare, Farm Coverage Statistics, 1955 (November, 1957), Table 7 Revised (November 1958). This estimate is made from partial returns, on the basis of experience with nonfarm reporting.

[20] There were 140,000 partnerships estimated, with a net of 302,000 partners. 302,000 minus 140,000 is 162,000. This is reduced by 1,000 to allow for those reporting from outside the 48 continental states.

Internal Revenue Service operator population.

On the basis of average gross farm incomes per individual, it would appear that those reporting partnership farm income should be relatively more numerous in OASI than in the Internal Revenue Service data. The average gross for individual partners was $8,680. This was 40 percent above the average of $6,080 for sole proprietors. Higher average incomes for operators involved in partnerships suggest that fewer of them would be excluded by minimum OASI income requirements and other factors in the complex related to reporting of taxable income to the BOASI. The proportion of partners in OASI data is increased 50 percent--to 6.5 percent--as a conservative allowance for their higher incomes.[21]

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[21] Qualifications to the use of those reporting as partners to the Internal Revenue Service as a measure of cases where OASI counted two or more operators on one Census farm, must be recognized. On the one hand there may be a distortion resulting from cases where two or more individuals reported on form 1065 (the Internal Revenue Service partnership form), but the Census of Agriculture enumerated their operations as several separate farms. There are other cases of two or more farmers on one farm unit who do not use form 1065, instead each reports his share of expenses and receipts separately on 1040F (the individual Internal Revenue Service form for reporting farm income in 1955, now Schedule F). Since adequate means of allowing for these considerations are not available they can only be given expository recognition--amounting to the assumption that they cancel each other.

In Chapter II it is theorized that splitting of incomes from a small farm business may decrease the number eligible for OASI coverage from farming. This does not affect the problem under consideration at this point. Here the discussion concerns only those actually in the OASI population and their relationships to the Census of Agriculture population of operators.

In 1954 there were approximately 1.5 family workers per farm in the United States.[22] Some of these were the partners mentioned above, although it is possible to be a bona fide farm partner without qualifying as a member of the agricultural working force. Some of these were spouses. Others were children. There are certain to be cases where children have projects as with 4-H or F. F. A. in which they receive an income requiring them to report to the Internal Revenue Service. In areas where agriculture is heavily commercialized, such cases may become important.

Vocational agriculture statistics from the commercial agricultural states of Illinois, Indiana, Iowa, Missouri and Ohio, were employed as a guide. There were an estimated 63,000 vocational agriculture boys in those five states in 1955. Fifty-six thousand of these were making money from projects--amounting to 6 percent of the number of farms in this area. Fifteen thousand are estimated to have project incomes of $400.[23]

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[22] U. S. Agricultural Marketing Service, Farm Employment, Statistical Bulletin No. 236 (September, 1958), p. 15, reports an average of 6,579,000 family workers in 1954. Census of Agriculture: 1954, Vol. II, Chapter 11, p. 1150 reports 6,869,693 family workers from 4,242,000 farms.

[23] Estimates made here based upon figures obtained separately from the Vocational Education Divisions of the five states. It was not possible to secure figures for 1955 from every state, nor were all the factors considered available in each case. While the numbers given are the best that could be done with what exists, short of extensive research, they are guides--not firm figures. They are used here to indicate the order of magnitude of youths in the OASI operator population.

The age distribution of the OASI data neither supports nor denies this estimate of 1.5 percent for family members who were not partners. There were .3 percent under twenty, and 2.4 percent in the 20-24 year age range.

The 15,000 figure will be noted as almost 1 percent of all OASI operators. Youth with profitable projects are regarded as concentrated in this area--these five states sold one-fourth of the value of all agricultural products in 1954, but there will be substantial numbers in other states. In addition, not all youth will be included within the Vocational Agriculture figures. An allowance for reporting problems, plus other factors named above, suggests an estimate of 1.5 percent for the family members in the OASI population as a conservative allowance.

The OASI farm operator population is estimated to contain 8 percent who live with another operator on the same Census farm. This is needed in analyzing interrelationships between Census of Agriculture and OASI data. Items involved in this estimate are: Numbers reporting farm partnership income to the Internal Revenue Service, their incomes compared to sole proprietors, and family members with farm incomes.

Overall Reconciliation of OASI, Census of Agriculture, Current Population Survey and Internal Revenue Service Data

A summary of the overall relationships between the four data sources used in this study is now possible. This is dependent upon the estimates and assumptions made in the foregoing part of the chapter. It is presented in tabular form in Table IV-3.

Table IV-3 can be understood better by means of the following reasoning steps:

TABLE IV-3. Reconciliation of OASI, Census of Agriculture, Current Population Survey and Internal Revenue Service farm operator numbers

Farm income characteristic of operator group	Data sources[a] BOASI (1000's)	Ag. Census[b] (1000's)	CPS (1000's)	IRS (1000's)
1. Number in each population also appearing in OASI population:	1,876	1,726	1,876	1,876
a. Over $400 net taxable income	(1,671)	(1,536)	(1,671)	(1,671)
b. Under $400 net taxable income[c]	(205)	(190)	(205)	(205)
2. Reporting income from farm self-employment to IRS but not to BOASI[d]	-----	1,680	1,824	1,824
3. Over $400 net farm taxable but not reporting income from farm self-employment to IRS	-----	883	961	-----
4. Under $400 net taxable income and not reporting income from farm self-employment to IRS	-----	491	131	-----
Totals	1,876	4,780	4,792	3,700

[a]Source: See text page 82.

[b]Numbers in OASI and CPS populations are reduced 8 percent, to allow for farms with more than one operator, in the determination of the corresponding number in the Census population, except for item 4.

[c]Those in the OASI operator population who have less than $400 net income are estimated as 150,000 because of optional reporting procedures plus 55,000 who add self-employment income from nonfarm sources. Corresponding figures in the Census data are 140,000 and 50,000.

[d]CPS and IRS figures contain 27,000 estimated to have over $400 net income from farm self-employment but because they also have $4,200 income from wages they do not appear in the OASI operator group. Also see footnote 24.

1. The procedure starts with the number in the OASI farm operator population of row 1. These same operators must be in the Internal Revenue Service population and are assumed to also be in the Current Population Survey group.

Eight percent of those in the OASI population are assumed not to have been counted as operators by the Census. This is an allowance for more than one operator per farm. The same relationship--the Census number equals the Current Population Survey number, less 8 percent--is carried through rows 2 and 3.[24]

2. Once the number in the Internal Revenue Service who report to OASI is known the number who are not in the OASI population but who reported farm self-employment to the Internal Revenue Service can be determined by subtraction. This is assumed to be the same number in the Current Population Survey population, but lower by 8 percent in the Census.

3. An estimate of 961,000 for the number of individuals with net taxable farm self-employment incomes over $400 but who did not report self-employment income from farming to the Internal Revenue

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[24]Some error in this assumption for rows 2 and 3 of the Census-CPS-IRS relationships may be present but means are lacking to specify this relationship more suitably. For example in row 2 it is likely that partners reporting to CPS are less prominent than the 6.5% estimated, but other family members with small net incomes from farming should be more prominent than the 1.5% estimated for them. It is also possible that row 2 contains a number of small farmers who are actually partners but do not use the more complicated method of reporting income tax on form 1065. Thus changes may be at least partly offsetting.

Service was made earlier in this chapter. These are in the Current Population Survey population and 8 percent fewer are assumed in the Census population.

4. The numbers with taxable farm self-employment net incomes below $400 and not reporting to the Internal Revenue Service are computed as residuals for the Census and the Current Population Survey populations. The numerical value determined in this way is used in the comparison of OASI and Census economic classes of farms that follows immediately.

According to this procedure the number of Census farm operators who did not report to the Internal Revenue Service is not the simple difference between the two total populations--1,080,000; rather, it is the sum of rows 3 and 4--1,374,000. This is 27 percent of all Census farm operators in 1954 who did not report farm income to the Internal Revenue Service. Combining this with the conclusion of Stocker and Ellickson, it is seen that the 27 percent of operators who failed to report accounted for 14 percent of the sales of farm products in 1955.[25] This indicates their relative unimportance in the agricultural economy.

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[25] F. C. Stocker, and J. C. Ellickson, "How Fully Do Farmers Report Their Incomes?" National Tax Journal, Vol. XII, No. 2 (July, 1959), pp. 116-126. They conclude that reports to the Internal Revenue Service included 86 percent of the receipts from sales of farm products, in 1955.

OASI Operators Classified by Gross Farm Income

The foregoing part of this chapter serves as prologue to this section and the next. Here OASI farm operators who are also Census farm operators are classified by their gross farm income. The next section reconverts this into a classification by economic class of farm to permit an estimate of total agricultural production.

Useful insights have been achieved thus far into the makeup of OASI farm operator data. Additional relationships are brought to light in this section. These contribute understanding in their own right, but serve the primary purpose of aiding in the estimate of agricultural production accounted for by OASI operators. The immediate discussion focuses upon Census of Agriculture and OASI data, drawing upon relationships with other farm data that have already been established.

Economic Classification of Farms. --The economic classification of farms as used by the Census of Agriculture is a key tool in this estimate.[26] Farms are classified into eight groups on the basis of similar characteristics and problems.[27] Three factors are used as the basis for classification: size of business, or the total value of farm products sold; number of days the farm operator worked off the farm; and the relationship of

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[26] U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. II, Chapter II (1956), pp. 1131 and 1132.

[27] K. L. Backman, "An Appraisal of the Economic Classification of Farms," Journal of Farm Economics, Vol. XXX (1948), pp. 680-702.

income received from nonfarm sources by the operator and members of his family to the value of farm products sold.

In addition to the factors used by the Census of Agriculture in making the classification, other studies have associated various socio-economic characteristics of operators and farm families with the eight classes. Some of the more important of such items are listed in Tables IV-4 and IV-5. Extensive use is made of the characteristics shown in these tables in categorizing OASI farm operators. Table IV-5 can be used to illustrate this: This table shows the proportion of farm operators reporting incomes of less than $500 from their business and those not reporting income of any kind. These proportions provide approximate guides for inferences of those who would be ineligible for OASI coverage, or who might not be reporting to OASI. There is a difference in years treated, Table IV-5 is for 1949 and 1950,[28] and the figure of net income is for $500 in the table, against the OASI minimum net of $400. These differences must be considered in making use of the table.

Conversion of the Economic Classification of Farms to a Classification of Farm Operators. --Gross income per farm unit is the basis for the Census of Agriculture's economic classes of farms. OASI data are in terms of the individual income receiver. To convert the Census classification

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[28] In the use of Table IV-5 differences in the farm situation between 1950 and 1954 are useful. Parity ration was 101 in 1950; 89 in 1954. Operator's net income per farm was $2276 in 1950, and $2357 in 1954.

from a gross per farm to a gross per operator an adjustment must be made for rented farm units. Details of this adjustment are given in Table IV-6. This adjustment allows for the landlord's return from rented land that is included in the economic classification of farms. Tenant operators are treated as having a gross equal to 60 percent of the gross of the farm that they operate. The resulting classification, the right hand column of Table IV-6, is a classification of operators by gross incomes. In later manipulations of these figures, as in Table IV-7, it is assumed that tenant operators have a net income, bearing the same relationship to gross as that of owner operators. This is justified on the assumption that expenses incurred by tenants in operating land that produces the landlord's rental payment compensate for taxes, interest, upkeep, and depreciation charges that are borne by an owner-operator on his entire owned acreage.

Census Farm Operators in the OASI Farm Operator Population by Gross Farm Income. --Table IV-7 is an extension of Table IV-3. In it the Census of Agriculture operators are classified according to the reporting of farm income to the Internal Revenue Service and the BOASI and by gross farm sales classes. This is used as a systematic means of examining farms and farm operators from an overall point of view. The characteristics of farm operators in a given economic class imply certain relationships between the number in the class and economic classes

TABLE IV-4. Selected characteristics of farms and farm operators, by economic classes of farms, 1954

Economic class of farm	Number of farms and farm operators[a]	Midpoint of class interval[a]	Average value of gross sales[a]	Average farm expenses as a percent of gross[b]	Percent with other family income exceeding value of sales of agri. products[a]	Percent operators working off-farm[a]	Percent operators working off-farm 100 days or more	Percent operators with nonfarm business[c]
(gross sales)	(1,000's)	($)	($)	(%)	(%)	(%)	(%)	(%)
I. Over $25,000	134	-----	57,000	36.9	4.6	20.2	7.8	24.3
II. $10,000 - $24,999	449	17,500	14,900	35.2	4.4	27.2	7.4	11.8
III. $5,000 - $9,999	707	7,500	7,200	35.6	6.4	31.2	10.2	7.5
IV. $2,500 - $4,999	812	3,750	3,700	37.3	12.6	36.3	16.2	10.4
V. $1,200 - $2,499	763	1,850	1,850	40.6	24.3	43.9	24.4	8.2
VI. $250 - $1,999	462	725	757	50.4	----	24.5	----	9.5
VII. $250 - $1,199	575	725	620	66.1	82.5	81.1	71.1	15.4
VIII. Below $250	878	125	-----	226.9	67.2	65.4	55.9	11.6
Total	4,780	-----	5,153	37.6	10.8	45.0	27.9	----

[a]Source: U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. II (1956), Chapter 11, Economic Classes of Farms.

TABLE IV-4. Continued

[b]Source: Same as footnote a. Does not include all farm expenses. The principal ones included are: fertilizer, machinery, labor, feed and fuel.

[c]Source: U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. III (1956), part 11, Farmer's Expenditures. Computed from tables 10 and 12.

TABLE IV-5. Farm operators not reporting income and reporting incomes of under $500, by economic class of farm, 1950[a]

Economic class	Number in each class	Reporting income from farms and business or profession of under $500[b]		Not reporting income[b]	
		Number	Percent of class	Number	Percent of class
	(1000's)	(1000's)	(%)	(1000's)	(%)
I & II.	484.4	13.0	2.7	78.1	16.7
III.	721.2	25.0	3.5	111.6	12.0
IV.	882.3	87.8	10.0	160.8	18.2
V.	901.3	166.4	18.5	211.7	23.5
VI.	717.2	247.9	34.6	189.4	26.4
VII. (part-time)	643.4[c]	164.3	25.6	294.9	45.8
VIII. (residential)	1,029.4	165.1	16.0	652.2	63.2
Total	5,375.0[c]	869.5	16.1	1,698.5	31.4

[a]Source: U. S. Bureau of Census, Farms and Farm People (June, 1953), p. 33.

[b]Determined from a collation of Census of Agriculture and Population Census data.

[c]Less abnormal farms (4,216).

TABLE IV-6. Adjustment of numbers in the 1954 Census economic classes of farms to account for the inclusion of landlords' share of gross income[a]

Economic class	No. of farms[b]	Percent distribution	Adjustment for skew[c]	Part owners: Number[b]	Part owners: Percent dist.	Part owners: 18% income adjustment & skew adj.[d]	Tenant operators: Number[b]	Tenant operators: Percent dist.	Tenant operators: 40% income adjustment & skew adj.	Number of farm operators[e]
I	134,000	4	N	61,000	8	11,000	38,000	4	15,000	108,000
II	449,000	13	up 50%	159,000	21	43,000	127,000	13	77,000	355,000
III	707,000	21	up 12%	197,000	26	57,000	205,000	21	129,000	641,000
IV	812,000	24	N	151,000	20	39,000	235,000	24	131,000	828,000
V	763,000	23	N	135,000	18	35,000	221,000	23	125,000	773,000
VI	462,000	14	down 6%	53,000	7	12,000	134,000	14	70,000	540,000
	3,327,000	100		756,000	100		960,000	100		3,245,000
VII	575,000									575,000[f]
VIII	878,000									960,000[g]
Total	4,780,000[h]									4,780,000[h]

[a]This adjustment in effect converts the number of farms within each economic class to numbers of operators who are receiving incomes from gross sales within the specific class limits after deduction of the landlords' share. Adjustment is not made for numbers renting for cash or share since it is felt that the added complication would not improve the data for purposes of this estimate.

[b]Part-owners and tenant farmers make up 51.5 percent of all commercial farmers. The adjustment to gross is only made to commercial farms since other factors are more important in "other" farms. The 756,000 part-owners are given a distribution in which relatively more are in the "higher" economic classes and relatively fewer in the lower gross income classes. This agrees with a higher average income from farming for part-owners. Tenants are distributed in the same proportion as the

average. While some tenants have high incomes, the croppers must be balanced against this.

[c]Adjustment for skew is to allow for the fact that the distribution of farms within a class is not uniform, judged by a comparison of average gross sales within the class and the class midpoint as shown in Table IV-4. "N" means no adjustment for skewness. "Adjustment up" means that the number, taken from the given class and put into the next lower class because of removal of the landlord's gross, is increased to allow for heavy concentration in the lower range of the class. Renters are assumed to be distributed throughout each class in the same manner as other farmers.

[d]Part-owners on the average rent 45 percent of the land they operate (270 M. acres owned; 206 M. acres rented). The landlord's share is assumed to be 40% on rented land. This drops the average part-owner's gross by 18%. In the case of tenants, the 40% is used. In making the adjustment advantage is taken of the fact that the upper limit of each gross income class is double the value of its lower limit. The adjustment would be more difficult with narrower categories. Given even distribution throughout a class, an 18% reduction in gross income will put 26% in the next lower class, and a 40% reduction will put 56% in the class below. To partly allow for the open-ended nature of class I and for the fact that class II has a range equal to 150% of its lower limit, only 18% and 40% reductions (plus skew adjustment in II) are used in these classes. In all others 26% and 56% are dropped into the next lower classes, plus an additional skew adjustment in classes II, III and VI.

[e]The number in the adjusted classes is determined by adding those falling into it from the class above and subtracting the adjustments for part-owners and tenants.

[f]Actually some of the tenant operators from class V should have been placed in class VII as well as class VI. But an adjustment would have been difficult to determine because few part-time farmers are expected to be tenants or part owners. In any event such a change would make almost no difference since approximately the same number of Census operators are estimated to be in the OASI from classes VI and VII.

[g]Since all those falling below class VI will have gross incomes of below $250, these must go into class VIII. The large number raises questions of the assumptions involved but solution to this must await study of the share-cropper income situation.

[h]Abnormal farms, 2,693, are not included.

TABLE IV-7. Census farm operators in the OASI farm operator population, by gross farm income classes[a]

(1) Economic class of farm operator (gross farm income)	(2) Adjusted number of operators[b]	(3) Reporting farm income to IRS but not to OASI[c]	(4) Net farm income $400 but not reporting it to IRS[d]	(5) Net farm income under $400 and not reporting it to IRS	(6) Net farm income under $400 but using option to report to OASI	(7) Net farm income under $400 but combining it with other self-employment income	(8) Census operators in OASI farm operator population
I. Over $25,000	108,000	4,000	4,000	4,000	(1,000)	-	96,000
II. $10,000-24,999	355,000	16,000	7,000	2,000	(4,000)	-	330,000
III. $5,000-9,999	641,000	30,000	53,000	8,000	(10,000)	-	550,000
IV. $2,500-4,999	828,000	75,000	298,000	35,000	(45,000)	-	420,000
V. $1,200-2,499	773,000	160,000	371,000	47,000	(50,000)	(5,000)	195,000
VI. $250 - 1,199	540,000	160,000	140,000	185,000	(20,000)	(5,000)	55,000
VII. $250 - 1,199	575,000	475,000	10,000	30,000	(10,000)	(20,000)	60,000
VIII. Below $250	960,000	760,000	-	180,000	-	(20,000)	20,000
Total	4,780,000[e]	1,680,000	883,000	491,000	(140,000)	(50,000)	1,726,000

[a] This table is an extension of Table IV-3 using only Census operators and OASI operators and classifying them by gross farm income.

[b] This is a classification by gross farm income per farm operator rather than in terms of the farm as a unit. See Table IV-6 for the method of determining numbers of operators.

[c] Includes those optioning out, and individuals with wage incomes of $4,200 and over.

[d] Includes those reporting late.

[e] Abnormal farms excluded.

above and below it.[29] Complementary to Table IV-7 is a categorical discussion by economic class. These two devices, the overall view of Table IV-7 and a class by class consideration of factors, are interrelated and mutually supporting in a determination of Census of Agriculture operators who were also OASI farm operators.

A class by class discussion of Census of Agriculture operators who were in the OASI group falls naturally into three parts: The lower economic classes--VI, VII and VIII--are assumed to have contributed relatively few to the OASI farmer population; the upper economic classes I, II and III, are expected as heavily represented in OASI; and classes IV and V are thought of as intermediate. The classes are treated in the order named.

Economic class of farm VIII includes those selling less than $250 worth of agricultural commodities. Operators of such farms could have received OASI coverage from farm self-employment under only one condition: where they added farm self-employment income to other self-employment income to reach a total of $400 net or more. The total number adding farm self-employment income of less than $400 to income from other self-employment has already been estimated at 50,000. Largely from considerations in the makeup of Table IV-7, 20,000 are estimated to be in class VIII.

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[29] The reader will note that economic classes used here are in terms of gross farm income per operator, but that characteristics of operators in each class are assumed similar to those of operators in the usual classification by gross sales per farm unit.

Economic class of farm VII, part-time farms, are those selling $250 to $1,199 worth of agricultural commodities and having other family income greater than the total value of sales or where the operator worked 100 days or more off the farm. A general indication that a very large proportion of part-time farmers are not present in the OASI operator population is given in a check with Current Population Survey data. According to the Current Population Survey, 1,507,000 individuals received both wages and farm self-employment income.[30] Only one-fourth of this number in the OASI data, 387,400, had the same income combination.

Relatively few are thought to have reported optionally, in terms of gross farm income. The gross farm earnings of operators in class VII show a strong right skewness: The midpoint of the gross income range is $725, while the average gross is $620. On this basis only 125,000 are estimated to have had over $800 gross sales, as these sales are calculated by the Census of Agriculture. Even fewer had over $800 gross sales when computed according to the rules for taxable income under OASI. This number is estimated at 100,000. These constitute the operators who were eligible to report on the basis of the optional method. Contrary to the situation in economic classes IV, V and VI, most of the operators in class VII are thought to have reported to the Internal

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[30] U. S. Bureau of the Census, Current Population Reports, Consumer Income, Series P-60, No. 23 (November, 1956), computed from Tables 6 and 7.

Revenue Service, because of the high percentage receiving income from nonfarm sources, see Table IV-4. Relatively few are expected to have used the optional method of reporting because they have coverage under OASI from other income sources. Comparing with the number who might be reporting optionally in other classes, an estimate of 10,000 is made. This is explained further in the discussion of Table IV-7.

Farm expenses of class VII are observed to be two-thirds of gross sales, Table IV-4. Average net is thus about $200 and would be lower if all expenses are considered. For this reason fewer are thought eligible for OASI because of net farm income than those who could qualify optionally. The 15 to 20 percent eligible on the basis of gross farm income is thus reduced to an estimated 5 to 10 percent on the basis of net, or 40,000. Some, but not all, of these two groups overlap. A high proportion of those eligible on the basis of net is considered to report self-employment farm income, or 30,000. Those not reporting net income may have been in the "over $4,200 from wage and salary" group, or may have neglected farm income because it was small compared to other sources, in addition to simple reporting failure. To this 40,000 (10,000 reporting optionally; 30,000 with net over $400) another 20,000 is added, estimated to have added farm self-employment income to self-employment income from other sources. The result is a total of 60,000 operators from class VII who were in the OASI farm operator population.

Economic class VI has the same gross income limits as class VII, a value of sales between $250 and $1,199, but includes only those farms with "other" family income less than the value of farm sales and/or operators working less than 100 days off the farm. The 540,000 in this class are the real subsistance farms in the United States. Their low gross and net incomes place many of them in the group ineligible for OASI. Another useful consideration in determining operators from this class who were in the OASI population is their reporting characteristics. Many who are eligible for OASI coverage failed to report because of their lack of contact with information about the program, and unfamiliarity with reporting to the Internal Revenue Service. Studies made in 1956 verify this.[31]

Average net farm income computed from Census of Agriculture data is $380. After allowing for expenses not listed by the Census, and for income not counted toward OASI, net could average as low as $250. This suggests that one-fourth to one-third--approximately 150,000--had net farm incomes over $400. The average value of gross sales in the class serves as the basis for an estimate of less than half having gross incomes over $800, or 220,000. If 30,000 of these are assumed to have had $400 net and less than $800 gross, there were 100,000 who were eligible by optional means only.

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[31] J. R. Christiansen, et al., op. cit.; and R. L. Skrabanek et. al., op. cit.

Reporting problems of this class, together with comparisons to other classes in Table IV-7, result in an estimate that only 20 percent of eligible class VI operators were in the OASI population. This proportion is assumed for both those eligible because of net income, and because of gross alone. The result, 50,000, plus 5,000 estimated to add farm self-employment income of less than $400 to other self-employment income, makes a total of 55,000 from class VI in the OASI group.

The analysis shifts at this point to the three classes at the upper and of the economic classification. Like the lower three classes, there is a reasonably firm basis of estimating operators in classes I, II and III who would be in the OASI population. Simply stated, it is that incomes of operators in classes I, II and III were sufficiently high that they must have been familiar with the Internal Revenue Service reporting and most would have been eligible for OASI coverage. Thus a large proportion of operators from the top three classes should appear in the OASI operator population. This conclusion is exactly opposite to that made with regard to the three lower classes.

Economic class I included those operators having gross incomes of $25,000 or more. Corporate farms present the first problem in this class. Those reporting to the Internal Revenue Service number 9,421 and have an average gross farm income of $250,000.[32] They

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[32] U. S. Internal Revenue Service, Statistics of Income, 1955, Corporate Income Tax Returns (1958), p. 5.

were accordingly presumed to all fall into class I. The problem of treating corporate farms revolves about the question of their organization and the way in which operators were assigned to them by the Census of Agriculture. The situation of some would be such that a number of farm operators might be involved as renters in each case, and each operator could appear at any point in the economic classification and also in OASI data. For those corporations where a single manager was designated as operator, he surely would be in class I of the Census data but could not appear in the OASI operator data--corporate employees do not have self-employment income. Arbitrarily 4,000, a little less than half, are assumed of this type. This number appears in row 1 of column 5 in Table IV-7.

Of the 104,000 remaining in class I most should have been eligible for OASI, Table IV-5 indicates 3 percent with business and professional income below $500 in 1950. The cost-price squeeze between 1950 and 1954 is likely to have dealt more severely with larger operations because of labor and other cash operation costs. Census and OASI methods of income calculation are also thought to be more divergent in the case of large units; if for no other reason than that these units attempt tax savings to a greater extent. Above considerations suggest that at least 5 percent of class I operators will not have been in the OASI population. At the same time the number who could escape must be low--not over 10 percent. As a compromise, 92.5 percent is used.

Economic class II included those with gross farm incomes of $10,000 to $24,999. By most standards these are large farm enterprises. Such operators would be expected to be reporting to the Internal Revenue Service in about the same proportions and to have as few limitations to their eligibility for OASI coverage as those in class I. Thus the same percentage of this class is estimated to appear in the OASI farm operator population. This is 330,000 out of an adjusted number of 355,000.

Economic class III has gross income class limits of $5,000 and $9,999. The lower limit is sufficiently small that some class III operators would not have been paying an income tax regularly if at all. For example: The average farm family has approximately four members.[33] With just four members this family would need to be making a net income of about $2,670 before any income tax was due. In cases where farm expenses are equal to one-half of gross, this represents a gross farm income of over $5,300. Many farm families are much larger than four, and when calculated as above a family of six might have almost $9,000 gross before owing a tax. There were also many farms in 1955 where net income was not one-half of gross. Since penalties are not assessed for non-reporting when a tax is not due, many families whose income was well below that required for reporting did not bother to do so.

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[33] U. S. Department of Agriculture and U. S. Department of Census, Farmers' Expenditures in 1955 by Regions, U. S. Department of Agriculture, Statistical Bul. No. 224 (April, 1958), Table 59. Average size of families in the Farm Expenditure Survey was 3.83; in the 1955 spring food survey it was 4.01.

All of those who had not had the reporting habit would not be expected to be suddenly aware of the greatly lowered tax liability requirements in 1955. The fluctuating yearly incomes to farmers would aggravate this problem. Some who were normally in a lower economic class, would have moved up into the $5,000 to $9,999 range of sales for a given year due to the nature of production and product prices.[34]

Because of the above factors and because class III shows a small increase over classes I and II in the proportion with self-employment incomes of $500 and less, class III is estimated to have been represented in the OASI population in a smaller proportion than classes I and II or at 87 percent. This is 550,000 of the adjusted number of 641,000 operators.

The six classes already discussed account for 1,111,000 of the 1,726,000 Census farm operators who appeared in the OASI farm operator population. Classes IV and V are more difficult to reconcile individually than the others because of their intermediate position. Minimum income requirements excluded large numbers from classes VI, VII and VIII. The high gross incomes in classes I, II and III guarantee that most of these had the habit of reporting and nearly all would have been eligible for coverage under OASI. Classes IV and V were computed as residuals. The problem then was to allocate the remaining 615,000 operators between these two classes.

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[34]Milton Friedman, A Theory of the Consumption Function (Princeton: Princeton University Press, 1957). See discussion of permanent income hypothesis.

One important basis for allocation was the assumption that a much higher proportion of class IV was represented than of class V. The most important considerations involve interclass comparisons from Table IV-7. They resulted in a decision that 50 percent of class IV should be represented in OASI data and 25 percent of the operators of class V. Some examples will illustrate the reasoning: If the proportion by which class IV is represented in the OASI population is increased appreciably this lowers the proportion from V to a point that does not appear reasonable when compared to lower classes and when income to operators that compose it is considered. Should the number of operators from IV be raised to 500,000--about 60 percent of the class--this drops the number in V to 115,000 or only 15 percent. This would appear too low compared to the plus 10 percent already estimated to be reporting from class VI. If the numbers are juggled in the opposite direction we rapidly reach a point where differences, implied by the socio-economic characteristics of classes IV and V, become too narrow.

Before leaving the discussion of class IV two other items deserve mention. One is that the entire range of gross income, $2,500 to $4,999, is less than the gross required for an average farm family to pay an income tax. A computation of tax liability appeared in the discussion of class III. The other item concerns optional reporting. It is estimated that 18 percent of the operators in class IV, or 150,000,

could only qualify for OASI coverage from farm income by means of the optional method. Table IV-5 provides much of the basis for this estimate. Ten percent had under $500 from business and profession in 1950. This is assumed to represent the proportion with less than $400 in 1954.[35] In addition, 18.2 percent reported no income in 1950. It is assumed that a much higher proportion of this 18 percent had incomes under $400 than the average--40 percent instead of 10 percent. The sum of (.40 x .182) plus 10 percent is approximately 18 percent. One-fourth to one-third of those in class IV who are only eligible for OASI optionly, are estimated to exercise this option. Table IV-7 comparisons provide the basis for this latter estimate.

Economic class V included operators with gross incomes of $1,200 to $2,499. Although already partly discussed under class IV, some significant aspects of this class merit further treatment. Among these are the 24 percent working off-farm 100 days or more, and the 24 percent with a family income greater than the value of farm sales shown in Table IV-4. Because of the large proportion working off-farm, class V is considered to include as high as 30 to 40 percent of the 27,000 individuals estimated to have a self-employment income from farming of $400 or more but who are not in the OASI population because

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[35] The parity ratio was 12 points lower in 1954. Another factor is the inclusion of all income from businesses and professions. Still another is the difference of OASI and Census methods of computing farm income, this alone could account for $50.

they had over $4,200 of wage income. This swells the number in class V who report self-employment farm income to the Internal Revenue Service but not to BOASI. Economic classes VII and VIII also report self-employment income from farming in large numbers to the Internal Revenue Service but not to BOASI, but most operators in these classes have net farm incomes that are too low to qualify. About one-third or 250,000 of this class are estimated to be eligible only by optional reporting. This estimate is based upon information from Table IV-4 and computed in the same manner as that employed in the preceeding paragraph. Table IV-7 is the most important means of determining the proportions of those appearingin the OASI population from the 250,000 eligible because of gross income and the 520,000 eligible and required to participate because of net income.

Throughout the discussion of economic classes it was frequently necessary to refer to Table IV-7. A discussion of the separate columns in this table will serve to explain additional details of the classification of Census operators who are in the OASI group. Table IV-7 and the class-by-class discussion are a unit. They are considered separately for the sake of simplicity and clarity.

All figures in Table IV-7 are the result of two-way comparisons of rows against columns. Readjustments were made until the table was internally consistent and agreed with other estimates made here, and with data and assumptions about the characteristics of each class.

Column 7 of Table IV-7 is an estimate by classes of farm operators having less than $400 net income from farm self-employment who were included in the OASI farm operator population because they added farm income to other self-employment income. These were estimated to total 50,000, see Table IV-3 and its discussion. Such individuals are thought to be mostly confined to classes VII and VIII, since net farm incomes were low in these classes and there were large numbers with nonfarm businesses. The number is estimated to fall drastically when moving from class VII to class VI because of the much smaller number with nonfarm businesses, lower average incomes from the nonfarm business,[36] and an assumption of a lower proportion who reported to the Internal Revenue Service in class VI. Every economic class probably contained some such individuals, but the numbers would be small in classes above V because this is the last class, as we proceed toward higher gross incomes, having a large number of operators with net farm incomes below $400.

Column 6 of Table IV-7 is a distribution by economic class of the 140,000 estimated to have reported by the optional method and who had insufficient net self-employment farm incomes to be eligible for OASI coverage. Some could have reported optionally in class VIII and

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[36] U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. III, part 11 (1956), Table 12. Nonfarm business incomes, for those having it, average $845, $2,878 and $2,811 in classes VI, VII and VIII respectively.

become eligible for coverage who might not otherwise have qualified but the number doing this is considered to be inconsequential. With 81 percent of the operators in class VII working off-farm, it is inferred that a high proportion had OASI coverage from other than farm income sources. Only 15 to 20 percent of class VII were estimated to have over $800 gross from income. Together these considerations suggest that few in class VII would have appeared in the OASI farm operator group by use of the option.

A larger number who were in the OASI population because of the option was estimated for class VI both on the basis of a larger proportion in this class with a gross of over $800 and because these individuals were less likely to have had coverage from other sources of income. The number from class VI was not large, however, because of the low proportion estimated to have reported to the Internal Revenue Service.

The bulk of the total in column 6 is estimated to originate in economic classes IV and V. These two classes had the largest numbers eligible on the basis of gross income alone and reported farm income to the Internal Revenue Service in larger proportions than operators in class VI.[37] In classes I, II and III the number in column 6 falls off rapidly. Most of the individuals in these classes are thought to have reported income regularly, but the number with net incomes under $400 was small.

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[37] There are 150,000 and 250,000 operators estimated as having $800 gross farm income and less than $400 net in classes IV and V respectively. Class VI is the next closest with 100,000.

Column 5 of Table IV-7 is a distribution of operators who did not report farm self-employment income to the Internal Revenue Service, and who had net farm incomes under $400. Economic classes VI and VIII contain the bulk of these. The low farm gross of class VIII suggests that the 180,000 assigned to column 5 from this class may be too conservative.[38] On the other hand, the proportion of class VIII operators with other income and off-farm work suggests that it is not impossible that 80 percent could have reported their farm operation to the Internal Revenue Service. This results in most of class VIII being classified in column 3--reporting farm income to the Internal Revenue Service but not enough to qualify for OASI. A large proportion of class VI was not eligible for OASI coverage from farm self-employment income, and fewer than half are estimated to have reported income. This accounts for the large number of class VI operators in column 5. By contrast, operators in class VII are assumed to have reported in large proportions, because of off-farm work. Most are expected to report

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[38] A problem of the group, neither reporting farm self-employment income to the Internal Revenue Service nor eligible for coverage under OASI from net farm income, is that the 491,000 total estimate could be as much as 100,000 too low. No more suitable method for calculating this group was at hand however, than that used in Table IV-3.

An important reason for thinking that 491,000 is too small is that as many as 300,000 may be estimated to have had no farm sales in class VIII. This figure was not directly available for 1954 but is based upon 1944 and 1949 figures. In these years 7.2 percent and 6.7 percent respectively reported no sales; see Census of Agriculture: 1954, Vol. II, Chapter 10, p. 915. But increasing the number from class VIII in column 5, would require reducing the number from class VI in column 5 and increasing correspondingly in class VI operators who reported to IRS but not to OASI--column 3. If a sizeable shift of this nature takes place, a point is soon reached at which the proportion reporting to the IRS from class VI appears too high compared to class V.

farm income along with the report of off-farm income, but because of small farm enterprises few qualified for OASI coverage from farm self-employment earnings. As the result 80 percent of class VII operators are in column 3.

Those delinquent in reporting to the Internal Revenue Service, but who actually had a net income that required them to pay a tax for OASI--column 4 of Table IV-7, are estimated to be concentrated in class V with somewhat smaller numbers in IV and VI. Most class V operators had sufficient gross income to imply a net of over $400 from farm self-employment, yet a high proportion are estimated to have not reported this income. Class IV operators have higher incomes and more should have acquired the "reporting habit." In class VI many not reporting did not have sufficient net income from farm self-employment to qualify for OASI coverage. Hence relatively fewer class VI operators are in column 4.

Class V may be used to provide an example of the internal consistency within a class. Numbers in columns 3, 5, 6 and 7 should sum to the total estimated as having net farm incomes below $400. The actual sum is 262,000 compared to the 250,000 estimated earlier. Most of this discrepancy is accounted for by an estimated 10,000 to 12,000 with over $4,200 wage earnings. Figures in columns 3, 4, 5 and 8 must sum to that in column 2. Thus, given any three, the fourth is determined.

In each class the total number who reported to the Internal Revenue Service is equal to the sum of figures in columns 3 and 8. Class VI has the lowest proportion who reported to the Internal Revenue Service--only 40 percent. This rises to 46 percent for operators in class V, to 60 percent in class IV and 91 percent in class III.

Central Premises. --At the present time it is not possible to guarantee the detailed accuracy of figures in each cell of Table IV-7. The table provides a mechanism for systematic analysis and, it is hoped, may be useful as a framework for building more reliable estimates.

More important than the detail of Table IV-7, however, is the general nature of the figures reconciling numbers of operators by economic classes of the Census of Agriculture with the OASI operators. The central premises are that operators in the three highest classes, I, II, and III, had a farm self-employment income compelling coverage under OASI and they will have largely developed a habit of reporting to the Internal Revenue Service. For these reasons, all but a few of the operators in classes I, II and III will also be found in the OASI population. Operators in the three lower economic classes VI, VII and VIII, had such low incomes from farm self-employment that relatively few could qualify for OASI coverage. Further, many who could qualify will not have reported to the Internal Revenue Service in 1955. Thus relatively few of these were in the OASI population. Classes IV and V are intermediate and can be calculated as residuals. As the estimates have developed,

numbers assigned by this method to classes IV and V appear reasonable, compared to adjacent classes. There is thus reason for confidence in the overall accuracy of this class-by-class estimate.

Agricultural Production of OASI Operators

An estimate of the agricultural production accounted for by OASI farm operators is made in Table IV-8. The procedure used was to reconvert the operator gross income classification to a classification of farms by gross sales. Production is determined by assuming that farm numbers thus derived are representative of those in their class.

The result is some extremely useful information: whereas farms represented in the OASI are only 36 percent of all Census farms, they account for almost three-fourths (73 percent) of farm products sold. Another fact is that farms having over $5,000 gross value of sales accounted for 79 percent of all sales of agricultural products, and 83 percent of these are estimated to be included in the OASI data. These farms, with over $5,000 gross value of sales, only represent 27 percent of all Census of Agriculture farms, but they comprise 62 percent of OASI farms. At the other extreme of farm size, those units with sales of less than $1,200 make up 40 percent of the Census of Agriculture farms but only 9 percent of the OASI farm group.

TABLE IV-8. Total agricultural production of OASI farm operators[a]

	Economic class[b]	2 Classified gross per operator[c] (1000's)	3 Classified gross per farm[d] (1000's)	4 Percent of Census class (%)	5 Total production, Census of Agriculture[e] ($ million)	6 Production of OASI farms ($ million)
I.	Over $25,000	96	120	90	7,768	6,240[f]
II.	$10,000 - 24,999	330	409	91	6,684	6,090
III.	$5,000 - 9,999	550	541	77	5,085	3,910
IV.	$2,500 - 4,999	420	369	45	3,009	1,370
V.	$1,200 - 2,499	195	168	22	1,414	311
VI.	$250 - 1,199	55	41	9	350	31
VII.	$250 - 1,199	60	60	10	357	37
VIII.	Under $250	20	18	2	64	1
	Total	1,726	1,726	36	24,728	17,990[g]

[a]This table converts Census farm operators, who are in the OASI farm operator population and classified by gross farm self-employment income, back to numbers of farms classified on the basis of gross agricultural sales per unit. This makes possible an estimation of the value of agricultural production by OASI farm operators. Farm units in column 3 are assumed representative of their class except as noted for class I.

[b]This classification is in terms of gross self-employment farm income per person when applied to numbers in column 2. Applied to column 3 it is in terms of gross agricultural sales per farm.

[c]From Table IV-7, column 8.

[d]The process of converting from operators to farm units is essentially the reverse of that done in Table IV-6. The same proportion moved into a lower class in Table IV-6 are moved back into the next highest class, for example, the operators in class IV are 420, 000; 43, 000 are moved into it from class V and 94, 000 are taken from class IV and added to class III.

$94,000 = \frac{186}{828}(420,000)$. Where: 186, 000 -- is the number moved from class III into class IV in Table IV-6.

828, 000 -- is the total number of operators classified on gross farm income in class IV from Table IV-6.

420, 000 -- is the number of Census operators classified on gross farm income, and estimated to be in the OASI operator population, in Table IV-7.

It should be noted that multiple operators and their production is subsumed under the estimate developed by this procedure.

[e]Source: U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. II, Chapter 11, p. 1216. Abnormal farms not included.

[f]In all except class I total production of OASI farms is assumed to be the same proportion of all production in the class as the number of farms bears to total Census farms in the class. In class I further adjustment is made for the 4000 corporate farms estimated to be counted as units by the Census. These are not in the OASI population and their production is removed first. The statistics for this computation came from: Statistics of Income, 1955, Corporate Income Tax Returns. 9, 421 agricultural corporations with total agricultural income of $2, 373, M are shown. This adjustment is made for the sake of consistency. It reduces the final production figure about 3 percent. The 4000 estimate for corporate farms counted as a unit by the Census is very crude, illustrating another gap in our agricultural statistics.

[g]This procedure estimates that OASI farm operators produced $\frac{17,990}{24,728}$ or 73 percent of the gross value of farm sales as enumerated in 1954 by the Census of Agriculture. The fact that OASI figures are for 1955 is thought to have little effect on this estimate. According to the AMS, there was only slightly over one percent difference between the cash marketings of 1954 and 1955-- $29, 944, 000, 000 compared to $29, 542, 000, 000. See: USDA, Major Statistical Series of the USDA, op. cit., p. 36.

Summary and Conclusions

Data from the Current Population Survey, the Internal Revenue Service and the Census of Agriculture can be used in a coordinate manner to define the OASI farm operator population. One of the most useful procedures is the translation of Census of Agriculture farms into terms of the OASI and their classification by farm production. This makes possible an estimate of the place of OASI farm operators in the commercial agricultural economy.

One of the most significant findings is that numbers of OASI farm operators were only 39 percent of the total of Census operators but these OASI operators accounted for 73 percent of the commercial agricultural production. Corollary to this, 83 percent of Census farms selling $5,000 or more of agricultural products were represented by OASI data. On these grounds the OASI farm operator population is considered basically to represent commercial agricultural producers.

An incidental conclusion may be noted in passing: This research supports field studies in pointing out that there are a substantial number of low-income farmers who cannot qualify under the OASI program. Ironically, these are the ones most in need of benefits from Old Age and Survivor's Insurance!

CHAPTER V

A COMPARISON OF NET INCOME ESTIMATES OBTAINED FROM OASI DATA WITH THOSE OBTAINED FROM OTHER SOURCES

A concept of the contribution of OASI farm operators to commercial agricultural production was derived in Chapter IV. Only 36 percent of the Census of Agriculture farms were represented in OASI data but they accounted for 73 percent of all sales of agriculture products. OASI operators were thus responsible for the bulk of the commercial agricultural production.

In further pursuit of meaningful characteristics of the OASI farm operator population and the OASI farm data, this chapter examines net income relationships. Specifically, two questions are treated: how does total and per person net income of OASI operators compare with that of other farm operator populations, and can OASI farm population data be used to help estimate net income of the total farm population?

OASI income data have been interpreted as essentially the monetary return to an individual for his current economic contribution. This may include entrepreneural return from a farm and in some cases a nonfarm business; a return to labor either in the form of wages or as part of the income from a business; and there may be a return to professional skills. Self-employed individuals may also receive a return from owned equity as discussed in Chapter II. Because of the components of income not

included as taxable income in OASI data it is necessary to draw upon other sources to supplement what is reported in the data of OASI farm operators in order to estimate their total money income.

No attempt is made here to compare incomes of farm people with incomes of those in nonfarm industry. At the same time it is not entirely possible to excape problems of income measurement due to widely differing income components. Within the farm population there are considerable variations in the value placed upon being one's own boss in day-to-day operations, and in the receipt of other non-money forms of income. There are also variations in economic opportunities of individuals within agriculture and in the degree to which off-farm alternatives constitute realistic possibilities. The farm population is not homogeneous and weight must be given to all these factors even in an intra-industry study.

Net Incomes of the OASI Farm Operators

Net incomes of the OASI farm operators will further define this group by indicating the relative command that they have over total current income. In addition to the return that they receive from their current economic contribution, total income also includes other returns because of command over resources, transfer payments, plus income elements excluded because of definitions used in the OASI program. A detailed expository treatment was given most of these items in Chapter II.

Taxable Income. --A total of $3,482,104,000 income was reported to BOASI by the 1,876,100 receiving self-employment farm income in the 48 states of continental United States.[1] The distribution of receivers of this income is shown graphically in Figure V-1. Since actual records, and not memory are the basis for income reports, this distribution is thought to be the most reliable obtainable, within the institutional limits of the OASI program.

Both the lower and upper parts of the taxable income distribution are affected by institutional limits to the OASI program. Only those with $400 or more of taxable income are included. Those with taxable incomes above $4,200 appear in the population but most of these are listed as having incomes of exactly $4,200.[2] A total of 172,600 or 9.1 percent of all operators had taxable incomes of $4,200 or above. Ninety-five percent of these reported exactly $4,200. According to this, Figure V-1 gives a picture of the income distribution from covered sources for about 90 percent of the OASI farm operators.

Income Distribution above $4,200. --A total income estimate required extrapolation beyond the curve shown in Figure V-1 to determine the

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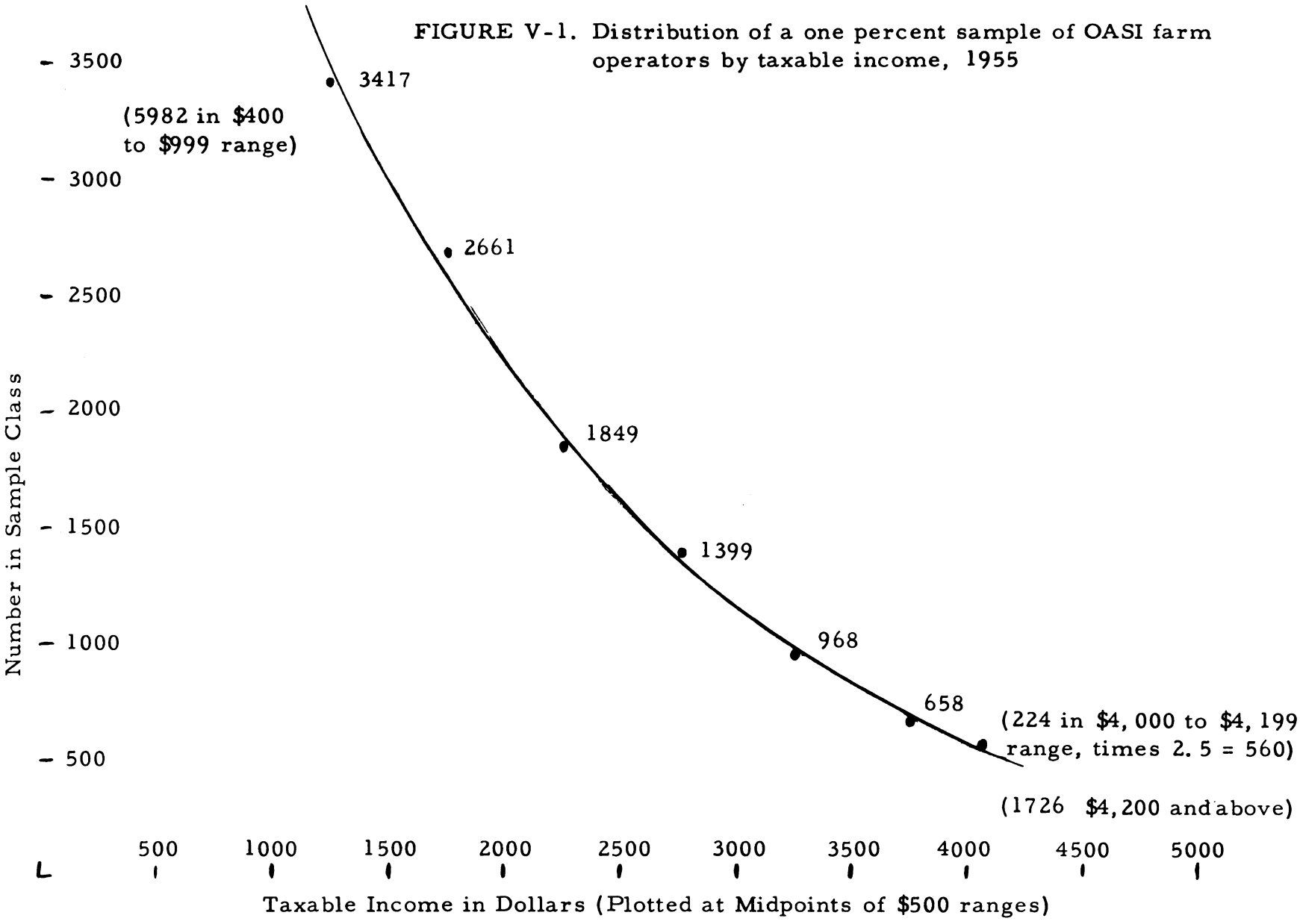
[1] All farm operators reported $3,507,536,000. The 12,300 operators in United States territories and trusts reported $25,432,000.

[2] Optional reporting procedures may distort the distribution somewhat but this is largely confined to incomes under $900. As estimated in Chapter IV, 27,000 are missing with taxable incomes above $4,200 because of wage incomes above $4,200. The 8,700 reporting incomes above $4,200 make up less than .5 percent of all OASI operators.

FIGURE V-1. Distribution of a one percent sample of OASI farm operators by taxable income, 1955



Source: A tabulation of data from BOASI.

distribution of the 9.1 percent reporting $4,200 and above. This was done using a total income distribution from the Current Population Survey as a guide.[3] Details of the extrapolation and the computation of income to be added to that of the OASI operator are given in Table V-1.

Livestock and Forestry Sales Reported as Capital Sales. --A special provision of income tax rulings requires the reporting of livestock kept for dairy breeding or draft and certain forestry products as sales of capital items. This excluded some income from being counted as taxable that is properly a part of agricultural production and that would have been considered income in Census and Agricultural Marketing Service statistics.

Not all receipts from sales of livestock kept for breeding, dairy and draft can be fully counted as increasing net incomes. Receipts from livestock raised on the given farm from which they are sold can be fully counted, but this is not true for breeding livestock that were purchased for

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[3]The regularity of the income distribution curve shown in Figure V-1 invites fitting a mathematical curve to these data for purposes of extrapolation. Problems attending such a procedure were discussed in connection with Table IV-2. Such mathematical extrapolation beyond the data range, while having the appearance of yielding neat, precise answers, gives results that are largely determined by the mathematical characteristics and treatment of the fitted curve. The distribution used as a guide--"Total Incomes of Farmers and Farm Managers" from Current Population Reports, Series P-60 has a number of points to commend it. The proportion with incomes over $4,000 is nearly the same as that of the OASI population and it only includes individuals who devote most of their attention to agriculture. A disadvantage is that it includes money income from all sources. This is at least partly offset by the lack of restriction upon the relative effort devoted to nonagricultural occupations by the OASI group. OASI operators may thus range higher in incomes from nonfarm sources.

use and later resold. A farmer raising and selling males or females for breeding purposes counts these as ordinary income. For this reason it is necessary to estimate the number of such livestock that were originally purchased. This estimate is crude, made on the basis of observed practices in important livestock areas, and it ignores cycles in numbers and prices.

All adult females were assumed to have been used for dairy or breeding. Males posed another question--stags resulting from poor castration practices had to be estimated. Horses are a special problem. Because of their rapid decline it is not possible to ignore the "horse cycle," in addition, many horses are permitted to die a natural death.

Table V-2 and its accompanying footnotes gives details of this estimate. The total is very close to a similar estimate by Stocker and Ellickson despite different assumptions.[4] OASI farm operators are assumed to account for 73 percent of the total, since this is the proportion of all agricultural sales attributed to them.

Income from Sources not Covered by OASI. --The 1955 Survey of Farmer's Expenditures also collected information on off-farm sources

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[4] Op. cit., p. 120. Their estimate of the 1.3 billion for sales of breeding cattle, sheep and hogs is almost identical to that made here ($1.06 billion x 1.25 = $1.32 billion). They assume .2 billion of other sales, and an allowance of one-third for failure to report on schedule D. No allowance is made for purchases from breeders, nor are timber sales considered. Stocker and Ellickson's allowance of one-third for improper reporting appears excessive. No adjustment for improper reporting is made in Table V-2 under the assumption that any downward adjustment required by it applies against omitted items.

TABLE V-1. Estimate of income excluded from OASI farm operator data because of $4,200 limit on taxable income, 1955

Total income	CPS Table 5 Percent distribution[a] (%)	OASI[b] Percent distribution (%)	OASI[b] Numbers	Average incomes[c] ($)	Total income of group ($)
$4,000 - $4,499	2.5	2.5[d]	24,300[d]	4,350	106,000,000
$4,500 - $4,999	1.9	1.6	30,100	4,750	143,000,000
$5,000 - $5,499	1.6	.9	17,900	5,250	94,000,000
$5,500 - $5,999		.7	13,500	5,750	78,000,000
$6,000 - $9,999	3.0	2.8	52,800	8,000	423,000,000
$10,000 - $14,999	.6	.6	11,300	12,500	141,000,000
$15,000 - $24,999	.7	.7	13,200	20,000	264,000,000
Over $25,000	.3	.5	9,500	40,000	380,000,000
Totals	10.6	10.3	172,600		$1,629,000,000
Less allowance for income already reported:			8,700 over $4,200	- 39,806,000	
			163,900 at $4,200	- 688,380,000	728,000,000
Items excluded--all OASI operators					901,000,000
Income excluded because of $4,200 limit--operators in continental U.S. only[e]					$895,000,000

[a]Source: U. S. Bureau of the Census, Current Population Reports, Series P-60, No. 23 (November 1956), Table 5. Data for "Farmers and Farm Managers" is used as an empirical guide in extrapolation beyond $4,200. A slightly larger proportion is estimated to be in the "over $25,000" class of the OASI data because the OASI group is not restricted as to the proportion of income from agriculture.

[b]A total of 172,600 had incomes of $4,200 and above in the tabulation of farm operator data from BOASI. This is an estimate of the distribution above $4,200.

[c]Averages are taken as the midpoints of the ranges except for the first and last categories.

[d]There are estimated to be 46,700 in the $4,000 - $4,499 income range. Since 22,400 of these fall between $4,000 and $4,199 their incomes have already been fully accounted for. In the OASI group only the number of those between $4,200 and $4,499 are shown. This number, 24,300, is about 1.3 percent of the total OASI operator group--just over half of the 2.5 percent in the $4,000 - $4,499 range.

[e]The tabulation as shown includes operators in United States territories. To adjust this to a basis of continental United States only, the total income estimated as not being reported above $4,200 is reduced by .7 percent. This is the ratio of reported incomes of operators in United States territories to the reported income of all operators.

TABLE V-2. Value of farm income excluded from OASI taxable income because of special provisions for reporting capital gains, 1955[a]

	Item		Farm production value excluded from OASI
1.	Cows		
	Slaughtered under federal inspection in 1955: 6,656,000 x $95 = (Average price $10.50, estimated weight 900 lbs.)	$633,000,000	
	Less adjustment for purchased dairy and beef cows--30%[b]	190,000,000	
	Added income accountable to farm production		$443,000,000
2.	Bulls		
	Bulls and stags, slaughter under federal inspection in 1955: 427,000 x $120 = (Average price $12.00, estimated weight 1000 lbs.)	51,300,000	
	Less two-thirds not kept for breeding[c]	34,200,000	
	Less purchases from breeders[c]	11,400,000	
	Added income accountable to farm production		5,700,000
3.	Sows		
	Slaughtered under federal inspection in 1955: 6,664,000 x $54 = (Average price $13.50, estimated weight 400 lbs.)	360,000,000	
	Less 15% allowance for purchased breeders	54,000,000	
	Added income accountable to farm production		306,000,000
4.	Boars		
	Boars and stags, slaughter under federal inspection 350,000 x $30[d]	10,500,000	
	Less two-thirds not kept for breeders	7,000,000	
	Less purchases from breeders[e]	2,600,000	
	Added income accountable to farm production		900,000

TABLE V-2. Continued

	Item		Farm production value excluded from OASI
5.	Sheep and rams[f]		
	Sheep and rams slaughtered under federal inspection 865,000 x $8 =	6,920,000	
	Less 20 percent not breeders	1,384,000	
	Less purchases from breeders	1,107,000	
	Income accountable to farm operators		$4,429,000
6.	Total of items 1 to 5		$760,029,000
7.	Increase of 25 percent because federally inspected slaughter is assumed only 80 percent of total		109,007,000
8.	Sales of horses and mules for slaughter[g]		1,500,000
9.	Forest products reported as capital sales (75 percent of $130,428,000)[h]		97,820,000
	Total increase in income due to capital items		$1,049,356,000
	Increase accountable to OASI farm operators (73 percent of above)		$870,969,000

[a]Source: U. S. Agricultural Marketing Service, Livestock and Meat Statistics, Statistical Bulletin 230 (July, 1950) except as otherwise noted.

[b]Livestock purchased from a breeder are reported as ordinary income by the breeder and only the difference between purchases from breeders and sales for slaughter can be counted as net farm income. Beef cows and dairy cows are estimated to be slaughtered in a 1:2 ratio as follows:

Total slaughter 6,656,000 x 1.25	8,325,000
Dairy cows (an unpublished estimate by Harold Bremeir)	5,470,000
Beef cows	2,855,000

The 1.25 factor is used on the assumption that federally inspected slaughter is 80 percent of total slaughter. Fifteen percent of the beef cows and 25 percent of the dairy cows are estimated to be purchases from breeders. The price of beef cows for replacements is assumed equal to their price for slaughter. The price of dairy heifers is assumed to be 50 percent higher than the price of cull dairy cows.

Beef .33 x .15 = 5% reduction
Dairy .67 x .25 x 1.5 = 25% reduction

This estimate ignores cycles in prices and livestock numbers.

[c]Two-thirds of the bulls used for breeding, 142,000, are assumed to be purchased from breeders. Purchase and sales prices are assumed equal.

[d]Prices for boars estimated on a per head basis since per cwt. prices are not directly available.

[e]Three-fourths of breeding boars are estimated purchases from breeders.

[f]Less specific data are available for sheep and rams than other forms of livestock. The total sales value is assumed to consist of 80 percent animals kept for breeding. Eighty percent of these are assumed raised on the farm from which they were sold for slaughter.

[g]In 1955, 196,000 horses and mules were slaughtered under federal inspection. Estimated return is $75 per head. Other factors must be considered: There was a 381,000 difference in numbers between 1955 and 1956, probably reflecting the fact that many horses were permitted to die without being sold for slaughter; and the replacement rate is estimated to be far under depletion. The figure used was 200,000 x $75.

[h]Sales of forest products in 1954 were $130,428,000: U.S. Bureau of the Census, Census of Agriculture: 1954, Vol. II, Chapter 9. Forestry economist Richard Smith, School of Forestry, University of Missouri collaborated in the estimate that three-fourths of this was reported to the Internal Revenue Service as capital sales rather than ordinary income. A consideration causing this estimate to be placed high was studies showing that in areas selling forest products the larger farms tend not only to sell more forestry products but to gross more per acre. A. B. Cole, "Forest Resources of Rural Householders in Dent County Missouri" (unpublished Master's thesis, University of Missouri, 1960). Such farms would be more likely to be in the OASI population.

of income.[5] Data contained in the report of this survey provide a convenient means of estimating income to the OASI farm operators from sources not covered.

Details of the estimate by economic classes are given in Table V-3. It is assumed that OASI farm operators who are also Census operators have "other" income equal to the average for their respective economic class. From at least one viewpoint this would be in error, in the lower economic classes individuals with larger off-farm incomes might be expected as less likely to have $400 net farm income. This conclusion assumes part-time farms to have a lower ratio of net income to gross than the average. Partially offsetting this is the consideration that farmers with off-farm incomes appear more likely to report to the Internal Revenue Service. Another argument supporting the method of estimation employed points out the chance for errors occurring in one class to be canceled by opposite errors in another. This could result from socio-economic differences between the economic classes.

Not all OASI operators are included in the operators who are categorized by economic classes, because of multiple operators per farm unit. These 150,000 added operators are assumed to be composed of non-operating partners, adult operating partners and younger family members. It is estimated that the non-operating partners have relatively

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[5] U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. III, part 11 (1956), Tables 8 to 12.

TABLE V-3. Income to OASI farm operators from sources not covered by the OASI program, 1955

Economic class[a]	Average "other" income[b] ($)	Number Census operators in OASI population[c]	Total "other" income ($)
I	907	120,000	108,840,000
II	391	409,000	159,919,000
III	385	541,000	208,285,000
IV	250	369,000	92,250,000
V	261	168,000	43,848,000
VI	246	41,000	10,086,000
VII	357	60,000	21,420,000
VIII	384	18,000	6,912,000
Total	395[d]	1,726,000	681,560,000
Multiple operators per farm 150,000 x $500[e]			75,000,000
Total "other" income to OASI operators			756,560,000

[a]Economic classes are the economic classifications used in Chapter IV and Census of Agriculture: 1954, Vol. II, Chapter 11.

[b]Source: U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. III, part 11 (1956), Table 10. Includes income from: rental of farm and nonfarm property interest and dividends, transfer payments, retirement pay and unemployment compensations.

[c]From Table IV-8.

[d]Computed from this table. Average of all Census operators is $345.

[e]These operators are in the OASI population but not counted as operators by the Census because only one is assigned per farm. See text for discussion of the $500 average income from other sources estimated for this group.

large "other" incomes more than offsetting very small "other" incomes to youths. On these grounds an average of $500 in "other" income is estimated for this group compared to a mean of $395 for those OASI operators who are also in the Census.

Optional Reporting. --A distortion to income is thought to have resulted from optional reporting because it was based upon gross income rather than net. On the assumption that very few optioned out, this would produce an upward bias. It is thought that the taxable income from farm self-employment reported by most who used the option is very near the maximum permissible by this method, or $900. The data used could not determine those who reported optionally except in the occupation groups that had farm self-employment only, the SEF and SEF-PC groups--by an income of exactly $900. Individuals having an optional income below $900 in these two groups, or those in any of the other seven groups who used the option, could not be identified. Sixteen percent of all OASI operators were estimated to use the option and in the SEF and SEF-PC groups 14 percent reported exactly $900. This is used as the principal basis for estimating $800 as the taxable income from farm self-employment for all optional reporters. Arbitrarily $200 is assumed to be the average net income of those reporting optionally. This yields a correction of $180 million to the income totals for OASI operators.[6]

[6] $800 - $200 = $600 difference, times the number estimated to use the option, 300,000.

Total Net Income. --Table V-4 summarizes the items discussed up to this point in tabular form to give an estimate of the total net money income of the OASI farm operator population.[7]

TABLE V-4. Estimate of total net income of the OASI farm operator population, 1955

1.	Income reported to OASI by 1,876,000 individuals with farm self-employment income	$3,482,104,000
2.	Income from wages, salaries, and self-employment above $4,200. Total from Table V-1	895,000,000
3.	Income from items treated as capital goods by OASI but generally considered ordinary income. Total from Table V-2	870,969,000
4.	"Other" income. Total from Table V-3	756,560,000
5.	Correction for optional reporting	180,000,000
Total net money income of 1,876,000 OASI farm operators		$5,824,633,000
Average income per operator		$3,105

[7] The 27,000, estimated to be excluded from the OASI operator group because of wage incomes above $4,200, might be properly considered a part of this population. They were not included, however, because of the decision to treat only those individuals actually appearing in the data. Similar treatment was accorded those estimated to report late. This simpler handling is more expeditious and may be an advantage in later use of OASI farm data. It is also regarded as yielding more reliable estimates, except where aggregates are involved.

As a means of defining OASI operators in their control over current income two total money estimates of all farm operators are used for comparison. The first of these is a population defined in a manner very similar to the OASI groups. It is derived from unpublished data of the Current Population Survey and is composed of all individuals receiving self-employment income from farming. This source determines total money income of farm operators to be $10,204 million. The second estimate is a composite of the Agricultural Marketing Service estimate of net cash income from farming of $8,140 million,[8] plus off-farm cash income to operators of $5,657 million from the 1955 Farm Expenditures Survey.[9] Together these total $13,797 million.[10]

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[8] U. S. Department of Agriculture, Major Statistical Series of the U. S. D. A., Vol. III, op. cit., $11,581 million (realized net income) less $3,441 million (non-money income, excluding inventory change).

[9] U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. III, part 11, op. cit., computed from Table 8.

[10] A number of reasons for discrepancies between these two total cash income estimates can be given: There is the problem of underreporting of incomes in surveys. Grove particularly notes this, see E. W. Grove, "Per Capita Income by Economic Class of Farm," Agricultural Economics Research, Vol. VIII, No. 2 (April, 1956), pp. 51-58. The Census of Agriculture probably included some with little or no farm income (estimated at a possible 300,000, page 119), and certain of these would have had relatively high off-farm incomes. There is in addition the problem of the AMS estimate which always yields a high income figure--raising a question that appropriate assignments have been made in all cases. Suffice it to say that if discrepancies could be eliminated, there would be no value in using two different estimates of income for comparison.

TABLE V-5. Distribution of individuals reporting self-employment income from farming in the Current Population Survey, by total money income, and an estimate of aggregate farm operator income, 1955

Total money income ($)	Percent distribution[a] (%)	Number[b] (1000's)	Average income[c] ($)	Total income ($)
Loss	6.9	331	-300	-99,300,000
1 - 499	19.2	920	250	230,000,000
500 - 999	17.0	814	750	610,000,000
1,000 - 1,499	12.4	594	1,250	742,500,000
1,500 - 1,999	9.7	465	1,750	813,750,000
2,000 - 2,499	8.2	393	2,250	884,250,000
2,500 - 2,999	5.6	268	2,750	737,000,000
3,000 - 3,499	4.5	216	3,250	702,000,000
3,500 - 3,999	3.2	154	3,750	577,500,000
4,000 - 4,499	3.2	153	4,250	650,250,000
4,500 - 4,999	2.0	96	4,750	456,000,000
5,000 - 5,999	3.0	144	5,500	792,000,000
6,000 - 6,999	2.0	96	6,500	624,000,000
7,000 - 9,999	1.4	67	8,500	569,500,000
10,000 - 14,000	0.8	38	12,500	475,000,000
15,000 - 24,999	0.5	24	20,000	480,000,000
25,000 and over	0.4	19	40,000	760,000,000
Total	100.0	4,792		$10,203,550,000
			mean $2,130[d]	
			median $1,278	

[a]Source: U. S. Bureau of the Census, Current Population Survey, unpublished data, used by permission. This distribution is subject to the errors of sampling variability, and response noted in literature of the Current Population Survey.

[b]Total number from Current Population Reports, Series P-60, No. 23 (1956), Table 10. It is distributed according to percent distribution shown.

[c]Midpoints of the ranges are used. First and last are arbitrary estimates.

[d]Computed from this table.

Net money incomes are observed, in Table V-6, to average higher for OASI operators than for either of the total farm operator populations as computed here. An equally significant fact is that total net incomes of OASI operators are relatively smaller compared to that of all operators than are gross farm sales. This defines OASI operators as relatively more committed to the agricultural industry than the average of all individuals who are commonly defined as farm operators. Nonfarm incomes are more important for operators who are not in the OASI operator population.[11] This leads to a further conclusion that an operator's contribution to commercial agriculture production is not always a good relative measure of his full contribution to the commercial economy; nor does it adequately measure his economic welfare. As Grove states: "Low-production farms and low-income farm families are not necessarily the same thing."[12]

An Estimate of Total Income to the Farm Population

A more complete view of the manner in which the OASI farm population data fits into the overall demographic and economic scene of

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[11] U. S. Bureau of the Census, Census of Agriculture, 1954, Vol. III, part 9, Chapter VIII, "Part-time Farming" (1956), p. 48. Here it is suggested that the amount of money earned in off-farm work by the operator is in inverse proportion to the labor required by the farm operation.

[12] E. W. Grove, "Per Capita Income by Economic Class of Farm 1949," op. cit., p. 56.

TABLE V-6. Average gross farm sales, and average total net incomes for farm operators of the OASI, Census of Agriculture and Current Population Survey

Data source	Average agricultural sales per operator (nearest $100)	Average total net income ($)
OASI[a]	9,600	3,110
Census plus U. S. Department of Agriculture[b]	5,200	2,890
Current Population Survey[c]	5,200	2,130

[a]Average sales computed by dividing the net sales estimated for OASI operators--$17,990 million (from Table IV-8); by the number of OASI operators in continental United States--1,876,000. In a comparison with Census operators it would actually be fairer to use only those OASI operators who are on farms as defined by the Census--1,726,000. This would raise average gross to $10,400.

[b]The basic data used here is actually something of a composite of Census Bureau, and the U. S. Department of Agriculture figures as noted in the text. Gross sales per farm reported by the Census of Agriculture are $5,153. The number of operators used for computation is that of the Census--4,780,000. It should be noted that the total net income per operator figure of $2,890 probably has an upward bias compared to the other two because all farm sales are attributed to the individual designated by the Census of Agriculture as operator.

[c]The number of operators used for this computation is 4,792,000. Gross sales are those reported by the 1954 Census of Agriculture--$24,728 million.

agriculture may be obtained by its use in an estimate of total income to the farm population. The preceeding section began such an estimate by treating the OASI farm operators alone. It is proposed here to complete the estimate for the entire farm population using similar methods. This approach consists mainly of building up totals from net incomes to individuals. As such it contrasts with the Agricultural Marketing Service method which places primary dependence on aggregates of sales and costs of the agricultural industry.

At this stage the purpose of constructing such an estimate of total income is to add conceptual depth; it is not a rival estimate to that of the Agricultural Marketing Service. The latter is employed here as a standard of comparison. Nor are the two entirely independent since many common data sources are used. Quantitative values are not available directly for many elements, however, related data permit a reasonable approximation in most cases. This estimate will direct attention to major factors of such an approach as well as specify the order of magnitude for the different elements and their aggregated value.

Conventions in agricultural thought tend to view self-employed farmers and their families as the farm population. Thus it is traditional to regard an estimate of their income as the income of the farm population. It is not proposed here that there is reason for radical change--this study employs substantially the same concepts. At the same time it is noteworthy that this is a unique treatment. In almost all other industries the bulk of personal income goes to the wage earners. Little effort is made

to identify families of these workers, isolate them as a class and to compare their overall economic welfare. The special procedure used for farmers emerges from the idea of the farm entrepreneur family as a basic economic unit. Again, there is agreement in principle with this concept but, as pointed out in the introductory chapter, changes are occurring that lessen the validity of this view. Particularly is this true for marginal farmers with substantial nonfarm interests.

The above concept of the farm population is called into question by the need to draw upon farm wage income data for a total farm income estimate. Farm wage income of OASI farm entrepreneurs was included in the estimate already made of their aggregate income. But, in addition, there were those dependent upon agriculture in varying degrees for income who were not farm operators. How should these be handled? Should the income of the entire families of these hired workers be considered?

In brief outline, this aggregate farm income estimate builds upon that made for OASI farm operators: Incomes for other members of the families of this group are added; all family income for the large group of operators excluded from the OASI operator population must be estimated; and income to those who are in the farm population but not farm operators completes the estimate. This is the only point at which OASI data for farm wage earners who are not operators are used. A detailed investigation of farm wage earners is not central to the purpose of this study, and they are not given extensive treatment.

Income of Wives and Children of OASI Operators. --Income of family members of OASI farm operators is the next logical group to consider. Details of this estimate are given in Table V-7. Use is made of data from the 1955 Survey of Farmers' Expenditures and Off-farm Income[13]--a source also employed in making the Agricultural Marketing Service estimates. In Table V-7 it was assumed that families of OASI operators had incomes that were average for their respective class. Such a class-by-class procedure gives an opportunity for better accuracy in the aggregate because of offsetting errors. In addition to those families of OASI operators who were counted by the Census of Agriculture, an additional figure was added for multiple operators. The total income estimate for family members, not counting the operator, is determined as $589 million.

Total Family Income of OASI-Excluded Operators. --An estimate of the total family income of those farmers excluded from the OASI operator group is made in Table V-8. The term "excluded operators" implies a concept of the farm operator population that differs from those who are in the OASI group. Basically the Census of Agriculture definition was used.

Fortunately there are reasonable bases for estimating total family incomes to OASI-excluded operators. This was the largest component of the total income estimate and could have been a correspondingly large source of error. Use was again made of the economic classification of

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[13]U. S. Bureau of the Census, Census of Agriculture, 1954, Vol. III, part 11 (1956).

TABLE V-7. Income to spouse and other members of the family of OASI farm operators, 1955

Economic class	Number of operators[a]	Average income per operator[b] ($)	Total income of family members ($)
I	120,000	330	39,600,000
II	409,000	291	119,019,000
III	541,000	312	168,792,000
IV	369,000	320	118,080,000
V	168,000	354	59,472,000
VI	41,000	313	12,833,000
VII	60,000	431	25,860,000
VIII	18,000	368	6,624,000
Totals	1,726,000	319[c]	550,280,000
Add: Allowance for farm operators' families not included in Census of Agriculture 122,000 x $319[d]			38,918,000
Total income of OASI farm operator family members, excluding operator			$589,198,000

[a] From Table IV-8.

[b] U. S. Bureau of the Census, 1954 Census of Agriculture, Vol. III, part 11 (1956), Table 10. Includes only the income to the wife and other family members.

[c] This is average for the 1,726,000 operator's families in this table. It compares with $341 for all farm operator families.

[d] An approximate allowance for those not counted by the Census of Agriculture because of multiple operators per farm unit. Only the 6.5 percent resulting from partnership reporting is used. Minor youth reporting farm incomes from project work on their father's farm are assumed to be included as part of the operator's families. Average income of wives and other family members as estimated in the body of this table is used for this group.

TABLE V-8. Family income of Census farm operators not in the OASI farm operator population, by economic classes of farms and an aggregate estimate, 1955

Economic class	Operators excluded[a]	Average off-farm family income[b]	Average net farm income[c]	Average total[d]	Total in class
		($)	($)	($)	($)
I	14,000	2,779	0	2,779	58,906,000
II	40,000	1,198	0	1,198	47,920,000
III	166,000	1,161	600	1,761	292,326,000
IV	443,000	1,228	800	2,028	898,404,000
V	595,000	1,668	500	2,168	1,289,960,000
VI	421,000	834	200	1,034	435,314,000
VII	515,000	2,730	0	2,730	1,405,950,000
VIII	860,000	2,382	0	2,382	2,048,520,000
Total	3,054,000			$2,110	$6,477,300,000

[a]The difference between numbers of farm operators, as defined by the Census of Agriculture, and those estimated to be in the OASI farm operator population.

[b]U. S. Department of the Census, Census of Agriculture, 1954, Vol. III, part 11 (1956), Table 10.

[c]See text.

[d]The average family incomes by economic class of farm estimated here are for a very special part of the Census farm population. Total family incomes for the OASI-included group of operators would presumably be very different, with much higher net incomes for those on farms that were in the higher economic classes. Compare this with Grove's estimate: See, E. W. Grove, "Per Capita Income by Economic Class of Farm, 1949," Agricultural Economics Research, Vol. VIII, No. 2 (April, 1956), p. 53, Table 2, column 8.

the Census of Agriculture. Off-farm incomes as determined by the 1955 Survey of Farmers' Expenditures[14] are employed on a class-by-class basis--a procedure consistent with other treatment of data from this source. While there is no comparable empirical basis for determining farm incomes of the OASI-excluded operators, an a priori approach gives results appearing to be reasonable. In economic classes I and II there are only 11,000 estimated to have over $400 of net farm income who did not report in 1955.[15] Against this are 26,000 with under $400 net income, many of whom are estimated to have had losses. Some of these losses were probably large and are assumed to cancel positive incomes not reported to BOASI. For this reason net farm incomes to OASI-excluded operators in classes I and II are estimated to average zero. The small number in these two classes makes this part of the estimate less critical than it might otherwise be. In economic classes III, IV and V simple reporting failure is assumed the most important factor. OASI-excluded operators in each of these classes are assigned incomes well below the average net of the class because some have incomes below $400 or even losses, and it is assumed that those individuals with lowest incomes are least likely to report. Class IV can be used as an example. It is assumed to have the largest proportion not reporting among those with a net self-employment income from farming of $400.[16] The estimated average net

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[14]U. S. Bureau of the Census, Census of Agriculture, 1954, Vol. III, part 11 (1956).

[15]See Table IV-7, column 4.

[16]Ibid.

for class IV is $1,500 from farming, but only $800 is used as the average net farm income for those who are excluded from the OASI farm operator population. In classes VI, VII and VIII, net farm incomes are known to be low. Any correction made should probably be in the direction of assigning a negative value to net incomes in class VIII.

A factor mitigating the estimate of net farm income as a large item of error in classes VII and VIII is its relative unimportance to total family income. This does, however, bring forcibly to mind the problems of farm population definition in an income estimate. The OASI-excluded operators in classes VII and VIII constituted about one-fourth of the Census farm operator families, yet there is good evidence that almost all their income came from off-farm sources.

Some self-employment farm income is still unaccounted for. Cases of multiple operators among the OASI-excluded farm units are not included. An allowance for this item is not made for two reasons: In the first place the actual net farm income involved is thought to be small. Secondly, there is difficulty with estimating the off-farm income of such multiple operator families. Some of this is probably already included in Table V-8. In other cases non-operating partners could aggravate the problem of relatively high off-farm earnings, as discussed in the preceeding paragraph.

The Farm Wage-Earning Segment of the Farm Population.--Reference to the definition problem of the farm operator population has already

reached the point of redundancy. But what are the criteria for farm wage earners? For a number of reasons we tend to think of operators as more properly a part of the farm population than farm wage earners. Part of this derives from the American ideal of an owner-operated family farm. Inherent differences in the relationships to agriculture between a farm operator and a farm laborer play an even more fundamental role in this dichotomy. A farm entrepreneur usually commits not only his personal labor and management but also capital assets. The agricultural industry is of such nature that returns to managerial and capital investments may become fixed so that alternatives to continuing commitment are unsatisfactory.[17]

For such reasons entrepreneural relationships to farming tend to be relatively stable and binding over time. By contrast an individual whose only relationship to the farm is as a wage earner may terminate the arrangement at will with relatively little loss. There are individuals who are at least psychologically bound to a farm wage-earner role but in general the distinction is sharp; it is seldom that one with incidental farm wage earnings would consider himself a farmer on this basis alone, whereas any farm self-employment earnings--even title to small tracts of land, as in the Census--entitle the individual involved to the epithet of "farmer."

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[17]Clark Edwards, "Resource Fixity and Farm Organization," Journal of Farm Economics, Vol. XLI (November, 1959), pp. 747-759.

As a working definition of farm laborers to include as a part of the farm population it was decided to use the minimum requirement for OASI coverage from farm wage work. This is $100 in wages from one employer for farm work in a calendar year. Coverage from farm wages could not be obtained in 1955 if no one employer paid as much as $100 in a year, even though there were a number of employers during the year and the aggregate was greater than $100. This implies a degree of commitment to one industry and although it may eliminate some migratory laborers, it has the possibility of being a figure that can be derived with some reliability as facility is developed in the administration of OASI.

Such a definition makes use of the full range of data of the OASI farm hired worker population. It also has the advantage of delimiting approximately the same population as those "with 25 days or more of farm wage work" employed by the Current Population Survey.[18] These Current Population Survey data of hired farm workers are used in a manner similar to that of the Current Population Survey farm operator data: to outline the full spectrum of the OASI hired farm worker population, and to supplement information on characteristics not available in the OASI data.[19]

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[18]Reported in: U. S. Agricultural Marketing Service, The Hired Farm Working Force of 1957, Agricultural Information Bulletin 208 (June, 1959).

[19]The OASI definition, "$100 or more of earnings for farm work from one employer" and that of the CPS, "25 days or more of farm wage work" are recognized as having some qualitative differences among marginal

Neither residence nor the relative dependence upon agricultural income was included as a criterion in the definition used. It was not possible to classify OASI workers by urban or rural residence. With respect to dependence upon agricultural income, there are indications that the farm hired worker population may not differ as widely as might be expected from the farm operator group. Comparisons, mostly derived from the Current Population Survey, show about 70 percent of the farm operator population to be chiefly farmers compared to 55 percent for the hired farm labor group.[20]

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individuals. Quantitatively their differences are assumed to cancel out. Short time workers average higher earnings per day--$6.80 compared to $6.40 for those working over 25 days per year in 1957 (Agriculture Information Bulletin 208, Table 25). On this basis the average person working less than 25 days could have earned $100 in only 15 days, however, their average farm earnings were only $80 in 1956 (Agriculture Information Bulletin 208, Table 27). Balanced against those with under 25 days of farm wage work but over $100 income are two groups from among those with over 25 days of farm wage work: (1) about 7 percent had less than $100 in wages from all sources (Agriculture Information Bulletin 208, Table 11), and (2) those with over $100 of farm wage income but less than this from one employer. This latter cannot be specified exactly; there were, for example, about 300,000 migrant workers in 1955 who had over 25 days of farm wage work. A number of these are certain to have not met the qualification of $100 earnings from one employer. There were, in addition, others with more than one employer but not classed as migratory.

[20]U. S. Bureau of the Census, Current Population Reports, Series P-60, No. 23 (November, 1956), indicates 3,399,000 "farmers and farm managers" with income who devote 50 percent or more time to farming (Table 5); there are 4,792,000 with net income from farm self-employment (Table 10). "Farm laborers and foremen" devoting half or more time to farming number 1,102,000 (Table 5), while the full range of OASI farm laborers is 2,000,000. See discussion on this in the section entitled "Numbers in the Farm Wage Population."

Numbers in the Farm Wage Population. --Table V-9 summarizes the classification of farm wage earners into groups relevant to this study. A total of 3. 3 million are estimated to have received farm wages in 1955 but only 2 million of these are considered sufficiently committed to have been a part of the farm wage earner population. These 2 million are assumed as the total number having earnings from farm wages and/or salaries that were taxable under the rules of the OASI program.

Ten percent, or 200, 000, of the 2 million farm wage-earner population were also farm operators. Two separate approaches may be used to estimate this figure. The first is by the use of Table 5 in Agricultural Information Bulletin No. 208. Those having "other farm work" as their chief activity numbered about 190, 000 in 1955. This is raised to 200, 000 to allow for some who would have reported farm self-employment as subordinate to farm wage work. The other approach draws upon the 1955 Survey of Farmers' Expenditures.[21] This indicates about 320, 000 farm operators to have received farm wages. If the same proportion could be counted as eligible for OASI coverage from farm wages as was true of all farm wage earners, the result is again 190, 000 to 200, 000.[22]

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[21] U. S. Bureau of the Census, Census of Agriculture, 1954, Vol. III, part 11 (1956), estimated from Tables 10 and 12.

[22] In other words: $\frac{2,000,000}{3,300,000} \times 320,000 =$ about 200, 000.

TABLE V-9. Farm wage earners, 1955

	Classification		Number (1000's)
1.	Total number receiving farm wages[a]		3, 300
	Less: Not considered a part of the farm wage earner population[b]	1, 300	
2.	Potential OASI wage earner population		2, 000
	Less: Operators earning farm wages[c]	200	
3.	Number in the OASI farm population as farm wage earners only		1, 800
	a. In OASI farm wage earner population[d]	1, 346	
	b. Not in OASI population	454	

[a]U. S. Agricultural Marketing Service, The Hired Farm Working Force of 1957, Agriculture Information Bulletin No. 208 (June, 1959). An interpolation from Table 1. The total number receiving farm wages as reported here differs radically from the 2, 017, 000 farm hired workers reported from Crop Reporting Board Surveys. See U. S. Agricultural Marketing Service, Crop Reporting Board, Farm Employment, Statistical Bulletin No. 236 (September, 1958). The 3. 3 million estimate results from a survey of all having done farm work for wages during the year. Crop Reporting Board monthly surveys are averaged to obtain the figure of 2, 017, 000. It is lower mainly because of movement in and out of the farm hired labor group.

[b]Source: same as (a). Includes those having less than 25 days of farm wage work, interpolated from Table 1. See text for discussion.

[c]See text.

[d]From a tabulation of data from the Continuous Work History sample supplied by the Bureau of Old Age and Survivor's Insurance. The total estimate of individuals with OASI coverage from farm wages but not farm self-employment in all U. S. possessions and territories is 1, 458, 500. This number was adjusted to the 48 states on the basis of the place of issue of the social security number. The adjustment is inaccurate to the extent of worker mobility.

Only 2.4 percent of the OASI farm operators, or 45,000 reported farm wages as a source of taxable earnings. The remaining 155,000 operators with farm wages were contained within the OASI-excluded operator group and comprise about 5 percent of its total number.[23]

When the 200,000, already counted as farm operators, are subtracted from the total number estimated as constituting the farm hired wage population, 1,800,000 remain. This was the farm labor force whose only OASI taxable farm income is from wages and/or salaries. The discrepancy of 454,000 between this number and the 1,346,000 included in OASI data is assumed a measure of the reporting failure for hired farm workers in the OASI program.

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[23]The total proportion of Census farm operators estimated to have had taxable farm wage earnings is only 4 percent. This surprisingly low proportion reflects the prestige system of the American farm population. Farm ownership is viewed as the pinnacle of the value system; a renter is lower and hired farm laborers are at the bottom rung of the ladder. So strong is this value system that those who have advanced to the status of farm operator are sometimes observed to accept low income and periods of idleness rather than a farm wage job. OASI operators have only half the proportion with substantial farm wage work as that of the excluded operators. This can be partly explained by: (1) the larger farming operations of the OASI operators--giving them less time for farm wage work, especially during the peak season when extra hired help is needed; (2) OASI operators probably consider themselves higher in the prestige system; and (3) the OASI-excluded group works off-farm in much larger proportion. Nonfarm wage work is not nearly so degrading and 17 percent of OASI operators had this form of taxable income. Off-season opportunities are an additional factor in this higher proportion of nonfarm wage work compared to that of farm wage work.

Those individuals whose farm wage incomes are not reported would be expected to be mostly in the lower income ranges. Further analysis indicates two other significant characteristics: most of them received wages from farm work only; and there is probably a high proportion of Negroes.[24] This confirms the belief that those missed are in the lower socio-economic group; in the OASI data of hired workers Negroes averaged less than two-thirds the income of non-Negroes, and those with only farm wages averaged about 70 percent the income of workers with other covered wage income.

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[24] Approximately 1,480,000 of those with 25 days or more of farm wage work had no nonfarm wage income (Agriculture Information Bulletin No. 208, Table 10). After taking 180,000 farm operators with farm wages from this plus the total OASI group with farm wages as the only taxable income, 804,000, there are 496,000 to compare with the estimated 454,000 who failed to report. The more dependable reporting procedures of nonfarm businesses are less likely to be delinquent. This suggests that OASI data should have had 1.2 to 1.3 million instead of .8 million having coverage from farm wages only.

The racial comparison shows 30 percent of the hired farm population as Negroes in 1957 (Agriculture Information Bulletin, No. 208, Table 16). This contrasts with only 17 percent Negroes in the OASI hired farm population. The difference between numbers of these two estimates is checked as follows:

Non-whites in 1957, from Agriculture Information Bulletin 208	713,000
Less 10 percent adjustment for difference between 1957 and 1955	71,000
Less OASI Negroes	240,000
Discrepancy	402,000

Again, the discrepancy is within the same order of magnitude as the number who apparently were not reported to OASI in the hired farm population.

Income of the Farm Wage Earner Population. --Table V-10 summarizes the income of those who are farm hired workers but not farm operators. A much larger proportion of this group's income is estimated to have been reported to OASI, as compared to the farm operator group. The $1,671 million reported to OASI is 75 percent of the $2,221 million estimated total. By contrast only a little over one-fourth of the total income estimated for all farm operators and their families was reported to BOASI by the OASI farm operators.[25] An important reason for this difference is derived from the definitions of the two populations--relatively more of the hired group are included in the OASI data than of the farm operators. Other causes of the difference in the proportion of total income reported to OASI by farm hired workers compared to farm operators largely result from assumptions about total income levels and components.

Only 2.8 percent of the OASI hired farm workers had taxable incomes of $4,200 and above in 1955, while there were 9.2 percent of the OASI farm operators in this income group. This constitutes a partial basis for the assumption that hired farm workers have lower average incomes than farm operators. An estimate of the income above $4,200 received by OASI hired farm workers but not reported to BOASI was made, using basically the same procedure as that employed in Table V-1 for the OASI operators. The distribution used for extrapolation beyond

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[25] See item 1 of Table V-4 and items 1, 2, and 3 of Table V-11. "All farm operators" as used here corresponds approximately to the Census of Agriculture population.

TABLE V-10. Income of farm wage earner population, 1955[a]

	Income item	Income ($ million)
1.	Income reported by 1, 346, 000 to OASI	1, 671[b]
2.	Income above $4, 200 to OASI population	95
3.	OASI taxable income to those not reporting to OASI (454, 000 x $400)	182
4.	"Other" personal income to farm wage earners (1, 800, 000 x $100)	180
5.	Income to spouses and other family members (620, 000 x $150)	93
	Total income to farm wage earners and members of their families	2, 221

[a]This table includes only those estimated to be members of the farm labor force because of income from wages and/or salaries but who do not receive farm self-employment income. See Table V-9 and text for explanations of population used. 1, 800, 000 farm wage earners are estimated to be included. There is a possibility of some duplication of numbers in this population and those classified as OASI-excluded operators in Table V-8. This would involve the hired farm managers who are counted as farm operators by the Census of Agriculture.

[b]From a tabulation of data from the Continuous Work History sample supplied by BOASI. All individuals reporting farm wages but not self-employment income to BOASI had a total taxable income of $1, 786 million. The $97 million reported by those in United States trusts and territories is subtracted. This classification is based on location of the worker at the time of issue of his OASI number. It is inaccurate to the extent of worker mobility.

$4,200 was that for "Laborers except Farm and Mine" from Table 5 of Current Population Reports, Series P-60.[26] The distribution for "Farm Laborers and Foremen" was not used because this classification was required to spend at least half time at farm work. In the OASI data of hired workers, those with wages from nonfarm sources had the higher incomes. It was thus thought that the wage income distribution above $4,200 was more likely to resemble that of nonfarm wage earners. There is an important difference between the distribution assumed for farm wage earners, and that of farm operators. Income from self-employment is likely to have a distribution curve that almost becomes asymptotic to the x-axis; some farm entrepreneurs are estimated to have earnings from taxable sources in excess of $25,000. On the other hand $10,000 is considered the practical ceiling for incomes of those receiving farm wages. The procedure as outlined yielded an estimate of $95 million dollars in income from taxable sources that was not in the OASI data of farm hired workers.

Evidence has already been presented, page 167, that indicates a high proportion of the OASI-excluded, hired farm worker population to be Negro and to have wages only from farm work. Negroes with only wage incomes in the OASI hired farm group had an average taxable income of $670. Those not included would almost certainly average well below this. As a reasonable assessment of these factors an estimate of $400 in taxable earnings was made of this OASI-excluded group. This is about 60 percent of $670.

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[26] U. S. Bureau of the Census, op. cit.

"Other" income--from sources not taxable under OASI--is also expected to be lower for hired workers than the average of $345 received by farm operators.[27] OASI hired workers are younger--37 years versus a 51 year average for OASI operators. This implies fewer transfer payments because of age. It also suggests that hired workers will have had less time to accumulate capital to earn income; ceteris paribus the fact of hired farm labor of itself implies small capital resources. An estimate of the average income for "Farm Laborers and Foremen" is $1,360.[28] This is $50 above the $1,310 average of OASI hired farm workers.[29] There are questions about the comparability of populations and incomes involved and the major value of such a comparison is to

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[27] U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. III, part 11 (1956), Table 10.

[28] U. S. Bureau of the Census, Current Population Reports, Series P-60, No. 23 (November, 1956), from Table 5. The average estimate was obtained in the same manner as that in Table V-5. Those with incomes under $100 were eliminated. Differences between the two populations compared must be recognized but are at least partly offsetting. CPS "Farm Laborers and Foremen" only included those spending half or more time at this occupation. This is thought to restrict the number who would have very low incomes from farm wages so that most of this number would be eligible for the OASI population. At the same time it limits the upper range of income--only 3,000 had over $5,000. More OASI hired workers are in the lower ranges--57 percent had under $1,000 reported to BOASI compared to 48 percent of the subject CPS group, but there is more possibility of higher-ranging incomes because OASI hired farm workers are not restricted as to the proportion of time that they must spend at farm work.

[29] Items 1 and 2 from Table V-10 (equal to $1,766 million) divided by 1,346,000.

support the contention that large "other" incomes were unlikely for the average member of the hired farm population. In consideration of the above items, $100 is used as an approximation to "other" income for the hired farm population.

Only an educated guess can be made of income to family members other than the household head of families in the hired farm worker population. Beside the lack of statistics that are specific to this end, a somewhat different unit is under consideration in the hired farm worker group compared with farm operators. In the case of operators, the overwhelming number are family heads and the family itself tends to constitute a more tightly knit economic unit. In the case of hired workers only 40 percent are household heads, or an estimated 620,000 of the 1,800,000 total.[30] A complication in estimating family income to members beside the household head is that some of the 1,120,000, who are in the farm hired worker population, are family members of the household heads in the same population. In order to avoid a later correction, only income to family members who do not qualify as part of the hired farm work force is considered. This income includes that from nonfarm sources plus farm wages up to $100 per person.

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[30]U. S. Agricultural Marketing Service, The Hired Farm Working Force of 1957, Agriculture Information Bulletin No. 208 (June, 1959), p. 39. Forty-one percent of those having over 25 days of farm wage work are reported to be family heads. This is roughly confirmed by the fact that just over 50 percent of the OASI hired farm worker population are males 30 or more years old--the group most likely to be household heads in large proportions.

Allowance for double counting is thought to substantially reduce income that can be assigned to family members because of an assumed limitation on alternatives, other than farm wage work, available to the subject families. For these reasons the income to spouses and other family members is estimated at less than one-half the $341[31] average of farm operator families, or $150.

Correction for Double-Counted Income. --An adjustment to money income must be made for farm wage income received by members of farm operator's families, beside the operator, that is double counted both to operator's families and to the farm hired work force. In this, as in certain previous cases, the adjustment is included because the problem is known to exist but estimates are subject to a wide margin or error because of limited information.

The 1955 Survey of Farmers' Expenditures reports income to wives and other members of operator families from off-farm, farm sources.[32] It is considered improbable that many wives on higher economic classes of farms performed farm labor for wages; their farm income is more likely to come from property owned or farm projects. Nor are children from higher economic classes of farms

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[31] U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. III, part 11 (1956), Table 10.

[32] U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. III, part 11 (1956), Tables 8 and 12.

likely to be hired out in significant numbers; they are more likely to receive farm money from custom work, rental and other farm projects as illustrated by the high off-farm incomes to other family members in classes I and II. Another factor to consider both, for wives and children, is that many did not earn $100 in wages--the wives of part-time farmers who received off-farm, farm income averaged only $79 from this source.

Arbitrarily one-half the wives' off-farm, farm incomes in economic classes VI, VII and VIII and one-third that in classes III, VI and V is used in this adjustment. In the case of other family members--in addition to operator and wife--all off-farm, farm income received in classes VI, VII and VIII and one-half that in classes III, VI and V is considered as applying. This totals $48,320,000 that is assumed to be double counted, and that must be subtracted from the total income estimate.

Total Income Estimate. --The various components of farm population income are summed in Table V-11 into an aggregate estimate of money income to the farm population. This total of $15,064 million compares to $16,178 million estimated by the Agricultural Marketing Service.[33] While yielding surprisingly similar figures, note should be taken of differences in what these two estimates measure.

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[33] U. S. Department of Agriculture, Major Statistical Series of the U. S. D. A., Vol. III, op. cit., $19,890,000,000 - $3,712,000,000 (estimated non-money income).

TABLE V-11. Aggregate money income of farm population, 1955

	Income component	Income ($ million)
1.	OASI farm operators (from Table V-4).	5, 825
2.	Income to spouses and other family members of OASI operators (from Table V-7)	589
3.	Family income of OASI-excluded operators (from Table V-8)	6, 477
4.	Family income of hired farm population (from Table V-10)	2, 221
5.	Less double-counted income (see text)	48
	Total	$15, 064 million

As already pointed out, the approach for estimating income is different in each case. That used here was to built up aggregates by adding together individual incomes. The Agricultural Marketing Service depends primarily upon aggregate sales of commodities and an aggregation of farm costs. Both estimates lean upon Census data, particularly the estimate of off-farm income to farm operator families included as a part of the 1955 Survey of Family Expenditures.

There are differences in those included as part of the farm population by the two methods as well as problems not entirely resolved with regard to the population definition used here. It is probable that some farm income is not included in the estimate produced by this study because no accounting was made for multiple operators per farm in the OASI-excluded group. Another question arises in the matter of

accounting for landlords. It is beyond the range of this study to examine the question of rent payments in the Agricultural Marketing Service estimate against multiple operators and farm partners determined from Internal Revenue Service and BOASI sources, however this is a problem area. By far the largest difference in population definitions was in the hired farm group. In the Agricultural Marketing Service estimate this group is determined on the basis of residence. The procedure of this research was to base membership in the hired farm population upon receipt of $100 in farm wages from one employer. The income to family members of hired workers is also accounted somewhat differently in the two estimates.

Summary and Conclusions

An estimate of total income to the OASI farm operator group indicates that they have higher average incomes than persons classed as farm operators by the Census of Agriculture. It also indicates that they derive relatively more of their income from agriculture. Thus OASI operators not only account for the bulk of agricultural production but they tend to be specialized in agriculture. This strongly suggests that they are an important group in matters of commercial agricultural policy.

OASI data of both farm operators and farm hired workers may be used as the basis for building up an income estimate of the total farm

population. Because of reporting problems, the peculiarities of population definitions and income deficiencies that attend OASI data it must be heavily supplemented from other sources. However, when this is done an estimate is obtained that compares closely with that of the Agricultural Marketing Service. The aggregate sum is not regarded as of primary importance at the present because of the large number of unrefined elements in its makeup. The insights gained into various components of the farm population, their incomes, and indications of relationships needing further definition are the leading gains from this attempt at a total income estimate. At the same time the result indicates that farm population income estimates may be feasible when built up in this manner.

This estimate has not answered questions raised in the introductory chapter, or in early sections of this chapter. Some procedures, such as the inclusion of family members for farm wage earners, may even add further to the confusion in farm income. This component is clearly identified, however, and it is thought to add a dimension to the total picture. Again, it is relationships between elements that are thought most important at the moment, since a different approach to farm population income is employed here. It is thought that an extension and further development of the techniques of Chapters IV and V performed upon OASI data over a period of years is a fruitful means to insights leading to clearer understanding of the farm economy.

CHAPTER VI

FARMERS IN THE NONFARM LABOR MARKET--AN EXAMPLE OF OASI DATA IN USE

The larger purpose of this study is to specify uses of OASI data of the farm operator population in studies of farmers and their incomes. Up until this point emphasis has been upon defining the OASI farm population. Comparisons that were made in pursuing this end developed many relationships of the farm population components and their incomes. These add insights that are unique, because of data from BOASI, and that can find use in studies of the farm sector. They were derived as by-products of the primary effort at definitions, however; thus far the only direct application in use of the OASI farm labor force data was the development of an income estimate.

It has been suggested earlier that the greatest potential for use of OASI data lies in its continuous register characteristic. This requires data from two or more years. Fortunately such an application need not await the generation of data over a period beyond 1955. The OASI data used in this study include a record of covered employment from 1937 to the present. This makes possible the beginnings of an analysis in time depth of the pattern and processes of farm and off-farm experiences of OASI farm operators.

Since farm self-employment was not covered prior to 1955 any covered employment for 1954 or earlier must necessarily have been

off-farm. For this reason this chapter is limited to a study of farmers in the off-farm labor markets--the extent of present and past involvement and its association with present circumstances.

Only the 1,805,800 indicated as the OASI male farm operator population are studied.[1] Primary interest is in the employment pattern of the family head. Females are considered atypical in this role in agriculture. Drawing upon definitions developed in Chapters IV and V it is noted that OASI operators are relatively specialized in agriculture and produce the bulk of commercial agricultural products. The omission of females is thought to not change this in any important manner, since only 4.4 percent of the operators were women.

In this chapter it should be kept in mind that income data are on a per-income-receiver basis, and are considered a measure of the return from current productive effort. These qualifications were considered in detail in Chapter II.

Limitations to a Time Study with Present Data

Despite an indulgence in modest claims to special features of OASI data in its time depth, sober reflection will not permit the luxury of overlooking some serious limitations for doing this with only the data at hand. One of these is that only those indicated as farm operators in

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[1] This includes farmers reporting from all United States territories, not simply the 48 states existing as of 1955.

1955 are under study. A look backward into their history, misses the segment composed of individuals who once were farmers but who are now identified with another industry. This operates to distort the results in a rather complicated manner--we have here only the segment composed of those who continued on the farm up until now or who have returned to it.[2] Another limitation, already fully discussed, is the implicit definition of farmers made by the data.

One of the special complications that requires recognition is the effect upon characteristics of the employment groups as set up in Chapter II. There is occasion to use this classification in this chapter, and these problems should be recognized. For example, the incomplete industry coverage of OASI data prior to 1955 makes it impossible to tell if individuals who had coverage in those years were farming at the time. Thirty percent of all males were in the SEF-PC group in 1955 but we do not know if they were part-time farmers or employed full-time off-farm in the years when they had coverage prior to 1955. The same problem applies to those in the seven employment groups with off-farm work in 1955 who indicated coverage in 1954 or earlier.[3]

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[2]There may also be some who shifted to farm operator status from nonfarm work without previous farm experience. The number of these is thought to be small.

[3]Of the 1,805,800 male operators, 564,500 had off-farm covered employment in 1955. About three-fourths of these, or 418,000, had received covered income prior to 1955.

Those without off-farm coverage in 1955 or earlier, the SEF group, comprised 39 percent of all male operators. Limitations to the coverage of OASI data tend to swell the size of this group. A number of the individuals in this employment class have unquestionably worked for wages but for various reasons were not covered. One such factor is the length of the time that OASI has been operating. Many farm individuals have worked off-farm before settling on farming as a vocation. For some individuals this was a part of the process of acquiring capital to farm.[4] Such a stage usually occurs in youth and those already past this period in 1937 would have been classed as SEF instead of SEF-PC. The effect is an upward influence on the age of the SEF group. In 1955, SEF males averaged fifty-five years of age, the SEF-PC males averaged forty-six years and all males were forty-nine. Other factors, beside those allied to the data limitations just discussed, were also operating.

Other special problems in data distortions will be noted in later sections of the chapter.

Extent of Involvement in Off-farm Employment

Data in general use indicate a high proportion of farmers to be involved in off-farm work. The 1954 Census of Agriculture reports 45

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[4]This is treated in: W. J. Spillman, "The Agricultural Ladder," AER supplement (March, 1919), pp. 170-179; and B. T. Inman, and W. H. Fippin, Farm Land Ownership in the U. S., U. S. D. A. Miscellaneous Publication 699 (1949).

percent of all farm operators to have off-farm work; 60.7 percent had other family income beside that from farm self-employment; and for 29.8 percent income from off-farm exceeded the value of farm sales. The 1955 Farmers' Expenditures Survey showed nonfarm income to be equal to or greater than farm income for 45 percent of the farm operator families.[5] The Agricultural Marketing Service estimated farm operators' realized net money income from farming at $8,140 million and nonfarm family income of the farm population at $6,300 million in 1955, plus farm wages to farm residents of $1,738 million.[6] The latter two figures combined are similar but not strictly comparable to the estimate of over $8 billion for off-farm family incomes to operator families that was obtained from the Farm Expenditures Survey.[7] Keeping in mind the unique qualifications of OASI male operators, data of this population are now presented.

Those who were male OASI farm operators in 1958 can be divided into three broad groups with respect to off-farm income. Thirty-one percent had covered income from off-farm sources in 1955. An additional 30 percent had received coverage in prior years from off-farm income but their only covered income in 1955 was from farm self-employment; this latter is the SEF-PC group. There were only 39 percent of the male OASI operators who neither in 1955 nor previously had been a part of the

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[5] U. S. Department of Agriculture, U. S. Department of Commerce, Farmers' Expenditures in 1955 by Regions, USDA Statistical Bulletin No. 224 (1958), Table 42.

[6] U. S. Department of Agriculture, Major Statistical Series of the U. S. D. A., Agricultural Handbook No. 118 (1957).

[7] U. S. Bureau of Census, Census of Agriculture: 1954, Vol. III, part 11 (1956), Table 8.

nonfarm labor force; these constitute the SEF group. This, at first glance, appears to agree with the general statistics quoted in the preceeding paragraph--an impressive 61 percent of the OASI farm operator population had off-farm work in 1955, or had had it previously.

Is the indicated situation of an extensive involvement in off-farm work on the part of OASI operators an entirely accurate one? Our ability to follow each individual from year to year via OASI data throws a substantially different light upon the matter.

Twenty percent of the 1,101,900 with off-farm OASI coverage at some time had covered employment in 1937--the first year of the program. Only five percent of these continued with off-farm coverage every year from 1937 to 1954. The number thus involved off-farm was 9,800. This is .9 percent of those having off-farm coverage and only .5 percent of all OASI male farm operators.

Male operators with covered employment in 1954 or previously averaged only 5 years of covered employment during the 18 years 1937 to 1954. Most individuals in this group were sufficiently old to have employment in 1937--they would have averaged 28 years of age. Males with covered employment in 1954 or earlier constitute 53 percent of all male operators. If we consider all 1,805,800 males, the average number of years worked in 1937-1954 drops to 2.7 per person. Due allowance must be made for limitations in industries and incomes covered by OASI, during 1937-1954, but these figures of years with off-farm income tell a quite different story of the involvement of farm

operators off-farm from that of the income data mentioned earlier.

Detailed, year-by-year data for the 1951-1954 period give further evidence of the extent of off-farm involvement of individuals who were farm operators in 1955. Almost half--48 percent or 530,000--of the 1,109,900 with off-farm experience in 1955 or earlier reported income under covered employment at some time during 1951-1954. Seven percent of this 530,000 failed to meet even the modest requirements for at least one quarter's coverage. Unsteady work, as well as amount of income, may be responsible for such failure to qualify. In any case, there is the suggestion that many who did qualify may be barely above the minimum.

One of the most important indications of the real role that off-farm employment plays in the economic life of OASI male operators is found in a check of those with coverage every year in 1951-1954. Only 140,000 were sufficiently steady contributors to the nonfarm labor force to qualify for at least one quarter of coverage during each of these four years. Barely half of this 140,000, or 72,800, had four quarters of coverage in every year. This is 7 percent of males with off-farm experience and 4 percent of all male farm operators.[8]

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[8]It should be noted that incomes to farmer committeemen working with the Agricultural Stabilization and Conservation program were covered under OASI. This would have been recorded by BOASI as off-farm income. It would account for at least some of the off-farm work of 1955 farm operators, both in 1955 and previous years. There were probably also cases where income from this source amounted to less than $50 per quarter, so that a quarter of coverage was not earned.

Scrutiny of the group with four quarters coverage each year of 1951 to 1954 reveals two significant facts: their farm operations are decidedly smaller, or less profitable, than those of the average OASI operator; and they are relatively more dependent on nonfarm income. Forty-seven percent of this group were in the SEF, SEO employment classification and another 27 percent were SEF, WSO. A comparison of OASI incomes in 1951-1954 and 1955 for these two groups is as follows:

	Receiving 4 Quarters Coverage Each Year 1951-54	
	SEF, SEO	SEF, WSO
1951-1954 average taxable income	$2,590	$2,630
1955 average taxable income	2,960	3,195
Farm self employment income in 1955[9]	$370-$590-$840	905

This suggests that some of the SEF, SEO group above, might not have been in the OASI farm operator population at all if they had not been able to add self-employment income from other sources to farm income.

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[9] The farm self-employment income for the SEF, WSO group is determined from an actual tabulation. The smallest figure for the SEF, SEO class is a subtraction of 1951-1954 taxable income from 1955 taxable income. The intermediate estimate is derived by assuming that there is the same ratio between actual farm income and that computed by subtraction (used to determine the $370 figure) for the SEF, SEO class, as there is in the case of the SEF, WSO class:

$$\frac{565}{905} = \frac{370}{590}.$$

The estimate of $840 as the farm self-employment income for the SEF, SEO group assumes that the same ratio as that between farm self-employment and total income of the SEF, WSO group holds for those classified SEF, SEO. This is thought the upper limit because there was a floor on farm income of the SEF, WSO group that should have caused it to average higher.

The size of the farm operation for those in the SEF, WSO group is necessarily the larger. They were required to have at least $400 from farm self-employment. Even at this, for the SEF, WSO group with four quarter's coverage each year, 1955 net incomes from farming are less than two-thirds the $1,370 average for all males in the SEF, WSO class.

The picture that emerges from this look at the off-farm involvement of OASI male farm operators may be summarized: almost two-thirds have had some such experience; very few, .5 percent, had off-farm covered employment in every year of 1937 to 1954; and less than 8 percent had at least one quarter's coverage and only 4 percent had four quarter's coverage every year of 1951-1954. Farming was relatively unimportant for this latter group who were heavily and steadily involved off-farm.

Stability of Off-farm Income Sources

Widely fluctuating farm prices are often compared unfavorably to the relatively stable wage rates paid to industrial workers. This, plus the tendency during the past decade for aggregate farm net income to decline while wage rates advanced and farmers as defined by the Census became more involved in off-farm work, would make it appear that such off-farm work has a stabilizing effect upon total income to farm families. Indeed, aggregate estimates almost compel one to such a conclusion. In no less than four years of the 1950-1959 period, an increase in estimated total nonfarm incomes to farm families has at least partially off-set a

decline in net farm income.[10]

Again it is appropriate to note that farm population and income definitions may alter conclusions derived from a given set of statistics. A special concern is that the aggregation of cross-section data may obscure individual viscissitudes. Other specific questions relevant to the stability of off-farm income are posed as part of the discussion that follows.

As a first step in this phase of the investigation, the pattern of work off-farm is re-examined--this time in more detail. Table VI-1 affords this closer look. Only 20 percent of the male farm operators with off-farm covered types of employment prior to 1955 reported some every year of 1952, 1953, and 1954. Thus at least 80 percent failed to have covered employment annually after starting it. A large number with this broken pattern of employment is composed of the SEF-PC class. Even when individuals of this class are eliminated from the computation, there are still about 60 percent with a broken employment record in 1952-55. This evidence suggests a considerable shifting in and out of the off-farm labor force.

Not all the 1955 OASI farm operators had been shifting in and out of the off-farm labor force. It has been noted that 140, 100 had at least

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[10] U. S. Agricultural Marketing Service, Farm Income Situation (February, 1960), p. 29. Years in which this occurred: 1952, 1955, 1956 and 1959. The observed behavior of non-agricultural incomes is partially inherent in the method used for estimating it. The general procedure is to establish a figure as of a base survey year and to vary it for later years as a function of nonfarm sectors.

TABLE VI-1. Patterns of employment in 1950-1954 for OASI farm operators with earnings from covered types of employment prior to 1955, by employment group[a]

Employment group[b]	Totals		OASI coverage pattern						
	Number (1000's)	Percent (%)	Continuous 1952 to 1955 (%)	Covered 1952-53 not 1954 (%)	Covered 1953 not '52 & '54 (%)	Covered 1952 not '53 & '54 (%)	Covered prior to 1952 not '52 - '54 (%)	Covered prior to 1950 not '50 - '54 (%)	Others[c] (%)
2. SEF-PC	538	100	6	6	5	8	11	58	6
3. SEF, SEO	131	100	36	9	3	5	6	24	17
4. SEF, WSO	216	100	38	6	3	4	5	18	26
5 to 9	71	100	41	5	3	5	6	15	25
Total (2 - 9)	956	100	20	7	4	7	8	41	13

[a]Source: A tabulation of data from the Continuous Work History sample supplied by BOASI. Includes any with earnings from covered types of employment. Approximately 5 to 10 percent reporting such earnings did not meet requirements for covered income in each year.

[b]See description of employment groups in Chapter II. Numbers here correspond to numbers assigned in Chapter II.

[c]Miscellaneous patterns of one to three years without reported earnings subsequent to 1950. Includes a small number with first covered employment in 1954.

TABLE VI-2. Average taxable income and four-year income range of OASI male farm operators receiving one or more quarters covered income each year of 1951 to 1954, by employment groups for years 1951 to 1954[a]

Employment group[b]	Number (1000's)	Average income per year ($)	Average range[c] ($)	Range as a percent of average (%)
2. SEF-PC	19.7	1934	1710	88.6
3. SEF, SEO	39.6	2510	1040	41.5
4. SEF, WSO	57.1	1810	1120	62.0
Groups 5 to 9	23.7	2120	1100	53.5
Total (2 - 9)	140.1	2080	1180	56.9

[a]Source: A tabulation of data from the Continuous Work History sample, supplied by BOASI.

[b]See explanation of employment groups in Chapter II.

[c]Determined by subtracting the lowest taxable income received from the highest received in 1951-1954 for each individual and averaging. Standard error is not used because only four observations are involved.

one quarter's coverage for every year of 1951-54. Year-to-year off-farm income for this group provides further insights. This is summarized in Table VI-2. Mean taxable income was $2,080 per year for the period. The range of income received for just these four years was well over half of the average--57 percent. Year-to-year income variation as measured by the range was highest for the SEF-PC group. This is emphasized as a significant factor later in the discussion. Those with nonfarm wage income in 1955 were numerically the most important, making up 41 percent of the total. Although they continued in 1955 with off-farm income they had a range in year-to-year incomes equal to almost two-thirds, 62 percent, the average received in 1951-54. Thus even off-farm employment in every year did not assure a stable income from this source for the relatively few farm operators having it.

In the period studied there is evidence of an unsteady pattern of off-farm work, and a widely varying income for those with off-farm employment each year. This directs attention to another major factor: Can instability in off-farm work be associated with the period under consideration; More specifically we may ask: How does the nonfarm income received by farmers vary with the demand for nonfarm wage workers, hence with the business cycle? If nonfarm incomes of farmers are less secure than nonfarm incomes to other segments of the labor force, then this source of income to farm operators may actually exaggerate fluctuations in nonfarm employment. Rather than a stabilizing element in the incomes of farmers, nonfarm incomes would act

as an unstabilizing factor. Important facets of this question can be studied with OASI data at hand.

First, a brief look at conditions prevailing during the years 1951-1955 is necessary. The period began with a rise in demand for agricultural products and other products generally due to the Korean conflict. This slackened and was followed by falling farm prices and, in 1954, an industrial recession. Despite the recession, farm cash costs continued to rise throughout the period, and net income of farm operators dropped steadily. In 1955 it was $11,767 million, down from $16,334 million in 1951 and the purchasing power of operators' net cash income from farming was less than two-thirds its 1943 to 1947 level on a per-farm basis.[11] Drought in some areas contributed to farmers' difficulties in 1954 and 1955. Generalizations from so short a period must be made with due care, however it covers a wide range of conditions, since it includes both an expansion and a contraction in agricultural demand, and an industrial recession.

Estimates of aggregate non-agricultural income to the farm population fell in the 1952 to 1954 period, but relatively more slowly than the net income of farm operators from farming. See Table VI-3, part A.

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[11] U. S. Agricultural Marketing Service, Farm Income Situation (February, 1960), pp. 29 and 33.

TABLE VI-3. Farm and off-farm income to indicated farm populations and specified OASI farm populations for years 1951-1954

Population and income group	Income			
	1951	1952	1953	1954
	(mil. dol.)	(mil. dol.)	(mil. dol.)	(mil. dol.)
A. AMS estimates[a]				
1. Income to the farm population from non-agricultural sources	$5,600	$6,100	$6,000	$5,800
2. Total net income of farm operators from agricultural sources[b]	16,334	15,337	13,278	12,691
B. OASI income to those who were male farm operators in 1955[c]				
1. Total taxable income	487	492	495	432
2. Taxable income from wages only	-----[d]	328	330	264
3. Total taxable income to those who were male farm operators in 1955, with SEF-PC class excluded	345	364	389	386
	(1000's)	(1000's)	(1000's)	(1000's)
C. OASI numbers data of those who were male farm operators in 1955[c]				
1. Number with OASI taxable income	316	324	337	312
2. Number with wage income	245	249	258	229
3. Number who were SEF-PC in 1955	114	109	102	61

[a]Agricultural Marketing Service, Farm Income Situation (February, 1960), p. 29. Population as measured by AMS is on the basis of farm residence and income sources.

TABLE VI-4. Continued

[b]Includes non-money income and government payments.

[c]Tabulations of data from the Continuous Work History sample supplied by BOASI. Note that all income is off-farm since farm self-employment income was not covered in these years. Directly comparable 1955 data are not available.

[d]Not tabulated.

TABLE VI-4. Indexes of employment and weekly payrolls, averages by years for 1951 to 1955

Year	Employment total non-agricultural civilian labor force[a]	Total labor income[b]	Manufacturing industries[c]	
			Production worker employment	Production worker weekly payroll
1951	100.0	100.0	106.4	129.8
1952	101.0	108.3	106.3	136.6
1953	103.2	116.9	111.8	151.4
1954	101.4	116.0	101.8	137.8
1955	104.7	123.8	105.6	152.9

[a]Source: Economic Report of President (January, 1957), Table E-17. Index constructed by setting employment numbers in 1951 equal to 100 percent.

[b]Source: Economic Report of President (January, 1957), Table E-12. "Wage and Salary Disbursements and Other Labor Income." Index constructed by setting 1951 labor income equal to 100 percent.

[c]Source: Monthly Labor Review (April, 1956), Table A-4, 1947-49 = 100 for both employment and payrolls.

These are estimates by the Agricultural Marketing Service and provide the basis for the usual conclusion regarding the income stability resulting from nonfarm wage work. There are at least three grounds for objection to use of these data in support of such a conclusion: (1) parts of the population included are basically nonfarm--they do not fit the concept of a family farmer bolstering farm income with wage work; (2) other components than wages are included in the non-agricultural income; and (3) the data used are basically an annual cross-section series--it is not possible to follow individuals from year to year.

The OASI data in Table VI-3 do not completely satisfy all the above objections, but they are a decided improvement. It consists mainly of individuals shown to be important in agriculture in 1955 and an assumption is that they were also closely associated with agriculture in the 1955-54 period.

Wage income is more relevant to the subject under discussion and it is traced through 1951-1954. The number with wage income dropped 11 percent and total wage income dropped 20 percent between 1953 and 1954. This compares with a 1.5 percent drop in civilian non-agricultural employment, and less than a 1 percent fall in labor income. Even the more volatile indexes for the manufacturing industry each fell only 9 percent.[12]

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[12] In this comparison the total nonfarm wage force was increasing annually, but so were the numbers in the 1955 OASI farm population who had off-farm experience. Those having covered income for the first time were 2.8, 2.8 and 2.5 percent respectively for 1952, 1953 and 1954 in terms of all operators who had had this experience.

See Table VI-4. The above is apparently clear cut evidence of unstability in the wage income to farmers. It occurred in a dynamic situation making a simple assignment of cause-effect relationships impossible. Unfortunately the OASI data are not complete and, used in this manner, have some notable distortions. The following observations serve to supplement the data and add further insights.

A first item worthy of special note is the 22 percent fall in the purchasing power of operator's net cash income from farming during 1951 to 1955.[13] This is certain to have had its effect in discouraging farm families, and unfavorable weather in some parts of the country in 1954 made farming even less attractive. A decade of favorable farm profits had greatly elevated farm living levels, requiring a sustained flow of cash income for their maintenance, as would be suggested by the "Ratchet Theory."[14] All of these combined to put pressure on farmers to seek off-farm sources of income. Without such a concert of factors it is probable that the total off-farm wage income might have dropped more than 20 percent in 1954.[15]

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[13] U. S. Agricultural Marketing Service, Farm Income Situation (February, 1960), p. 33.

[14] James S. Duesenberry, Income Savings and the Theory of Consumer Behavior (Cambridge: Harvard University Press, 1949).

[15] There were almost twice as many with off-farm income in 1955 as in 1954--564, 500 compared to 312, 000. This might suggest that large numbers of farmers took off-farm employment as the general economy recovered in 1955, but there are many qualifying factors. Among these are the new categories of OASI covered employment added in 1955 in

Now consider the SEF-PC group--those with only farm self-employment income in 1955 but who had had previous off-farm coverage. Table VI-3 presents evidence that the drop-out in numbers of this group with off-farm employment may have been one of the most important factors in the decline of off-farm covered income between 1953 and 1954.

It is proposed here that an important element of the SEF-PC class is composed of individuals who were involuntarily separated from the off-farm wage force in 1953 and 1954. They were young--46 years of age compared to 55 years for the SEF class. Their mean 1955 income was the lowest of any class--$1,670 compared to an average of $1,875 for all males. Still more revealing is the relationship between years of off-farm employment and 1955 income. The more recent the period of off-farm employment the lower the 1955 income. Income in 1955 averaged $1,735 for the SEF-PC class who had no coverage after 1950. It fell to a low of $1,490 for those employed in 1952 and 1953 but not 1954.[16] This suggests that many in this latter group were involuntarily separated from the nonfarm labor force in 1954. They were forced back upon a farm unit that was inadequate. For this reason their 1955 incomes were

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addition to that of farm operators. There is some evidence of individuals previously eligible who first reported in 1955. For example, the SEF, SEO class jumped from 83,400 to 210,000 between 1954 and 1955. Thus the present data leave a number of items poised as a question mark.

[16]There were 313,800 of the SEF-PC group having off-farm coverage before 1950; 34,700 did not have coverage in 1954 after having it in 1952 and 1953. See Table VI-1. The difference between the average incomes of $1,735 and $1,490 is highly significant statistically.

low compared to incomes of farmers who had farmed full-time for several years.

There is another important element in the SEF-PC class that should be kept in mind when making comparisons. It is made up of those who use nonfarm income to gain capital and who returned to full-time farm operation voluntarily. In Table VI-3 it will be seen that the number of the SEF-PC group who had covered employment falls every year. This is a result of the definition of the class--those who voluntarily or involuntarily returned to full-time farming, and this tends to exaggerate the numbers forced out of nonfarm jobs in 1953 and 1955. Over half the SEF-PC class had all their nonfarm coverage prior to 1950 but even those who had been full-time farmers for five years had an average covered income in 1955 of only $1,735 compared to $1,755 for farmers of the SEF class. Even though small this difference is statistically significant at the .1 percent level. Were these individuals marginal nonfarm workers at some earlier period? There will be occasion in the next section to examine an interrelated aspect of the SEF-PC class. It was considered necessary to invite attention to this possible distortion in data due to the look backward from a specific year, although it cannot be fully assessed.

This section has argued that nonfarm income is less a stabilizing factor to the incomes of individual farmers than currently used estimates lead us to believe. For those farmers who are important in the commercial agricultural economy and who remain on the farm there is evidence that

nonfarm income may fluctuate widely. Relatively few commercial farmers are steady participants in the nonfarm labor force and even those who are have a quite varied year-to-year income from this source.

There is also evidence that suggests farmers to be more susceptible to the business cycle in their nonfarm wage income, than are other elements of the labor force. The dynamics of the situation and limits to OASI data from a single year make it difficult to quantify this exactly.

Ample a priori reasons exist substantuating the case developed here for unreliability of off-farm employment for self-employed farm operators. Having to divide his time and attention between two interests, the part-time farmer proves unreliable to his employer. He may require time off to handle farm emergencies and to do farm work at critical seasons such as seeding and harvest. Often his skills and work inclinations are such as to put him into jobs, as construction, that are plagued by their nature with viscissitudes. An employer may consider that laying him off causes the least individual difficulty since he has another income source. His location is fixed, this hampers him in moving with jobs or ranging for employment. All these operate to set the farmer at a disadvantage to the nonfarmer in competition for jobs and to make him a marginal employee in many situations.

Some Relations of Off-farm Experiences to Present Circumstances

General types of relationships between farm and off-farm employment are well recognized although much remains to be done to quantify elements involved.[17] Some individuals take off-farm work as a means of gaining capital for a farming operation. In cases where the individual works part-time at farming and a nonfarm job this may be a transitional stage from farm to nonfarm status, it may be simply a temporary means of supplementing farm income or it may be a case where a basically nonfarm worker prefers to reside in the country. Most of these relationships are with reference to current employment. Relatively little information is now available concerning past experiences and present circumstances.

In this section some of the salient aspects of past and present experiences are examined in their relationship to characteristics of individuals involved.

Opportunities for Income. --The present income commanded by an individual depends partly upon a complex of factors that may be termed opportunities for income. These include personal characteristics such as ability, the family socio-economic level, and regional factors.

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[17] See for example, U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. III, part 9, Chapter VIII, "Part-time Farming (1956), pp. 7-10.

There are important regional differences in levels of communications, education, availability of nonfarm employment, and average incomes. Random occurrences and personal goals are other important items that may influence money income.

Full-time farm operators with previous off-farm covered income were found to have a lower mean income in 1955 than full-time farmers without such experience. Apparently many of the former are individuals whose opportunities have been inferior to other full-time farmers.[18] One aspect of this was explored in the discussion of stability of off-farm labor income. Evidence was presented showing that some of this class were victims of uncertain off-farm jobs and apparently forced in 1955 to live on the income of an inadequate farm unit.

Regional data, provided in Table VI-5, shed additional light on distinctions between the two classes of farmers whose only covered income was from farm self-employment in 1955--the SEF and SEF-PC classes. The largest number, relatively and absolutely, of full-time farmers were found in the West North Central region. This region may be regarded as one of the better agricultural areas. Mean income of the SEF class is relatively high in the West North Central region--$1,815

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[18] Some in the SEF-PC group are thought to be retired. Such individuals would not necessarily fit into the discussion of this section. Such evidence as is available, however, indicates a relatively low proportion of retired individuals in the SEF-PC class. The proportion over sixty-five is 9.5 percent compared with 17 percent for all male OASI operators.

TABLE VI-5. Percentage distribution and taxable income of OASI male farm operators, by employment classification and United States regions, 1955[a]

Employment group[b]	United States regions[c]					
	North Atlantic	South Atlantic	East North Central	West North Central	South Central	Western
A. Percent Distribution						
	(%)	(%)	(%)	(%)	(%)	(%)
1. SEF	32	35	40	51	34	23
2. SEF-PC	34	33	32	23	31	36
3. SEF, SEO	16	11	9	9	12	19
4. SEF, WSO	14	18	16	13	17	14
5. SEF, WSF	1[d]	1[d]	1[d]	1[d]	2[d]	4[d]
6 to 9	4[d]	3[d]	3	2	4	5
Total[e]	100	100	100	100	100	100
Number in each region[f]	124,500	162,500	410,200	573,200	312,900	199,600
B. Average Taxable Income (Rounded to Nearest $5)[g]						
	($)	($)	($)	($)	($)	($)
1. SEF	1,085	1,295	1,855	1,815	1,395	2,345
2. SEF-PC	1,705	1,370	1,720	1,675	1,400	2,130
3. SEF, SEO	2,390	2,080	2,285	2,155	2,120	2,890
4. SEF, WSO	2,405	1,795	2,355	2,070	1,870	2,500
5. SEF, WSF	2,245[d]	2,350[d]	1,805[d]	1,780[d]	1,715[d]	1,670[d]
6 to 9	2,815[d]	2,540[d]	2,640	2,310	2,330	2,800
Average for region[f]	$1,985	$1,540	$1,950	$1,860	$1,610	$2,385

[a]Source: A tabulation from the Continuous Work History sample supplied by BOASI.

[b]See description of employment groups in Chapter II. Groups are numbered as assigned in Chapter II.

[c]Regional divisions include the same states as the Census of Agriculture: 1954, Vol. II. The North Atlantic region combines the New England and Middle Atlantic regions. The South Central region combines the East and West South Central regions. The Western region combines the Mountain and Pacific regions. Regional classification is on the basis of place of issue of OASI number. It is inaccurate to the extent of worker mobility, but this is regarded as small for farm operators.

[d]Fewer than 100 in the sample.

[e]Detail may not add to 100 percent because of rounding.

[f]The total number involved in this tabulation of OASI male farm operators was 1,782,800. This is less than the 1,805,800 total of all males in all United States possessions because of 12,300 who were outside continental United States and 10,700 with railroad employment at time of issue of card number who could not be classified by regions.

[g]Statistical significance: As a very approximate guide to statistically significant differences, where the population from which each sample mean compared is taken is 100,000 a difference of $10 is significant at the 1 percent level. Where each population is 10,000, mean incomes must have a difference of $20 to be significant at the 1 percent level. This illustrates an added advantage of OASI data; the relatively large numbers in each sample category make it possible to detect even small differences between the populations represented.

compared to $1,295 in the South Atlantic and $1,085 in the North Atlantic regions. SEF mean income is higher in East North Central than in the West Central region but in the former there is also relatively more demand for nonfarm labor. An important item for attention is the ratio between numbers in the SEF class vis a vis those classified as SEF-PC. The better the agricultural area, and/or the less available the nonfarm employment, the lower the proportion of SEF-PC to SEF in the population.[19]

An opportunity differential hypothesis appears to explain much of the observed differences.[20] In the better farming areas, one of the best means of accumulation farming capital in the 15 years of 1940-1955 was in agriculture itself. Those who were forced to go to nonfarm jobs to accumulate capital would be more likely to be the relatively disadvantaged ones. Their 1955 income reflects this. In the poorer farming areas of the South and North Atlantic, nonfarm jobs offered better ways of accumulating capital than agriculture alone.[21] Those who took the nonfarm

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[19]"Better" and "poorer" agricultural areas, refer to the average opportunity for per capita income in agriculture.

[20]The Western region appears an exception in this generality just as it was found to be atypical in a number of respects in Chapter III. It has a very low proportion of SEF but the highest average income. The Western region varies markedly from others in its pattern of migration and recent development, e.g., reclaimation projects among others. Farmers moving to these also indicate problems of opportunities and are likely to have a history of past off-farm employment. Another factor in the West is the large agricultural units offering employment to operators of nearby smaller units.

[21]Vernon W. Ruttan, "The Impact of Urban-Industrial Development on Agriculture in the Tennessee Valley and Southeast," Journal of Farm

route fared better on the average than others not doing so. Despite the superior performance of the SEF-PC group in the poorer agricultural areas, their incomes in these regions were not as high, except in the North Atlantic region, as in the North Central region. This, combined with the lower proportion of SEF-PC in the North Central region where there was some of the best agricultural opportunity, resulted in a lower 1955 mean income for the SEF-PC class as compared to those whose only experience was at farm work.

Age at the time of first nonfarm employment is also closely related to opportunities available. Those starting at a relatively young age are likely to be more successful in a nonfarm job, hence improving their chances for accumulating capital. It also indicates that they have opportunities for nonfarm work available, they are aware of it and able to take advantage of the opportunity. An individual's starting nonfarm work later in life more often may result from an unsatisfactory farm income, or severe misfortune forcing him to make such a decision. Persons not employed off-farm till age thirty-five or beyond would also be expected to have less adaptability and lower earning capabilities at nonfarm work--handicapping them still further.

The level of OASI income in 1955 was decisively related to age at first nonfarm employment. All operators who were under twenty-five years of age at the time of first covered income between 1941 and 1950

Economics, Vol. XXXVII (February, 1955), pp. 38-57, discusses how an industrial complex may affect the incomes of all in the vicinity: on-farm, off-farm, and nonfarm workers.

had an average 1955 income of $2,040. For those over thirty-five at the time of first nonfarm employment in 1941 to 1950, average 1955 income was $1,560. Table IV-6 gives more detailed breakdowns of income by age at time of first covered employment.

Effect of Continuity and Tenure of Off-farm Wage Work. --There were 215,900 male farm operators in the 1955 OASI farm operator population who had wages and salaries from nonfarm sources in addition to farm self-employment income, this is the SEF, WSO group.[22] The distribution of their 1955 income between wages and farm income, according to their pattern of past employment is shown in Table VI-7. Few will be startled to find that wage income increases proportionately as a farmer is employed longer and more regularly off-farm. Data in Table VI-7 give documentation of the fact, and serve as a complement to the discussion of part of the SEF, WSO class on page 185. Differences in total 1955 income ranging from $1,685 for those with erratic coverage to $2,550 for operators covered every year are largely accounted for by differences in the wage component. For all these part-time farmers mean farm income is not widely different. There is an easily-identified tendency, however, for income from farming to be lower as off-farm work is more stable. This is the opposite of the strong correlation of 1955 wage income with regularity of off-farm work.

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[22]Does not include those having other types of income in combination with that from farm self-employment plus nonfarm wages and/or salaries.

TABLE VI-6. 1955 earnings of OASI self-employed male farmers, by age first employed in specific periods and employment groups[a]

Employment group[b]	Total number in class	First employed 1941-45[c]				First employed 1946-50[d]			
		Before age 25		After age 35		Before age 25		After age 35	
		Number	Average 1955 earnings	Number	Average 1955 earnings	Number	Average 1955 earnings	Number	Average 1955 earnings
	(1000's)	(1000's)	($)	(1000's)	($)	(1000's)	($)	(1000's)	($)
2. SEF-PC	537.8	68.3	1,880	83.3	1,420	33.0	1,810	30.2	1,420
3. SEF, SEO	210.3	14.5	2,440	15.4	1,960	4.1	2,330	4.1	2,120
4. SEF, WSO	267.2	32.5	2,230	19.8	1,760	13.0	2,060	6.5	1,840
Groups 5 to 9	86.6	8.6	2,390	5.5	1,890	4.8	2,320	2.4	1,970
Groups 2 to 9	1,101.9	123.9	2,070	124.0	1,560	54.9	1,950	43.2	1,580

[a]Source: A tabulation of data from the Continuous Work History sample supplied by BOASI.

[b]See description of employment groups in Chapter II.

[c]Military experience not included.

[d]Pre-1951 periods were used to avoid problems of changes in the definition of covered experience occurring in 1951. Better time perspective is also obtained.

TABLE VI-7. Distribution of mean 1955 income between wages and farm self-employment for OASI self-employed male farmers in the SEF, WSO employment group, by selected patterns of past covered employment[a]

Pattern of past covered employment[b]	1955 taxable income[d]			
	Number of operators[c] (1000's)	Average per operator ($)	Source: Wages ($)	Source: Farming ($)
1. Each year of 1952-54	81.3	2,550	1,400	1,150
2. Covered 1952-53, not 1954	12.9	1,835	585	1,250
3. Covered 1952, not 1953-54	8.9	1,810	470	1,340
4. Covered 1953, not 1952 and 1954	7.2	1,685	320	1,365
5. Not covered 1950 to 1954	40.0	1,915	340	1,575

[a]Source: A tabulation of data from the Continuous Work History sample supplied by BOASI. Farm operators in the SEF, WSO class had wage and/or salary income from a nonfarm job as their only covered income in addition to self-employment from a farm operation in 1955.

[b]Individuals in each pattern group may have had covered employment prior to the earliest year given.

[c]There were 215,900 in the SEF, WSO group. The five patterns shown are selected and do not include the entire number in the group.

[d]Statistical significance: All of average total incomes shown here have differences that are statistically significant at the 1 percent level. More important than the differences between average totals, however, is the pattern of an increasing proportion of total taxable income from wages as covered employment prior to 1955 is more recent and continuous.

TABLE VI-8. Average taxable income per year employed prior to 1955 and average 1955 taxable income for OASI self-employed male farmers with first covered income in 1950 or earlier, by percent of years employed, and employment group[a]

Percent of years with covered income since first year of employment	Number in category	Income by employment group[b]				
		Total of groups 2 to 9	2 SEF-PC	3 SEF,SEO	4 SEF,WSO	5 to 9
	(1000's)	($)	($)	($)	($)	($)
A. Average Taxable Income per Year Employed Prior to 1955 (to Nearest $5)						
Less than 25%	262.1	190	180	265	195	260
25 to 49%	288.6	665	625	1,035	565	630
50 to 74%	169.1	1,090	1,080	1,430	895	1,100
75 to 100%	81.5	1,420	1,390	1,650	1,310	1,600
Total	800.3	895	745	1,265	925	1,115
B. Average 1955 Taxable Income (to Nearest $5)						
Less than 25%	262.1	1,790	1,730	2,170	1,880	1,890
25 to 49%	288.6	1,870	1,680	2,360	2,060	2,225
50 to 74%	169.1	2,010	1,595	2,605	2,225	2,425
75 to 100%	81.5	2,420	1,590	2,570	2,685	2,895
Total	800.3	1,930	1,680	2,410	2,215	2,380

[a]Source: A tabulation of data from the Continuous Work History sample supplied by BOASI.

[b]See description of employment groups in Chapter II.

Table VI-8 quantifies other relationships between regularity and time of off-farm employment to income. Average income per year worked for those starting before 1950 rises from a mean of $190 for those working fewer than 25 percent of the years after their first coverage to $1,420 for those working three-quarters or more of the elapsed years. Similarly 1955 income rises from $1,790 to $2,420. In the case of the SEF-PC class the 1955 income relationship is inverted; those working the smallest proportion of years since first coverage have the highest 1955 incomes. This is in accord with previous discussions of the opportunities of the SEF-PC class and their security in nonfarm jobs.

Wartime Coverage. --Since the period of World War II was one of heavy nonfarm demand for labor and many farmers had their first nonfarm experience at that time, it was thought that relationships between income and the wartime work pattern might prove valuable. Unfortunately data are somewhat parsimonious in this respect. Only the "year of first covered employment" can be definitely associated with specific years prior to 1950.

In Table VI-6 relationships between the period of first coverage and 1955 income are given by age at the time of first coverage. Time of first coverage appears to have little relationship to the incomes of those who were over thirty-five at the time it occurred. Farmers under twenty-five at the time of first coverage had higher 1955 incomes if this

occurred in 1941-45 rather than in 1946-50. This difference is more likely due to 1955 ages than to other factors. Average 1955 incomes for all first covered in 1941-45 were $1,820. This compares with $1,790 for all those first covered in 1946-50 and with $1,875 for all males. (The figures $1,820 and $1,790 use the same data as Table VI-6 but are computed separately from it.) Differences in these figures are hardly sufficient to base broad inferences upon. While some differences in the data of Table VI-6 are statistically significant, the nature of the data raises grave doubts concerning implications drawn from it. This is discussed below.

Twenty-two percent of all those with off-farm experience had their first covered employment in 1941-45. This compares with only 9 percent with their first experience in 1946-50. This is difficult to interpret because of the data limits. The average OASI operator would have been 36 years old in 1945--sufficiently old to work off-farm, and there were powerful inducements in the 1941-45 period. Once having his first covered employment, he could not have this experience in a later year.

Twenty-nine percent of the SEF-PC class reported their first covered experience in 1941-45. This compares with only 16 percent for all others having off-farm experiences and the difference is significant at the 5 percent level. In addition, a higher proportion of the SEF-PC class first covered in 1941-45 were over thirty-five years of age--56 percent as against 39 percent of others receiving first coverage in this period.

These highlight limitations of our OASI data to give an unbiased picture with a backward look. The reader is again reminded that the population with which we deal is composed of those who are again or still on the farm in 1955. Those people over thirty-five starting off-farm work in 1941-45 could not be younger than forty-five years of age in 1955 and their average age would be much higher. Above age fifty the proportion having off-farm wage work declines rapidly. Thus those starting wage work in wartime who were over thirty-five and who were farm operators in 1955 would be sufficiently old that they would be less likely to also have off-farm wage employment, hence they would be classified as SEF-PC rather than SEF, WSO or a combination in 1955.

A somewhat similar data problem attends the higher proportion in the SEF-PC class who started in 1941-45. Most of the SEF-PC class either deliberately used off-farm work to supplement farm income, found nonfarm employment unsatisfactory, or were marginal nonfarm employees--at any rate they returned or stayed on the farm. Those who took off-farm work in this same period and completely left the farm without returning are lost from our OASI farm operator population. Sixteen percent of all with off-farm work in 1955 began covered employment in the war period and were engaged in both farm operator and off-farm work in 1955. The backward look from a given point, however, serves to limit the field of vision since we have lost the ones who migrated.

Aside from the meager information that there is apparently little relationship of first coverage in wartime to 1955 income, it appears that little of value can be gleaned from OASI data for specific years prior to 1950.

Summary

Data in current use show the farm population to be heavily involved in the nonfarm labor force. They suggest that nonfarm income apparently serves to stabilize fluctuating farm income. In contrast, relatively few of the OASI farm operator population are found to be employed steadily off-farm.

Income from off-farm work varies widely from year to year even for those receiving it annually. This, again, is at variance with the picture of a stable aggregate of nonfarm income to the farm population. There is also evidence that farmers are less secure in nonfarm employment than are other members of the labor force. This could cause the nonfarm income of farmers to magnify declines in the business cycle.

Relative opportunities on farm and off are associated with the employment experiences and present welfare of OASI farm operators. Nonfarm experience was relatively more important for operators in poorer agricultural areas. Years of off-farm work and its pattern are found to be associated both with the level of present income and the ratio of farm to nonfarm income.

The data used were a sample of those who were farmers in a single year. This produced significant distortions resulting from the dynamic interrelations of individuals with different segments of the economy over time. In any given year we may classify individuals as part-time or full-time farmers. With respect to the future some of these will become entirely nonfarm, some will continue as full-time farmers, others as part-time farmers. Some who are part-time operators now will become full-time operators and conversely. Others who are not in the farm population in a given year will enter it and become farm operators. Only year-to-year data following each individual can trace this pattern.

In the study of relationships for a past year the data available here give only a partial view because those who migrated are missing. Despite these limits, we are able via the time dimension of OASI data for 1955 operators to gain perspectives previously unavailable.

CHAPTER VII

SUMMARY AND CONCLUSIONS REGARDING THE POTENTIAL VALUE OF OASI DATA IN AGRICULTURAL ECONOMICS RESEARCH

This research mounts an investigation of the data of farm people derived from the program of Old Age and Survivor's Insurance. Its primary purpose is to determine ways that OASI data may be used to close gaps in our knowledge of farmers, of their interaction with other industries, and of the general economy.

It is not intended here to refute the claim articulated by O. V. Wells: "We in the United States probably have the best agricultural statistics in the world."[1] Indeed, it is thought to be correct! But relatively advanced as United States agricultural statistics may be, there are obvious inadequacies when attention is brought to bear upon the specific questions of what, how much, and why. Answers to these questions are needed as the background information for both public and private decisions.

Outlines of the more important deficiencies in our present statistical series may be sketched briefly. Among the ones receiving a large amount of attention is the matter of inadequate knowledge concerning farmers' income level and its distribution.[2] A somewhat less obvious problem is

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[1] U. S. Department of Agriculture, Major Statistical Series of the U. S. D. A., Agriculture Handbook No. 118 (1952), p. ii.

[2] See pages 1 and 2 of this thesis.

that of population definitions. Often the farm operator population as reported by the Census of Agriculture is taken as given without adequate recognition of the fact that any population statistic has implicit assumptions derived from its definitional boundaries. Many a tyro who uses the 1954 Census of Agriculture figure of 4.8 million farmers would be surprised to learn that large numbers are included who bear little resemblance to his personal concept of a farmer.

Least often recognized explicitly, but perhaps the most serious limitation of all, is our vague knowledge of the internal processes, currents, and trends in the farm population as it operates in the setting of a dynamic society. Failure to recognize this deficiency probably comes about because data now in use are thought of as time series data. They are time series data with respect to the agricultural industry, but all commonly used statistical series are only static, cross-section data of farm people. It is individual people that are a primary concern in our democracy! Such deficit areas in the United States agricultural statistics suggest an inchoate state, and the need for further sophistication.

How may OASI data of farmers contribute?

A leading hypothesis is that the continuous register characteristic of OASI data can make possible a distinct advance in our insights into the dynamics of change in the agricultural population, its income, and the interrelations of the farm labor force with other industries. The nature of information about farm population characteristics, their occupation, and income that is supplied by BOASI may also contribute to our knowledge

about farm people, in addition to tracing individuals over time.

Before proceeding to a statistical summary a brief review of sources and limitations of OASI data is in order.

OASI Data Sources and Limitations--Summarized

Background of Old Age and Survivor's Insurance. --The purpose of Old Age and Survivor's Insurance is to maintain partially the income of individuals in the event of disability due to age, illness, or death of the breadwinner. As a by-product of this program data on income, employment, and other items are collected about each individual who qualifies to be included. All who have earnings above a given level from specified sources are considered as qualified. Benefits are determined on the basis of special taxes paid on income. Most nonfarm laborers were included at the program's inception in 1937; nonfarm employers were thought to maintain the best records and be better able to do the required reporting. The coverage of the OASI program was expanded to other types of employment as administrative abilities developed. Farm hired workers were partially included in 1951. In 1955 farm entrepreneurs were added and the rules for including farm hired workers were liberized. This made 1955 the first year in which farm workers were quantitatively represented in OASI data; hence 1955 data were used in this study.

Records and Data Collection. --OASI records on each individual are maintained by the Bureau of Old Age and Survivor's Insurance which is a

part of the Social Security Administration in the United States Department of Health, Education and Welfare. The first data that are collected from persons in the OASI program are obtained at the time of application for a social security number. It includes items such as sex, race, and date of birth. The Internal Revenue Service is the collecting agency for Social Security taxes paid on income. After collection the Internal Revenue Service forwards information on income and employment to BOASI to be incorporated into the records of each person. In this way a complete record of covered employment and earnings over the work history of individuals is assembled.

The Continuous Work History Sample. --A statistically selected, one percent sample of all persons in the OASI program is maintained by the BOASI for purposes of program direction and administration. This is called the Continuous Work History Sample and it provides a workable sample for study of the United States labor population and its segments. In the research reported here use was made of the farm segment of this Continuous Work History Sample. In addition to 1955 income and employment, a history of covered employment back to 1937 was available from the data used. Because of this historical information it was possible to make a test of the use of OASI data in a time depth analysis.

Limitations of OASI Farm Data. --Limitations to the use of OASI, Continuous Work History data in the study of farmers are of three types:

(1) the sampling error,[3] (2) problems associated with program administration and reporting, (3) limits imposed by the rules of the program. The last two of these comprise what some have referred to as the "non-sampling error"[4] and are of by far the most consequence. They are discussed briefly.

Incomplete reporting is the most important administrative problem so far as use of the data of the OASI farm group is concerned. Farm operators are self-employed and must report their own incomes to the Internal Revenue Service. But farmers in the lower income range are unaccustomed to either bookkeeping systems or reporting procedures. For this reason a high proportion of these farm operators who were eligible and legally required to report in 1955 did not do so and are thus not included in the data. There are also indications of a substantial number of farm hired laborers who were eligible for OASI coverage but who were not included in 1955. This occurred in spite of the fact that responsibility for reporting of hired workers is upon employers.[5]

Use of OASI data of the farm labor force implies a definition of farm operators and farm laborers determined by the rules under which

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[3] See Appendix A.

[4] P. M. Hauser and O. D. Duncan (eds.), The Study of Population, An Inventory and Appraisal (Chicago: The University of Chicago Press, 1959), p. 8.

[5] See Chapter IV and V for details. An estimated 961,000 farm operators who were eligible for OASI coverage from farming did not appear in the data used in this study. Among these were 380,000 estimated to report late. An estimated 450,000 farm laborers who were eligible did not appear in the data. These figures complement Table VII-1.

the OASI program operates. This is a limitation only in the sense that the resulting definition may differ from that which is appropriate for use in a given situation. Differences between the OASI definition of farmers and that of the Census of Agriculture serve to direct attention to the fact that there is no absolute number of farmers; any statistic has its implicit assumptions that may or may not fit a given use. OASI data, in general, defined farm operators as all who receive a self-employment net money income from farming of $400. In the case of farm hired laborers, all receiving over $100 in wages in a year from one employer for farm work were considered as qualifying.

There are three modifications to the basic OASI definition of farm operators that deserve brief note. Two of these permitted coverage as a farm operator even though self-employment income from farming was under $400. One was an optional reporting rule that applied in certain situations of low income. Another rule permitted the aggregation of self-employment incomes from all sources to attain the $400 minimum required for qualifying under the OASI program. In a third case, some with over $400 from farm self-employment were not included as farmers because they had wage incomes of $4, 200 or more.[6]

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[6]This study estimated an addition to the OASI farm operator population of 150, 000 due to optional reporting, an additional 55, 000 because farm and other self-employment incomes could be added together, and a reduction of 27, 000 because of individuals with wages above $4, 200. These figures complement Table VII-1.

OASI income data are subject to analogous problems of reporting and administration as affect OASI population numbers. In addition, the rules of the program operate to exert a unique influence upon income. Only net money return from current productive effort is counted as income under the OASI program. In general this includes income from labor, skills, and entrepreneural ability and excludes income from investments and capital gains. There are certain special interpretations of this in the case of farm operators because the same system of reporting as that employed for collection of the income tax is employed. This was a matter of administrative feasibility--an already going system took over the collection of OASI taxes on self-employment income. For this reason the general definitions of farm income taxes carry over to farmers' OASI taxes. An example of an income data problem arising from the collection system is the inclusion of income from owned equity in OASI income data for self-employed persons while all other investment income is excluded. In 1955 the OASI program did not apply to income above $4,200. The effect is that the OASI income distribution is truncated at $4,200. These income characteristics require compensation when comparisons are attempted.

Data of OASI Farm Operators Compared with Other Farm Operator Statistics

An understanding of the composition of the OASI farm labor population is essential to its use. For this reason a summary of

comparisons of pertinent characteristics of the OASI population against other data sources is made in Table VII-1. The purpose is a definitive characterization of the OASI farm operator population. Operators are the main concern of most farm studies. Some data of hired farm workers are shown in Table VII-1 but are not discussed in this section.

Operator Numbers and Definitions Compared. --Since data from the Census of Agriculture are in common use, the Census farm operator population is used as a standard of reference for defining the 1,876,000 OASI farm operators. OASI data indicated only 39 percent as many farm operators in 1955 as the number reported by the 1954 Census of Agriculture. With exceptions, already generally noted, OASI data define a farm operator as any individual receiving $400 or more of self-employment income from farming. The procedure of the Census of Agriculture was to define a farm--a place selling $150 of agricultural products or if over three acres it was counted if $150 worth of agricultural products exclusive of a home garden were produced even though consumed on the farm--then one individual was designated as the operator of that farm.

Age. --A first look at the age characteristics of operators suggests that OASI operators might be a random sample of those from the Census of Agriculture. Average age is nearly the same--49.6 years for Census farm operators and 50.0 years for those from OASI data. The age distribution is flatter for OASI operators as demonstrated by having

TABLE VII-1. Summary of characteristics of indicated agricultural populations as estimated by the use of OASI data, compared with statistics from commonly used sources

Agricultural population and population characteristics	Statistics used for comparison[a]	OASI	OASI as percent of comparative statistic
A. All Farm Operators[b]			
1. Total number (cont. U. S.)	4, 780, 000	1, 876, 000	39. 3%
2. Number by U. S. regions			
a. South Atlantic	859, 000	171, 000	20%
b. West North Central	905, 000	597, 000	66%
3. Average age	49. 6 years	50. 0 years	
4. Percent over 55 years	36. 9%	40. 8%	111%
5. Number of farms represented			
a. Total number	4, 780, 000	1, 726, 000	36%
b. Economic classes I to III	1, 290, 000	1, 070, 000	83%
c. Economic classes IV & V	1, 575, 000	615, 000	39%
d. Economic classes VI to VIII	1, 915, 000	135, 000	7%
6. Commercial production	$24, 728 mil.	$17, 990 mil.	73%
7. Average gross agri. sales	$5, 200	$9, 600	185%
8. Total net income (all sources)	$2, 890	$3, 110	108%
B. Hired Farm Laborers[c]			
1. Total number (cont. U. S.)	3, 300, 000	1, 390, 000	42%
2. Number with over $100 farm wages and no self-employment farm income	1, 800, 000	1, 350, 000	75%
C. Farm Population[d]			
1. Total net money income	$16, 178 mil.	$15, 064 mil.	93%

[a]The statistics in this column are from commonly used sources and are arrayed for comparison with the OASI statistics in the same row. The sources vary and are given separately in footnotes below for each figure or group of figures.

[b]U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. II (1956).

TABLE VII-1. Continued

[c]U. S. Agricultural Marketing Service, The Hired Farm Working Force of 1957, Agricultural Information Bulletin No. 208 (June, 1959).

[d]U. S. Department of Agriculture, Major Statistical Series of the U. S. D. A., Vol. III, Agricultural Handbook No. 118 (December, 1957).

an 11 percent higher proportion in the "over 55" age category than is true for Census operators.

Race. --While age is not greatly helpful except in a detailed investigation of operator characteristics, a comparison of racial composition is immediately useful. Very few Negroes are included in the OASI farm operator population. An inferior average socio-economic position is suggested as the most important reason for such a wholesale omission of Negroes from the OASI data. A rough measure of the comparative economic position of Negroes in 1955 is given by the following: The median income for rural non-white males was $600--only 40 percent of a median income of $1,484 for rural farm, white males.[7]

A low socio-economic status for a given farm operator group may influence the number appearing in the OASI population in two principal ways: because of a low average income, fewer could meet minimum qualifications, and such individuals are less likely to be acquainted with accounting and reporting procedures.

[7]U. S. Bureau of the Census, Current Population Reports, Series P-60 No. 23 (November, 1956).

Region. --Further corroboration of the conclusions reached in a comparison of racial composition of the OASI farm operator population with the Census operator population is obtained in a study by United States regions. In the South Atlantic region, where average agricultural incomes are relatively low, there are only 20 percent as many OASI operators as the number of Census of Agriculture operators. By contrast, in the West North Central region the number of OASI operators is 66 percent of the total designated as operators by the Census. Differences in average opportunity for income from farming in the two regions are assumed to have a major influence here. A measure of the agricultural opportunity in the two areas is given by the average sales per farm. This was $6,690 in the West North Central region and only $3,260 in the South Atlantic region in 1954.[8] As in the case of Negroes, low incomes would reduce the proportion in the South Atlantic region who had over $400 of farm self-employment income. There would also be less likelihood of familiarity with the system of reporting income to the Internal Revenue Service.

Agricultural Production and Income. --Regional, race, and age comparisons provide interesting semi-quantitative descriptions of the OASI farm operator populations. But interesting information alone is

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[8] U. S. Bureau of the Census, Census of Agriculture: 1954, Vol. II, Chapter 9 (1956).

not adequate as a basis for defining operators of the OASI population. In order to use OASI farm data for drawing implications about the farm population, those represented must be specified in terms of their relationship to the economy. Fortunately it was possible to define OASI farm operators quantitatively with regard to both commercial agricultural production and net income.

OASI farm operators were estimated to operate only 36 percent of the farms as defined by the Census of Agriculture, but they accounted for 73 percent of the commercial agricultural production. In rough outline, the procedure for estimating the commercial production of the OASI farm operator population was to translate this group into terms of the economic classes of farms as defined by the 1954 Census of Agriculture. It was then assumed that the OASI farm operators had a production that was average for the economic class in which they were found.

In terms of commercial agricultural sales per operator, OASI farm operators account for almost twice the production of Census of Agriculture operators--$9,600 compared to $5,200. In terms of net income from all sources OASI operators have a much smaller margin of superiority--their average net income was estimated at $3,110 compared to $2,890 for Census operators.[9]

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[9]The total net income of OASI operators was estimated by adding income reported to OASI to other income not reportable for OASI purposes. This included income excluded because the total was over

The OASI Farm Population Defined

It has been seen in the preceeding section that OASI farm operators are relatively specialized in agricultural production and heavily committed as commercial producers. The net income comparison introduces another consideration: Those Census of Agriculture farm operators who were not in the OASI farm operator group were not necessarily low income families--but, in general, their farm businesses were smaller.

On the basis of the evidence presented, a broad characterization of the OASI farm operator population may be made. It can be considered as including those individuals who comprise the decision-making system of commercial agriculture. Depending upon the lower limit of those farm operators that may be considered commercial, OASI farm operators may be defined as the commercial agriculture segment.

There are certain data imperfections that have been noted in preceeding chapters. The most important of these concerns completeness of coverage at all levels of income and the problem of rules that

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$4,200, plus that excluded because of its source--such as transfer payments and investments.

In this comparison all farm net income, except to nonfarm landlords, is allocated to operators as defined by the Census. This is thought to make the net income of Census operators higher than it should be in comparison with the $3,110 total net estimated for OASI operators, but satisfactory means for a quantitative adjustment are lacking.

permit coverage as a farm operator in some cases even though a minimum net income is not attained. In addition, some individuals will be included whose farming interests represent a secondary economic concern and whose farm business may thus operate in an atypical manner. Despite such difficulties, the OASI farm operator population is sufficiently representative of commercial farms to be useful in drawing implications concerning them since almost five out of six operations with sales above $5,000 are estimated to be included in it.

In general, the United States population associated with low income farm units are excluded from the OASI farm population. These may be of two kinds: (1) families having substantial incomes from other sources and thus a part of the decision-system of nonfarm industry, and (2) families without appreciable income from other sources. These latter are more properly problems of welfare and national development; they are families that somehow do not have economic opportunities on a par with many others. This may be due to environment, misfortune, age, or other disability.

It is estimated that the bulk of those eligible for coverage as farm operators under the OASI program, but not included in 1955, are individuals whose farm incomes are relatively low. Many such omissions can be expected to be rectified in the future. As a result the number of operators in the $400 to $1,000 range of net farm income may increase relatively. There will be positive gains from such tightening

up in program administration; the data should lend itself better to analysis because of reduction in the area that must be treated mainly by conjecture.

The primary emphasis of this study is upon farm operators, but data for those who were hired farm laborers were also available and were used in achieving a concept of the entire human resources and income of the agricultural sector. Hired farm workers as a group are poorly-defined compared to farm operators; less is implied about their families, they are not as stable in their position, and there was no direct means in the Continuous Work History data to identify them with a given farm operation.

The OASI hired farm laborer population has a low minimum requirement--only $100 in farm wages from one employer. It may thus include many who are marginal in their role as farm laborers. But note should be taken of two items. In the first place 60 percent had no other covered source of income in 1955.[10] Secondly a crude tie to farm size may be made on an a priori basis; in only occasional instances would a sub-commercial farm operation pay wages of over $100. These suggest a degree of commitment to commercial agriculture on the part of OASI hired farm laborers.

Individuals who are included in the farm operator and hired farm labor populations of the OASI data are the OASI farm labor force.

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[10] Appendix B, Table 1.

These, plus their families, are the OASI farm population. The OASI farm labor force is regarded as representing the bulk of the labor force of commercial agriculture.[11]

Implications for Use of OASI Data of the Farm Labor Force

This section serves as the climax for one phase of study of OASI farm data. Actually, however, it is only the foundation for what lies ahead. Should research with OASI data not proceed beyond this point little would have been gained. The harvest is in the future. Having illustrated the limitations and special features of OASI data and defined the population that it circumscribes, the question is posed: How may OASI data be used to contribute unique insights and to what ends?

The ends may be stated briefly. Insights into the vital processes of significant sectors of the United States economy are not merely interesting information; they are primarily of consequence as they can be brought to bear in the process of decision-making with regard to policy direction. Such decision-making is not necessarily reserved to elements of the formal government such as the administrative bureaucracy or a legislative group. Individuals, firms, and private organizations also participate in public decisions in the complex

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[11] A due regard for imperfections must accompany this definition. One large problem area is that of unpaid family labor. Another is the imperfect coverage of the program, particularly among low income operators and hired workers.

processes of a democracy, as well as in decisions pertaining to more immediate private matters. The aim is a contribution to the quality of both private and public decisions so that the net effect of formal and informal systems acting in concert is a closer realization of prevailing goals.

Both farm and nonfarm sectors of the economy are involved, separately, and as an integrated whole. For some purposes it is desirable, to view agriculture as a microcosm or even to compare types of operators or regional variations.[12] Welfare studies require inter-industry and intra-industry comparisons. Among the more useful views is a study of the contribution of farm people to the commercial economy and the interrelationships of the labor force between industries.

As the result of this attempt to define the OASI farm operator population and other elements in the farm labor force, and of a brief exploration into potential of the data, the following six areas of use for OASI farm data are proposed:

The Anatomy of Change in the Commercial Farm Operator Population. --What is the real dynamics of the impact of social and

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[12] U. S. Agricultural Marketing Service, Farm Costs and Returns, Commercial Family-Operated Farms by Type and Location, Agriculture Information Bulletin series. These publications make comparisons of farm businesses from year to year and consider briefly the major physical and economic factors operating upon them. This procedure is in contrast to but would be a useful supplement for OASI data where the focus is upon the labor force.

economic events upon commercial farmers? Present data series give us only static cross-section views of farm operators. The Census of Agriculture will reveal certain changes to have taken place in the farm operator population between 1954 and 1959. But this is the net effect; it has come about as the result of currents and cross-currents that are poorly known and poorly understood in nature, direction, and magnitude. It is these primary elements that are important. Direction can only be achieved by helping to create a more favorable climate for desired trends and by mitigating or diverting others.

Within the commercial farm population answers are needed to the question of who does what. Whose income is most affected by a given event? Who is able to adjust farm operations and maintain income--by region, by ages, etc. ? Who adjusts by moving to nonfarm employment, either part-time or full-time? How well do those fare who enter nonfarm industries vis a vis those remaining as full-time operators? How seriously affected are those who are unable or unwilling to interact with the march of events? These are only a few of the many questions needing attention.

A hypothesis posed as the result of investigation into time dimensions of OASI data in Chapter VI provides an example:

> Relative opportunities in both farm and nonfarm industries influence not only current income but the employment pattern of farm operators. These patterns of opportunity vary by region. In areas of relatively low agricultural income a pattern of previous off-farm employment is associated with improved agricultural opportunities. This was indicated by higher average incomes, due

possibly, in part, to a better capital position. In areas of relatively high agricultural incomes, off-farm employment is likely to be associated with inferior opportunity as measured by current income levels.

The ability to use OASI data for comparing work history, location, and present income of individuals produced this hypothesis. Later study may substantially modify and/or elaborate this, not only because better year-by-year data will be at hand but because patterns may be altered over time.

Interrelationships of the Entrepreneurs in Commercial Agriculture with the Nonfarm Economy. --Two hypotheses concerning OASI farm operators in nonfarm jobs resulted from the investigation in Chapter VI. They are used here as the focus for discussion:

1. OASI farm operators who remain on the farm are employed off-farm to a much more limited extent than are farm operators as defined by the Census of Agriculture. Relatively few of the former are employed steadily off-farm year after year.

2. OASI farm operators are less secure in nonfarm jobs than are other segments of the labor force.

Although 31 percent of the male OASI farm operators had other covered employment in 1955, only 4 percent of them had had coverage off-farm each year of 1951-1954. This support of hypothesis number one above illustrates the difference between information obtained as a cross-section in a single year and data having a time dimension. A static view reveals only half-truths because of the dynamic nature of the labor force. In any one year farm operators with off-farm jobs may be: (1) in a transitional state from farm to wholly nonfarm--this group will cease

to be in the farm operator population within a few years, (2) basically farm operators with a sideline or occasional off-farm job, or (3) basically nonfarmers with interests in a farm business. This study suggests that OASI farm operators with nonfarm income prior to 1955 fall largely in the second category.

Hypothesis two is deceptively simple in form. It actually treats a challengingly complex array of factors. The basis for posing this hypothesis came from study of farm operators in the 1954 recession. The phenomenon under observation was not merely reactions of a particular group of the labor force--although this was observed. It was fundamentally a study of industries attempting to adjust themselves and of dynamic interaction of economic segments under stress. Serving as the backdrop was the entire economic and social syndrome of the 1954 period.

Among the reasons that the above can be posed only as hypotheses are the limitations of the OASI data used in this research. Those studied were farm operators in 1955 and investigations of the 1951 to 1954 years, of necessity, were limited to this group alone. It is recognized that the actual farm operator population as defined by OASI would have been different in 1951 and 1954 from what it was in 1955. Also, some who were farm operators in 1955 may have been only nonfarm laborers in 1951 to 1954.

A year-by-year study beyond 1955 with the aid of OASI data would have fewer of the handicaps encountered in the use of data from one year

alone. Challenging potential appears to await such an undertaking.

The Comparative Welfare of Farm People. --Many agricultural policy measures are based on the assumption of a relative disparity in the state of welfare of farm people. Attempts to measure the inequity by comparing income levels of farm and nonfarm people have met with indifferent success. Differences in income components of the two groups cause difficulties that are unresolved in producing an income figure for farmers that can be compared with that of nonfarmers.

OASI data offer the possibility of an approach to welfare measures that should prove a useful complement to methods in present use, if not an alternative. It is suggested that response to economic stimuli, that the income pattern over time, and wealth position when used in conjunction with personal characteristics such as age and with environmental factors, may serve as indicators of welfare. A farm operator who expects substantial capital appreciation may wisely discount a temporary period of low current income. Is there a difference in welfare of different groups over a period of the business cycle or a lifetime as compared to a measurement based upon current income from a single year? What are relative rates of mobility, e. g., of farmers to nonfarm jobs, of nonfarmers between industries and localities, of different segments of the population? Under what conditions does immobility indicate inability to move? When does it indicate lack of incentive to move? Does mobility result in improved income? How does this vary by age, race, and location?

These are a few of the many questions that bear upon relative welfare that OASI data can help in answering. As a requirement for such a study parallel information about the nonfarm labor force is needed as well as data of farm operators.

The Labor Resources in Commercial Agriculture. --Agricultural Marketing Service data now in use determine the labor force in agriculture as a yearly average of periodic checks made during the year.[13] Operators and unpaid family members are defined on the basis of time spent at farm work with no consideration to other activities. Any individual receiving farm wages in the check period is counted as a hired farm laborer. There are serious limitations to such a data series. Foremost among these is the same problem plagueing many other statistical series--this is cross-section data yielding an average number, not the total number, of individuals involved. This tells us something about average deployment of labor resources by industry but is woefully short on insights into dynamics of the labor force, and the interrelationships between industries. Other problems relate to questions concerning actual productivity attributable to unpaid family labor[14] and productivity of operators on small farm units.[15]

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[13]U. S. Agricultural Marketing Service, Farm Employment Monthly by States 1950-57, United States by Years 1910-57, by Months 1940-57, Statistical Bulletin No. 236 (September, 1958).

[14]Discussed in Chapter II.

[15]U. S. Bureau of the Census, Current Population Reports, Series P-57, Monthly Reports on the Labor Force. This serves as the basis for

OASI data of the labor force in agriculture have their limitations, but they also have features that offer potential for gaining more comprehensive knowledge about the agricultural labor force. The most important feature recommending them in this respect is that all individuals with money incomes above given levels are included.[16] In most cases incomes may be specified by sources, and individuals' work patterns may be traced over time. It will be possible to not only determine the number of farm operators and hired laborers as of a given year but their relative involvement in agriculture and its changing pattern over the years.

Additional Data on Individual Incomes. --For the population included in OASI data, an accurate distribution of net income from current productive effort (not investments or capital gains) is available. This has the advantage of being reported from records not memory as is the case with other individual income data. For farm operators the most accurate section of this income distribution range in 1955 was that lying between $900 and $4, 200. In the case of farm laborers the accurate range extended from $400 to $4, 200. Institutional factors distort the range above and below those figures. The upper limitation was not as serious as might

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yet another estimate of the farm labor force. It has many of the same properties of the estimate made by the U. S. Department of Agriculture, as well as some distinct differences, e. g., workers are classified on the basis of the occupation at which they spend the most time.

[16] Subject to limits of the administration of the program and of the rules by which it operates. See Chapters II to V.

appear, in 1955 only 9 percent of farm operators and 3 percent of hired farm laborers had covered incomes exceeding $4,200. This maximum limitation has since been raised to $4,800.

In a majority of cases covered income from off-farm and nonfarm sources can be separated from farm income and its source identified. Both farm and nonfarm income can be identified with individuals who may be subdivided by age, race, and location, and traced through time.

The Estimation of Aggregate Income of the Farm Population. --In Chapter V income data from the OASI was used as the basis for an aggregate income estimate of the farm population. Although a number of common sources were used, the approach differed from that of the Agricultural Marketing Service in its estimating procedure. Total income was determined as the aggregate of individual incomes. By contrast, the basic method of the Agricultural Marketing Service is to subtract total farm costs from the value of total sales of agricultural commodities. Both estimates compare closely, but that of the Agricultural Marketing Service is larger--as is almost always the case when it is compared with other aggregate estimates.

Whether or not a regular series of aggregate income estimates such as that made in Chapter V is justified depends upon further investigations into its relative economy and accuracy as compared with estimates of the Agricultural Marketing Service, and upon a possible superiority, e.g., showing the incomes of components of the farm population separately.

The most immediate use of the aggregate income estimate made in Chapter V is to give sharper definition and perspective to the OASI farm population. It adds conceptual depth to the total farm population income figure by highlighting various population and income components and by serving to direct attention to the arbitrary nature of farm population definitions.

Data Refinements Indicated

A by-product of this focus upon farm statistics is the highlighting of finite areas that need attention in addition to the broad categories that are the general subject of this chapter. The more important of these special areas are listed to direct attention to them:

1. Little is known about farms operated as partnerships or cases where there are two or more with entrepreneural income from a single farm unit. Who are the individuals involved. What are their incomes? What are the kinds of farming operations?

2. There is little definitive knowledge of unpaid family labor. How much production can actually be attributed to it? Is it accurate to count family labor on subsistence farms?

3. What is the production that is accounted for by youths on farms who are not bona fide partners but whose incomes are accounted separately from that of the principal operator of the farm unit? Closely allied to this and to "2" above is the problem of the allocation of farm income between the family head and other members.

4. Corporation farms--How are they organized? What do they produce? How is farm production accounted by them? How are they classified in our Census data? The deficiency of information in this area is amazing in view of the popular use of corporation farms as a scape goat when dealing with problems of surplus production.

In addition to the above there are special areas of information that are specific to the OASI data, that are required for its best use, and that need better definition:

1. The reporting of partners in OASI data and, after 1955, of "materially participating" landlords.

2. Characteristics of those reporting by optional methods.

3. Incomes from current effort above $4, 200.

4. Income for the OASI operator population from sources not covered by OASI data.

5. Definition of those apparently eligible for OASI but not reporting.

The conclusions of this study are partially dependent upon estimates made of the above nine areas. Refinement of these estimates can add confidence to OASI farm labor population data, and facilitate its use and treatment.

APPENDICES

APPENDIX A

SAMPLING ERROR

A guide to the probable sampling error at the 5 percent level for the OASI Continuous Work History Sample of farm operators used in this study is given in the following table:

Sampling Variation[1]

Number of workers in sample class	Estimated number workers in the given class in population	Percent variation at 5 percent level of significance
10	1,000	62.0%
50	5,000	28.0%
100	10,000	20.0%
500	50,000	9.0%
1,000	100,000	6.0%
2,500	250,000	3.7%
5,000	500,000	2.4%

The estimated workers in a given class C of the population is determined by C = Rc; where R is the sampling ratio and c the number of workers in the given class in the sample. It is expected that the total number of workers in a class of a given size, the middle column, will be within the percentage variations shown in the right hand column 19 times in 20.

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[1] W.G. Cochran, Sampling Techniques (New York: John Wiley and Sons Inc., 1953), Chapters 2 and 3. An unbiased estimate of the variance of the estimated number of units in a class in the population, is given by the formula:

$$s_{Np}^2 = \frac{N(N-n)}{n-1} pq$$

where:

N = total population

p = proportion a sample class is of total sample

n = total sample

q = (1 - p)

Because of the low sampling ratio, the finite population correction is not greatly useful. The actual formula used for calculation was:

$$S_{Np} = N\sqrt{\frac{pq}{n}}$$

APPENDIX B

SUPPLEMENTARY DATA

Footnotes for Tables 1 through 7 of Appendix B appear at the end of Table 7, page 250.

TABLE 1. Distribution of the OASI farm labor force, by employment, sex and race, 1955[a]

Employment group	Both sexes			Males			Females		
	Total (%)	Negro (%)	Non-Negro (%)	Total (%)	Negro (%)	Non-Negro (%)	Total (%)	Negro[d] (%)	Non-Negro (%)
A. Self-employed farmers (Employment designation)									
1. SEF	39.8	42.3	39.7	39.0	40.7	39.8	58.9	80.0	57.7
2. SEF-PC	29.1	29.7	29.1	29.7	30.1	29.8	13.9	20.0	14.0
3. SEF, SEO	12.0	6.1	12.1	11.6	6.4	11.7	19.8		20.1
4. SEF, WSO	14.4	11.8	14.4	14.8	12.3	14.8	5.5		5.3
5. SEF, WSF	1.5	5.3	1.5	1.6	5.5	1.5	.7		.7
6. SEF, SEO, WSO	2.3	2.4	2.3	2.4	2.5	2.4	1.5		1.5
7. SEF, SEO, WSF	.2	.4	.2	.2	.4	.2	.4		.4
8. SEF, WSF, WSO	.6	1.2	.6	.6	1.3	.6	.1		.1
9. SEF, WSF, WSO, SEO	.1	.8	.1	.1	.8	.1	.2	----	.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of self-employed (1000's)	1,888.4	24.6	1,863.8	1,805.8	23.6	1,782.2	82.6	1.0	81.6
B. Hired only (not receiving self-employment farm income) (Employment designation)									
10. WSF	60.5	65.5	59.5	58.8	62.1	58.2	70.7	79.6	68.2
11. WSF, WSO	38.7	34.4	39.6	40.3	37.8	40.8	29.3	20.4	31.8
12. WSF, SEO	.5	.1	.6	.6	.1	.6	----	----	----
13. WSF, WSO, SEO	.3	----	.3	.3	----	.4	----	----	----
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. hired (1000's)	1,458.5	241.3	1,217.2	1,247.8	194.2	1,053.6	210.7	47.1	163.6
Tl. no. in OASI farm labor force	3,346.9	265.9	3,081.0	3,053.6	217.8	2,835.8	293.3	48.1	245.2

TABLE 2. Percentage income distribution and average income of OASI farm operators by sex and race, 1955[a]

Income category ($)	Both sexes			Male			Female		
	Total (%)	Negro (%)	Non-Negro (%)	Total (%)	Negro (%)	Non-Negro (%)	Total (%)	Negro[d] (%)	Non-Negro (%)
Under 500	3.8	13.0	3.7	3.6	13.1	3.5	9.0	10.0	9.0
500 - 999	27.8	40.7	27.7	27.2	39.4	27.0	41.9	70.0	41.5
(900)	(10.0)	(----)	(10.1)	(9.9)	(5.9)	(10.0)	(12.2)	----	(12.4)
1000 - 1499	18.1	19.9	18.1	18.1	19.9	18.1	17.2	20.0	17.2
1500 - 1999	14.1	13.8	14.1	14.2	14.4	14.2	11.4	----	11.5
2000 - 2499	9.8	7.3	9.8	10.0	7.6	10.0	5.2	----	5.3
2500 - 2999	7.4	2.9	7.5	7.6	3.0	7.7	3.3	----	3.3
2000 - 3499	5.1	.8	5.2	5.2	.8	5.3	2.9	----	2.9
3500 - 3999	3.5	.8	3.5	3.6	.8	3.6	1.8	----	1.8
4000 - 4199	1.2	----	1.2	1.2	----	1.3	.1	----	.1
4200	8.7	.8	8.8	8.8	.8	8.9	7.0	----	7.1
Over 4200	.5	----	.4	.5	----	.5	.2	----	.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean income (nearest $10)	$1860	$1170	$1870	$1880	$1190	$1890	$1440	$700	$1450
No. farm operators (1000's)	1888.4	24.6	1863.8	1805.8	23.6	1782.2	82.6	1.0	81.6

TABLE 3. Percentage income distribution and average income of OASI hired farm workers, by sex and race, 1955[a, b]

Income category ($)	Both sexes			Male			Female		
	Total (%)	Negro (%)	Non-Negro (%)	Total (%)	Negro (%)	Non-Negro (%)	Total (%)	Negro (%)	Non-Negro (%)
Under 500	33.8	42.9	32.0	29.5	35.7	28.4	59.0	72.4	55.2
500 - 999	22.0	26.4	21.2	21.7	27.9	20.6	23.7	20.4	24.6
(900)	(.7)	(.7)	(.7)	(.7)	(.8)	(.7)	(.3)	(----)	(.4)
1000 - 1499	13.5	15.9	13.0	14.3	18.5	13.5	9.1	5.1	10.2
1500 - 1999	10.1	8.5	10.4	11.1	10.0	11.3	3.9	2.1	4.5
2000 - 2499	7.1	3.4	7.9	8.0	4.4	8.7	2.1	----	2.7
2500 - 2999	4.7	1.4	5.4	5.4	1.8	6.0	.9	----	1.2
3000 - 3499	3.2	.9	3.6	3.6	1.1	4.1	.6	----	.7
3500 - 3999	2.3	.3	2.7	2.6	.4	3.1	.3	----	.4
4000 - 4199	.5	----	.6	.6	.1	.7	----	----	.1
4200	1.1	----	1.3	1.3	----	1.5	.1	----	.2
Over 4200	1.6	.3	1.9	1.8	.4	2.1	.1	----	.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean income (nearest $10)	$1210	$810	$1290	$1310	$910	$1390	$600	$410	$660
Number of hired workers (1000's)	1458.5	241.3	1217.2	1247.8	194.2	1053.6	210.7	47.1	163.6

TABLE 4. Percentage income distribution and average income of the OASI farm labor force, by sex and race, 1955[a, b]

Income category ($)	Both sexes			Male			Female		
	Total (%)	Negro (%)	Non-Negro (%)	Total (%)	Negro (%)	Non-Negro (%)	Total (%)	Negro (%)	Non-Negro (%)
Under 500	16.9	40.1	14.9	14.2	33.2	12.7	44.9	71.1	39.8
500 - 999	25.3	27.7	25.1	25.0	29.1	24.7	28.8	21.4	30.3
(900)	(6.0)	(1.1)	(6.4)	(6.2)	(1.4)	(6.5)	(3.7)	(----)	(4.4)
1000 - 1499	16.1	16.2	16.1	16.6	18.6	16.4	11.4	5.4	12.5
1500 - 1999	12.3	9.0	12.6	13.0	10.5	13.1	6.0	2.1	6.8
2000 - 2499	8.6	3.8	9.1	9.2	4.6	9.5	3.0	----	3.5
2500 - 2999	6.2	1.6	6.6	6.7	1.9	7.1	1.6	----	1.9
3000 - 3499	4.3	.9	4.6	4.6	1.1	4.8	1.2	----	1.5
3500 - 3999	3.0	.3	3.2	3.2	.4	3.4	.7	----	.9
4000 - 4199	.9	----	1.0	1.0	----	1.0	.1	----	.1
4200	5.4	.1	5.8	5.7	.1	6.1	2.1	----	2.5
Over 4200	1.0	.3	1.0	1.0	.3	1.1	.2	----	.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean income (nearest $10)	$1580	$850	$1640	$1650	$940	$1700	$840	$420	$920
Number in labor force (1000's)	3346.9	265.9	3081.0	3053.6	217.8	2835.8	293.3	48.1	245.2

TABLE 5. Percentage age distribution and average age of OASI farm operators, by sex and race, 1955[a]

Age distribution (years)	----All self-employed---- Total (%)	Negro (%)	Non-Negro (%)	---------Male---------- Total (%)	Negro (%)	Non-Negro (%)	--------Females------- Total (%)	Negro[d] (%)	Non-Negro (%)
Under 20	.3		.3	.3		.3	.4		.4
20 - 24	2.4	.8	2.4	2.4	.8	2.5	.9	----	.8
25 - 29	6.0	1.2	6.1	6.2	1.3	6.3	1.5	----	1.5
30 - 34	8.1	5.3	8.1	8.4	5.1	8.4	2.4	10.0	2.3
35 - 39	10.0	6.5	10.1	10.4	6.8	10.4	1.9		2.0
40 - 44	11.3	10.2	11.4	11.6	10.2	11.6	5.2	10.0	5.1
45 - 49	10.8	12.2	10.8	11.0	11.4	11.0	6.4	30.0	6.1
50 - 54	10.3	7.7	10.4	10.3	7.6	10.4	10.2	10.0	10.2
55 - 59	10.5	10.2	10.5	10.4	10.2	10.4	11.7	10.0	11.8
60 - 64	12.1	20.7	12.0	11.8	21.2	11.7	18.9	10.0	19.0
65 - 69	9.0	13.0	8.9	8.7	13.1	8.6	16.2	10.0	16.3
70 and over	9.2	12.2	9.1	8.5	12.3	8.4	24.3	10.0	24.5
(70 - 74)	(5.7)			(5.3)			(13.8)		
(75 - 79)	(2.5)			(2.3)			(6.9)		
(80 - 84)	(.8)			(.7)			(2.7)		
(85 - 89)	(.1)			(.1)			(.5)		
(90 - 99)	(----)			(----)			(.5)		
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of farm operators (1000's)	1887.8	24.6	1863.2	1805.2	23.6	1781.6	82.6	1.0	81.6
Mean age (nearest whole year)	50	55	50	49	55	49	60	52	60

TABLE 6. Percentage age distribution and average age of OASI hired farm workers, by sex and race, 1955[a, b]

Age distribution (years)	----All hired workers----			--------Males---------			--------Females--------		
	Total (%)	Negro (%)	Non-Negro (%)	Total (%)	Negro (%)	Non-Negro (%)	Total (%)	Negro (%)	Non-Negro (%)
Under 20	14.7	10.8	15.5	14.8	11.0	15.5	14.5	10.2	15.8
20 - 24	11.6	11.5	11.6	12.1	11.9	12.2	8.6	9.8	8.2
25 - 29	10.6	11.7	10.4	10.9	12.0	10.7	9.2	10.4	8.9
30 - 34	9.8	9.5	9.9	9.6	8.9	9.7	11.0	12.1	10.6
35 - 39	9.4	12.4	8.8	9.0	12.4	8.4	11.3	12.3	11.0
40 - 44	9.6	10.6	9.4	9.3	10.2	9.1	11.7	12.3	11.5
45 - 49	9.7	9.7	9.7	9.7	9.6	9.7	9.7	10.0	9.7
50 - 54	7.8	9.3	7.5	7.7	9.0	7.5	8.1	10.4	7.4
55 - 59	6.3	5.8	6.3	6.2	5.7	6.3	6.6	6.4	6.6
60 - 64	5.0	4.3	5.2	5.0	4.2	5.2	5.1	4.7	5.2
65 - 69	3.2	2.5	3.3	3.3	2.9	3.3	2.7	.7	3.3
70 and over	2.3	1.9	2.4	2.4	2.2	2.4	1.5	.7	1.8
(70 - 74)	(1.6)								
(75 - 79)	(.5)								
(80 - 84)	(.1)								
(85 - 89)	(----)								
(90 - 99)	(----)								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number hired workers (1000's)	1454.4	240.7	1213.7	1243.9	193.7	1050.2	210.5	47.0	163.5
Mean age (nearest whole year)	38	38	38	38	37	37	38	38	38

TABLE 7. Percentage age distribution and average age of the OASI farm labor force, by sex and race, 1955[a, c]

Age distribution (years)	All labor force			Males			Females		
	Total (%)	Negro (%)	Non-Negro (%)	Total (%)	Negro (%)	Non-Negro (%)	Total (%)	Negro (%)	Non-Negro (%)
Under 20	6.6	9.8	6.3	6.2	9.8	6.0	10.5	10.0	10.7
20 - 24	6.4	10.5	6.1	6.4	10.7	6.1	6.4	9.6	5.8
25 - 29	8.0	10.7	7.8	8.1	10.8	7.9	7.0	10.2	6.4
30 - 34	8.9	9.2	8.8	8.9	8.5	8.9	8.6	12.1	7.9
35 - 39	9.7	11.8	9.5	9.8	11.8	9.7	8.7	12.1	8.0
40 - 44	10.6	10.6	10.6	10.6	10.2	10.7	9.9	12.3	9.4
45 - 49	10.3	9.9	10.4	10.5	9.8	10.5	8.8	10.4	8.5
50 - 54	9.2	9.2	9.2	9.3	8.9	9.3	8.7	10.4	8.3
55 - 59	8.6	6.2	8.8	8.7	6.2	8.9	8.0	6.5	8.3
60 - 64	9.0	5.8	9.3	9.0	6.0	9.2	9.0	4.8	9.8
65 - 69	6.5	3.5	6.7	6.5	4.0	6.6	6.5	.8	7.6
70 and over	6.2	2.8	6.5	6.0	3.3	6.2	7.9	.8	9.3
(70 - 74)	(3.9)								
(75 - 79)	(1.6)								
(80 - 84)	(.5)								
(85 - 89)	(.1)								
(90 - 99)	----								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number in labor force (1000's)	3342.2	265.3	3076.9	3049.1	217.3	2831.8	293.1	48.0	245.1
Mean age (nearest whole year)	45	40	45	44	39	45	44	38	45

[a]Source: A tabulation of data from the 1 percent Continuous Work History Sample supplied by BOASI.

[b]Includes only those receiving wages and/or salary for farm work; does not include any with income from farm self-employment.

[c]Includes all having covered income from farm sources, both self-employment and wages, who reported the specified characteristic.

[d]Note that there were a total of only 10 in this category in the sample.

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