

DEPENDENCY OF FARM FAMILIES IN WESTERN
OKLAHOMA UPON NON-FARM INCOME

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CHAPTER I

INTRODUCTION

PROBLEM SETTING

In recent years, the degree of dependence of farm families in the nation and in Oklahoma upon farming operations as the main source of family income has decreased significantly. Many farm operators and members of their families, particularly those with small farms, receive income from both farm and non-farm sources to supplement family income from the operator's farm unit.

The Agricultural Marketing Service of the United States Department of Agriculture estimated that the aggregate off-farm income of farm-operator families in 1955 was 8.0 billion dollars compared with 11.3 billion dollars realized net money and non-money income from agriculture.¹ These estimates were on the basis of a special survey of farm family income and expenditures conducted with the cooperation of the Bureau of the Census. The off-farm income of farm-operator families thus comprised an estimated 41 percent of the total realized net money and non-money income of farm-operator families in 1955.

Off-farm income consists of off-farm work by the operator and other family members, and non-work sources of income. Wages and salaries are received for off-farm work in non-farm occupations and as laborers on

¹United States Department of Commerce, Bureau of Census, 1954 Census of Agriculture. Part-time Farming, Volume III, Part 9, Ch. VIII, Washington, 1956.

other farms. Income is also received by operators from off-farm business or self-employment such as custom work and hauling and trucking for other farmers and non-farm business interests.

In addition to the income received from off-farm work, increasing amounts of income have been received by farm families from such non-work sources as rental of farm and non-farm real estate, interest and dividends from other invested capital, mineral leases and royalties, retirement pay, pensions, and unearned income.

Available data indicate that off-farm work and other non-farm sources are important contributions to the incomes of farm operators and their families in commercial agricultural areas. Most previous and present research in off-farm income and part-time farming has been confined to low income counties and areas adjacent to urban centers.

An analysis of Census data for eight counties in the commercial agricultural area of western Oklahoma revealed that farms reporting off-farm work increased by 29.7 percent from 1939 to 1954, while the number of farms decreased by 27.2 percent (Tables I and II). In this 15-year period the proportion of farms reporting off-farm work increased from 24.0 to 42.3 percent.

The proportion of farm operators reporting off-farm work of 100 days or more in the eight counties increased from 9.2 to 20.8 percent in the same period. Farms with other income of the family exceeding the value of farm products sold increased from 14.8 percent in 1949 to 17.5 percent in 1954. Comanche County particularly had a large increase in off-farm work.

TABLE I

NUMBERS OF FARMS WITH OFF-FARM WORK IN EIGHT WESTERN OKLAHOMA COUNTIES

County	Number of Farms				Number Reporting Off-farm Work				Number Reporting Off-Farm Work of 100 Days or More			
	1939	1944	1949	1954	1939	1944	1949	1954	1939	1944	1949	1954
Beaver	1,659	1,447	1,370	1,275	545	241	474	529	215	115	201	280
Custer	2,290	2,222	1,880	1,619	525	380	818	799	183	199	300	367
Ellis	1,443	1,347	1,123	970	358	365	414	438	144	168	131	212
Woodward	1,521	1,312	1,210	1,104	445	231	483	505	141	94	213	269
Grant	2,250	1,934	1,922	1,792	453	120	637	642	165	63	264	326
King- fisher	2,292	2,106	1,978	1,658	477	611	649	669	173	217	237	290
Comanche	2,039	1,918	1,696	1,477	562	383	724	760	212	241	358	499
Washita	3,447	3,065	2,825	2,447	706	804	1,067	940	331	255	322	318
Total for Eight Counties	16,941	15,351	14,004	12,342	4,071	3,135	5,266	5,282	1,564	1,352	2,026	2,561

Source: United States Department of Commerce, Bureau of Census, United States Census of Agriculture, 1940-1955 (Washington, 1940-1955).

TABLE II

PERCENT OF FARMS WITH OFF-FARM WORK IN EIGHT WESTERN OKLAHOMA COUNTIES

County	Number of Farms				Percent Reporting Off-farm Work				Percent Reporting Off-farm Work of 100 Days or More			
	1939	1944	1949	1954	1939	1944	1949	1954	1939	1944	1949	1954
Beaver	1659	1447	1370	1275	32.9	16.7	34.6	41.5	13.0	7.9	14.7	22.0
Custer	2290	2222	1880	1619	22.9	17.1	43.5	49.4	8.0	9.0	16.0	22.7
Ellis	1443	1347	1123	970	24.8	27.1	36.9	45.2	10.0	12.5	11.7	21.9
Woodward	1521	1312	1210	1104	29.3	17.6	39.9	45.7	9.9	7.2	17.6	24.4
Grant	2250	1934	1922	1792	20.1	6.2	33.1	35.8	7.3	3.3	13.7	18.2
Kingfisher	2292	2106	1978	1658	20.8	29.0	32.8	40.3	7.5	10.3	12.0	17.5
Comanche	2039	1918	1696	1477	27.6	20.0	42.7	51.5	10.4	12.6	21.1	33.8
Washita	3447	3065	2825	2447	20.5	26.2	37.8	38.4	9.6	8.3	11.4	13.0
Total for Eight Counties	16941	15351	14004	12342	24.0	20.4	37.6	42.3	9.2	8.8	14.5	20.8

Source: United States Department of Commerce, Bureau of Census, United States Census of Agriculture, 1940-1955 (Washington, 1940-1955).

Previous Research

No previous research has been conducted to determine the extent and characteristics of off-farm work and non-farm income in the commercial agricultural area of western Oklahoma. Research on part-time farming in Oklahoma has pertained to the low income areas in the eastern part of the state.²

Objectives

The major purpose of this study was to determine the characteristics, amount, and possible implications of non-farm income and off-farm work to farm operators and their families in the commercial farming areas of western Oklahoma. Particular emphasis was placed on the degree of dependence of farm operators and their families upon off-farm sources of family income.

The specific objectives of this study were:

1. To describe the present sources and extent of off-farm work and non-farm income.
2. To determine the degrees of dependence of farm operators and their families upon off-farm sources for family income.
3. To appraise the relationship of off-farm income to:
 - (a) selected farm characteristics.
 - (b) selected personal attributes of farm operators and their families.

²W. B. Back, Problems of Rural People in Latimer County, Mimeographed Report, Department of Agricultural Economics, Oklahoma State University, 1957. E. J. R. Booth, The Cherokee Survey - Preliminary Results, Mimeographed Report, Department of Agricultural Economics, Oklahoma State University, 1957.

(c) employment plans and farm size changes expected by the farm operator over the next two or three years.

4. To appraise the aggregate importance of farm resources controlled by farm operators who have non-farm sources of income.

5. To appraise the effect of off-farm income on farming adjustment opportunities and problems.

Chapter II will contain the procedure used in the analysis of off-farm work and non-farm income. Chapter III will contain the results of the income analysis, and Chapter IV will contain the interpretations of the results obtained in Chapter III in relation to farm adjustment problems. Chapter V will contain the summary and conclusions.

CHAPTER II

PROCEDURE

This chapter contains the procedure used in the analysis of off-farm work and non-farm income in western Oklahoma. Terms which will be encountered throughout the analysis are first defined. The areas included in the survey are then specified. Next, the procedure used in the income analysis is described, and, finally, the data and limitations are briefly discussed.

Terms Defined

The terms, non-work income, off-farm work income, off-farm income, net farm income, and net cash family income will be encountered frequently in this thesis. The following definitions for these terms apply in this study:

1. Non-work income includes all income received by the operator and family from sources which do not involve the use of operator or family labor.
2. Off-farm work income includes all income received by the farm family from sources, other than the farm unit, which involve the use of operator or family labor.
3. Off-farm income, or non-farm income, includes all income received from off-farm work and non-work sources.
4. Net farm income includes all net income received from the production and sale of farm products and includes such sources as government

price support payments. The net farm income was obtained from the farm operators' copy of their 1040F income tax forms.

5. Net cash family income includes all off-farm income plus the net farm income received from the farm unit.

Areas Included in Survey

This study is based upon an analysis of off-farm work and non-farm income from the Great Plains Survey of Farm Tenure, Land Market, and Farm Finance conducted in the summer of 1957 in eight western Oklahoma counties by the Agricultural Research Service of the United States Department of Agriculture. Although this survey of 404 Oklahoma farmers was not specifically directed to the answering of questions about off-farm work and non-farm income, much information was obtained about off-farm work by farm operators and other family members, and about non-work sources of family income within this area.

The counties and economic areas included in the survey are shown in Figure 1. Economic Areas 1, 2, and 4 represent most of the commercial agricultural area of Oklahoma. The only cities in these counties with populations of 5,000 or more are Woodward in Woodward County, Clinton in Custer County, and Lawton in Comanche County. Other large cities which may provide off-farm work and non-farm employment to farm families in the eight counties include Oklahoma City, Enid, and Duncan.

Procedure for Income Analysis

The first step in the analysis of off-farm work and non-farm income was to tabulate and summarize the income data according to the components of the net cash family income of farm operators and their families.

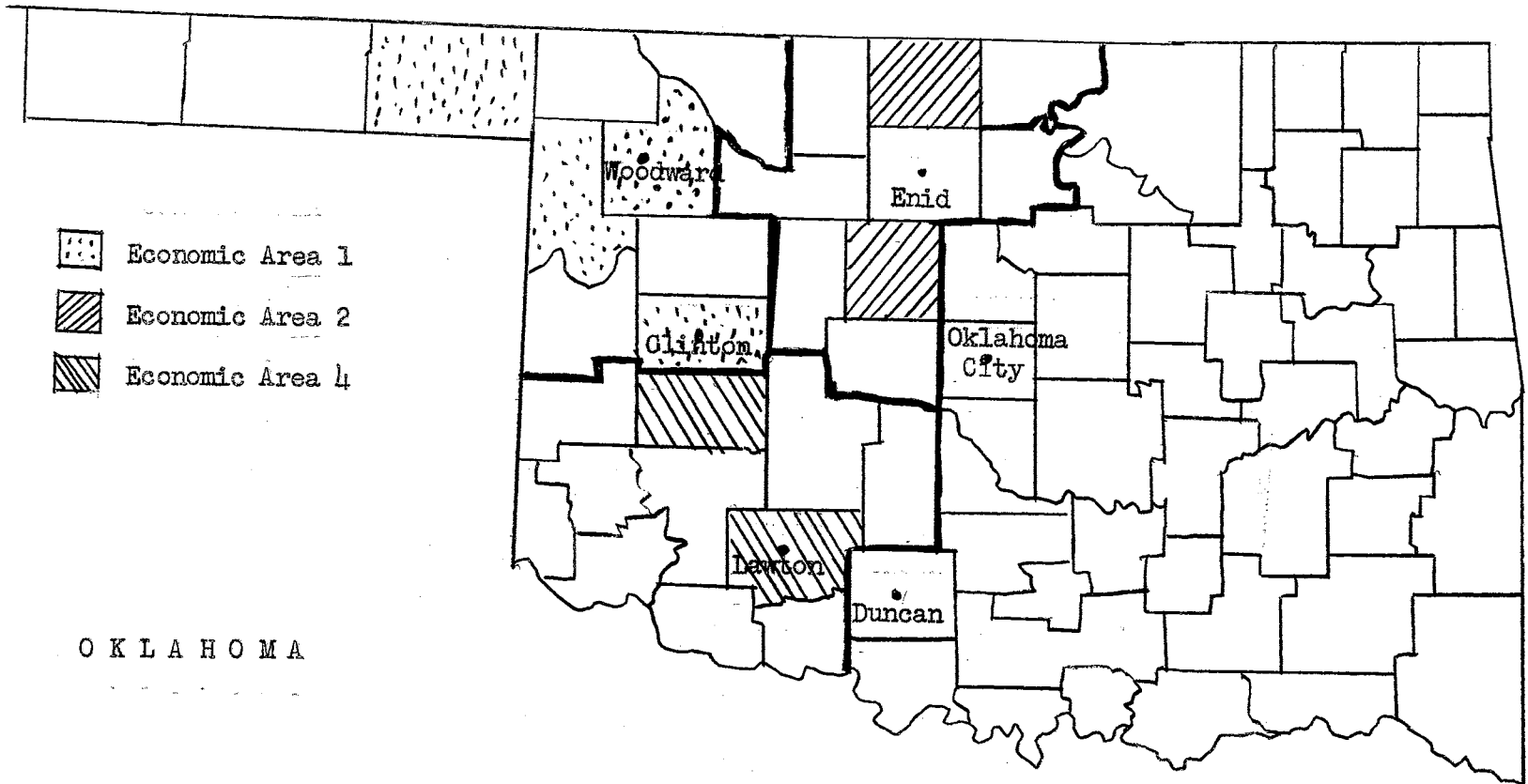


Figure 1. Economic Areas and Counties in Survey

The off-farm family income was then tabulated under four broad headings:

1. Income received from off-farm work by operators.
2. Income received from off-farm work by other family members.
3. Non-work income.
4. Total off-farm net cash income received by operator and family

(the sum of 1, 2, 3).³

The net cash family income was then determined by adding the net farm income to the total off-farm net cash income received by the operator and his family.

The degree of dependence of the operator and family upon off-farm sources for income in 1956 was defined as the ratio of the total net cash income received from individual off-farm sources by the total net cash income of the operator and family. These percentages were divided into categories according to the gross farm receipts and the major source of off-farm income so that income dependency classes could be developed and used in cross classification with selected farm characteristics, personal attributes of the operator and his family, and employment plans and farm size changes expected by the operator over the next two or three years.

Ten income classes were developed on the basis of the gross farm receipts, percent of net cash family income received from off-farm sources, and major off-farm source of income (Table III). The amount of gross farm receipts used in the division of farms was \$5,000. Farms in each of the two gross farm income classes were divided into three categories according

³No account was taken of possible costs of deriving the off-farm income.

to the percent of net cash family income received from off-farm sources. Farms receiving more than 50 percent and from 50 to 10 percent of their net cash family income from off-farm sources were further divided according to their major source of off-farm income (work or non-work). Farms in the less than ten percent group were not divided by sources of off-farm income since this group represented mainly full-time farmers. Much of the analysis in the study was a tabulation of farm resource and family characteristics by these income dependency classes.

TABLE III

CLASSIFICATION OF FARMS IN SURVEY

Total Gross Farm Receipts	Percent of Net Cash Family Income Received from Off-farm Sources and Major Off-farm Source of Income				
	More than 50 percent		50 percent - 10 percent		
	Off-farm Work	Non-work	Off-farm Work	Non-Work : 10 percent (Income Class)	
Less than \$5,000	1	2	3	4	5
\$5,000 and over	6	7	8	9	10

It was necessary to omit 33 farms in some of the analyses because of no report for the net cash farm income for some of these farms, and because of inconsistencies between the gross farm receipts and net farm incomes reported for others. It was not necessary to omit these farms for determining the sources and extent of off-farm work and non-farm income. These 33 farms were fairly well distributed among the counties according to the sample drawn from each.

Data and Limitations

One of the major limitations of this study was that the survey was not specifically designed to study part-time farming. The survey was primarily directed towards answering questions on the financial condition of farmers, on land ownership, and on land prices and factors affecting them. Although much information was obtained about off-farm work and non-farm income, there was insufficient data to fully explore the nature of part-time farming.

Data were available to determine the sources and extent of off-farm work and non-farm income and the dependence of farm families upon these off-farm sources for family income. There was no indication, however, of the availability and security of these off-farm jobs, their locations, and the farming adjustments associated with off-farm work by the farm operators over periods of time.

Another limitation to the study was that 1956 was not a normal year for farming. This year climaxed several years of drouth, and the net farm incomes were probably not as high as they normally would have been. Off-farm work possibly was intensified by this preceding drouth period.

CHAPTER III

RESULTS OF INCOME ANALYSIS

This chapter contains an analysis of the sources and extent of off-farm work and non-farm income, the relationship of off-farm income to selected farm characteristics and attributes of the farm operator and family, the employment plans and farm size changes expected by the farm operator over the next two or three years, and the farm resources controlled by farm operators in the different income dependency classes.

Sources and Extent of Off-farm Work and Non-farm Income

The sources and extent of off-farm work and non-farm income of the 404 farm operators and their families in the survey are summarized in Table IV. Off-farm income was reported by 361 farms. This comprised 89.4 percent of the total farms in the survey. The average off-farm income per farm in the survey amounted to \$1,669. This \$1,669 was composed of \$976 from off-farm work income and \$693 from non-work income.

Off-farm work income by the operator or other family members was reported by 191 farms, or 47.3 percent of the total farms in the survey. The average off-farm work income for farms reporting this source amounted to \$2,065 with an average income of \$976 per farm in the survey. Off-farm work by the operator was the major source of off-farm work income.

Off-farm work income was reported by 39.9 percent of the operators with an average income of \$778 per farmer in the survey. Wages and salaries from non-farm work comprised most of the off-farm work by the

TABLE IV

OFF-FARM SOURCES OF INCOME OF FARM OPERATORS AND FAMILIES IN WESTERN OKLAHOMA^a

Sources of Off-farm Income	Farms Reporting Source No. ^b	Percent of Total Farms in Survey ^c %	Average Income Per Farm Reporting Source \$	Total Income \$	Average Income Per Farm in Survey \$
Off-farm work income:	191	47.3	2,065	394,431	976
Operator:	161	39.9	1,951	314,117	778
Laborers on other farms	7	1.7	314	2,196	5
Customwork, etc., on other farms	11	2.7	710	7,814	19
Wages and salaries from non-farm work	140	34.7	1,898	265,681	658
Non-farm business activities involving operator's labor	8	2.0	4,803	38,426	95
Other family members:	65	16.1	1,236	80,314	199
Work on other farms	11	2.7	437	4,811	12
Non-farm work	56	13.9	1,348	75,503	187
Non-work income:	313	77.5	894	279,863	693
Other farms owned or operated	20	5.0	1,200	24,001	59
Other real estate	20	5.0	1,911	38,217	95
Royalties and mineral leases	210	52.0	443	93,073	230
Interest and dividends	163	40.3	145	23,590	58
Inheritance, gifts, and beneficiaries of insurance policies	14	3.5	1,706	23,885	59
Military, social security, pensions, allowances, or grants	32	7.9	1,022	32,691	81
Other non-work income	17	4.2	2,612	44,406	110
Off-farm income	361	89.4	1,868	674,294	1,669

^aSource - Great Plains Survey of Farm Tenure, Land Market, and Farm Finance.

^bNumber reporting source do not add to total number of farms since some operator or family members had more than one source.

^c404 farms in survey.

operator, with 34.7 percent of the farms reporting this source. The average income per farm in the survey from wages and salaries in non-farm work was \$658. This was the largest off-farm work source. Only eight farms reported operator off-farm work income from non-farm business activities involving the operator's labor. However, the eight farmers reported an average income of \$4,803 from this source. Approximately 23 percent of the farm operators in the survey worked off farms over 100 days, eight percent worked off farm from 50 to 100 days, eight percent worked off farm up to 50 days, and about 58 percent did no off-farm work (Table V).

TABLE V
DAYS WORKED OFF FARM IN 1956 BY FARM OPERATORS IN SURVEY

Days	Economic	Economic	Economic	Total Oklahoma	
	Area 1	Area 2	Area 4	No.	%
	No.	No.	No.		
0 Days	52	83	97	232	58
Under 50 days	7	11	17	35	8
50-100 days	5	13	16	34	8
Over 100 days	15	38	39	92	23
No report	0	4	7	11	3
Total sample	79	149	176	404	100

Off-farm work income by other family members was reported by 16.1 percent of the farms in the survey with an average income of \$199 each. The average income for farms reporting this source amounted to \$1,236. Non-farm work was the major source of this income. Only 11 farms reported work on other farms by other family members.

Non-work income was the most frequently reported off-farm source of income by farmers in the survey. Of the 404 farmers in the survey, 313, or 77.5 percent, received income from this source. The average income for farms reporting this source was \$894 and the average income per farm in the survey amounted to \$693. Royalties and mineral leases, and interest and dividends were the most common sources of non-work income, although they had the smallest average income for farms reporting non-work sources. Royalties and mineral leases were reported by 52 percent of the farms in the survey. The average income per farm in the survey received from this source, \$230, was the largest of the non-work sources. Although interest and dividends were listed by 40.3 percent of the farms, they had the smallest average income per farm in the survey and the smallest average income for farms reporting non-work sources. The percent of farms in the survey reporting other non-work sources ranged from 3.5 percent for inheritance, gifts, and beneficiaries of insurance policies to 7.9 percent for military, social security, pensions, allowances, or grants. These other sources, however, each had an average income per farm reporting this source of \$1,000 or more.

Dependence of Farm Operators and Families Upon Off-farm Sources for Family Income

Of the 371 farms classified, 189 had gross farm receipts less than \$5,000 and 182 had receipts of \$5,000 or more (Table VI). One hundred forty-three farms received more than 50 percent of their total net cash family income from off-farm sources. This was 38.5 percent of the farms classified. Operator and other family off-farm work was the major off-farm source for 91 of these 143 farms.

TABLE VI

TOTAL GROSS FARM RECEIPTS, PERCENT OF NET CASH FAMILY INCOME RECEIVED FROM
OFF-FARM SOURCES AND MAJOR OFF-FARM SOURCE OF INCOME BY INCOME CLASSES^a

Total Gross Farm Receipts	Percent of Net Cash Family Income Received from Off-farm Sources and Major Off-farm Source of Income				
	More than 50%		50% - 10%		Less than 10%
	Off-farm Work	Non-work	Off-farm Work	Non-work	
Less than \$5,000:					
Number of farms	68	38	18	30	35
Average net farm income	440	498	1,788	1,210	1,209
Average off-farm work income	\$3,068	506	735	9	9
Average non-work income	352	3,372	102	426	41
Average net cash family income	3,861	4,375	2,625	1,645	1,260
More than \$5,000:					
Number of farms	23	14	23	40	82
Average net farm income	1,611	54	4,035	3,910	4,097
Average off-farm work income	3,419	145	1,555	77	18
Average non-work income	236	2,054	162	1,035	148
Average net cash family income	5,267	2,144	5,752	5,023	4,263
Total Number of Farms	91	52	41	70	117
		143	111		

^aThirty-three farms in the survey were excluded because of no report for the net cash farm income or because of inconsistencies between the gross farm receipts and net cash farm income reported.

Approximately 30 percent, or 111, of the 371 farmers received from 50 to 10 percent of their net cash family income from off-farm sources. In contrast to those farms which received more than 50 percent of their net cash family income from off-farm sources, non-work income was listed as the major off-farm source by the majority of these operators. Of these 111 farms, 70 had non-work as the major off-farm source.

One hundred and seventeen farm families received less than ten percent of their net cash family income from off-farm sources. Eighty two of these families had gross farm receipts of \$5,000 or more, and 35 had gross farm receipts of less than \$5,000.

The total net cash income per family for 371 families was \$3,783 (Table VII). The components of this income were as follows: \$2,105 as net farm income, \$978 as off-farm work income, and \$700 as non-work income. These components amounted to 55.7, 25.8, and 18.5 percent of the total, respectively.

TABLE VII
COMPONENTS OF NET CASH FAMILY INCOME FOR
371 FARMS CLASSIFIED IN SURVEY

Income Source	Total Income \$	Percent of Total Net Cash Family Income %	Average Income Per Farm Classified \$
Net farm income	781,095	55.7	2,105
Off-farm work income	362,712	25.8	978
Non-work income	259,578	18.5	700
Total net cash family income	1,403,385	100.0	3,783

The families receiving more than 50 percent of their net cash income from off-farm sources had relatively low net farm incomes. The families in income class 7 had a negative net cash farm income. This can be partly explained by the location and type of farms within this class, and the drouth year. This class had the largest percent of farms located in the three northwestern counties: Beaver, Ellis, and Woodward. It also had the largest percent of livestock farms and the smallest percent of cash grain farms in the classes with more than \$5,000 gross farm receipts. The effect of the drouth was probably more severe upon this particular class. Relatively large net cash farm incomes were obtained for income classes 8, 9 and 10. Families in class 10 with an average net cash farm income of \$4,097, led in this respect.

Since the farms in the survey were classified according to the percent of net cash family income received from off-farm sources and the major off-farm source of income, differences in the average off-farm work income and non-work income among classes merely reflect the classification. That is, the classes with off-farm work as the major source of off-farm income by the operator or other family members had the largest average off-farm work income. Similarly, the classes whose major off-farm source was non-work had the largest average non-work income per income class.

The extent of farming by farm operators depends upon the alternative (non-farm) use of available labor and other resources. Of the classes with less than \$5,000 gross farm receipts, income class 5, the small full-time farms, had the lowest average net cash family income. Farmers in the other classes, who depended more on off-farm income, had larger net cash family incomes. With the exception of income class 7, this was also true for the classes with more than \$5,000 gross farm receipts.

A comparison of the components of net cash family income in western Oklahoma with available data from selected eastern Oklahoma areas revealed that the average net cash family income was higher in western Oklahoma by approximately the difference in net farm income (Table VIII). The amount of off-farm income received per family was about the same in each of the areas. The average off-farm income for the eight survey counties was \$1,678 compared with an average off-farm income per rural family of \$1,759 in Latimer County and \$2,068 in Cherokee County. However, the net farm income per family differed between west and east Oklahoma by \$1,800 and \$2,000. There also was a difference in the source of non-work income. Welfare and retirement income were important in the two eastern Oklahoma counties, whereas royalties and mineral leases comprised a major portion of the non-work income in western Oklahoma.

Relationship of Off-farm Income to Selected Farm
Characteristics and Attributes of the Farm
Operator and Family

The relationship between the income dependency classes developed from the classification of farms in the survey, and the number and percentage of farms within economic areas is shown in Table IX. In economic area 4, Washita and Comanche counties were listed separately, as 4A and 4B respectively, because of the differences in off-farm employment in the two counties. Economic area 1, which contained the northwestern counties in the survey, had a large percentage of farms in the income classes with major off-farm source as non-work, or income classes 2, 4, 7, and 9. (See Table III). Economic area 1 had a small number of farms in income classes 3 and 8, or those farms which received from 50 to 10 percent of their

TABLE VIII

COMPONENTS OF AVERAGE NET CASH FAMILY INCOME IN WESTERN
OKLAHOMA AND IN SELECTED EASTERN OKLAHOMA AREAS^a

Source of Income	Eight Western	Eastern Oklahoma Areas	
	Oklahoma Counties ^b	Cherokee County ^c	Latimer County ^d
	\$	\$	\$
Average net farm income	2,105	310	119
Average off-farm work income	978	1,588	1,170
Average non-work income	700	480	589
Average net cash family income	3,783	2,378	1,878

^aEastern Oklahoma surveys included some rural households which did not meet the Census specifications of a farm.

^bSource - Survey data of eight western Oklahoma counties.

^cSource - E. J. R. Booth, The Cherokee Survey - Preliminary Results, Mimeographed Report, Department of Agricultural Economics, Oklahoma State University, 1957.

^dSource - W. B. Back, Problems of Rural People in Latimer County, Mimeographed Report, Department of Agricultural Economics, Oklahoma State University, 1957.

TABLE IX

NUMBER AND PERCENTAGE OF FARMS WITHIN ECONOMIC AREAS BY INCOME CLASSES, WESTERN OKLAHOMA

Income Class	Economic Area							
	1 (Beaver, Custer, Ellis, and Woodward counties)		2 (Grant and Kingfisher counties)		4A (Washita county)		4B (Comanche county)	
	No.	%	No.	%	No.	%	No.	%
Less than \$5,000 Gross Farm Receipts:								
1	11	11.9	22	15.7	12	12.6	23	37.7
2	13	17.6	9	6.4	8	8.4	8	13.1
3	1	1.4	8	5.7	6	6.3	3	4.9
4	6	8.1	12	8.5	10	10.5	2	3.3
5	6	8.1	4	2.8	16	16.8	9	14.8
More than \$5,000 Gross Farm Receipts:								
6	4	5.4	12	8.5	4	4.2	3	4.9
7	6	8.1	8	5.7	0	0.0	0	0.0
8	2	2.7	15	10.6	5	5.3	1	1.6
9	12	16.1	16	11.3	10	10.5	2	3.3
10	13	17.6	35	24.8	24	25.4	10	16.4
Total	74	100.0	141	100.0	95	100.0	61	100.0

net cash family income from off-farm work as the major off-farm source.

Economic area 2, Grant and Kingfisher counties, had a heavy concentration of farms in income class 10—the large, full-time farms. This is partly a reflection of the numerous cash grain farms in this area. Economic area 4A, Washita County, had a large percentage of farms in income classes 5 and 10, the full-time farms, and none in income class 7, whose major off-farm source of income was non-work. Economic area 4B, Comanche County, also had no farms in income class 7. This county had a large percentage of farm families receiving more than 50 percent of their net cash family income from off-farm sources with off-farm work as the major off-farm source. This heavy concentration in income class 1 reflects the off-farm work opportunities at Lawton and Fort Sill. It also demonstrates that increasing off-farm work is associated with local non-farm development.

There was a significant difference in the size of farm and in the number of acres of crop land per farm among the income classes⁴ (Table X). The average size of farm and number of acres of crop land were all larger for classes 6 through 10. An analysis of variance of farm sizes among income classes within each gross farm receipts division did not reveal significant differences. However, the classes with the smallest size of farm under each gross farm receipts division were those whose major off-farm income source was operator or other family off-farm work. Classes 1 and 3 had the smallest average size of farm for the classes with less than \$5,000 gross farm receipts, and 6 and 8 had the smallest average size

⁴See Appendix Tables I, II, and III for results of statistical analyses made.

TABLE X

AVERAGE SIZE OF FARM, NUMBER OF ACRES OF CROP LAND, AND AGE
OF OPERATOR BY INCOME CLASSES

Income Class	Average Size of Farm ^a Acres	Average Number of Acres of Crop Land Per Farm ^a Acres	Average Age of Operator ^a Years
Less than \$5,000 Gross Farm Receipts:			
1	245.8	123.0	44
2	289.6	147.7	55
3	267.3	171.4	47
4	303.0	192.7	55
5	293.6	160.9	51
More than \$5,000 Gross Farm Receipts:			
6	514.0	348.2	41
7	864.6	500.9	53
8	564.3	375.8	43
9	996.0	413.4	48
10	592.7	378.0	48
Total for All Farms	477.7	268.7	48

^aAnalysis of variance revealed a significant difference between income classes. F value was significant at .99 level. See Appendix Tables I, II, and III for a presentation of the calculations.

for the larger gross farm receipts classes. The largest average sizes of farms under each gross farm receipts division were generally for the classes which had non-work as the major off-farm source. Classes 4 and 9 had the largest average size of farm for their respective gross farm receipt divisions.

A significant difference in ages of farm operators by income classes also was established by statistical analysis. Operators in the classes receiving more than ten percent of their net cash family income from off-farm sources with off-farm work as the major off-farm source had the lowest average ages. Operators in the classes with the major off-farm source as non-work income had the highest average ages. The lowest average age of operators for any income class was 41 years for class 6.

With the exception of income class 7, the classes with gross farm receipts of \$5,000 or more contained higher percentages of cash grain farms than did the other classes (Table XI). This can be attributed in part to the large wheat farms located in the northern part of the state, particularly in Grant and Kingfisher counties. Over 86 percent of the farms in class 8 were small grain farms. Farms in income class 7 mainly were livestock or general in type. Farms in the classes with less than \$5,000 gross farm receipts generally contained fewer cash grain farms than did the other classes. Farms in income classes 1 and 2 were mainly livestock in type, and farms in classes 3 and 4 were mainly general in type. More than 25 percent of the farms in income class 5 were cotton farms and were located primarily in Custer and Washita counties. Economic area 2 (Grant and Kingfisher counties) had the highest percentage of cash grain farms (Table XII). Washita county had the highest percentage of cotton

TABLE XI
TYPE OF FARM BY INCOME CLASSES^a

Income Class	Type of Farm				
	Cash Grain	Cotton	Dairy or Poultry ^b	Livestock Other than Dairy or Poultry	General ^c
	%	%	%	%	%
Less than \$5000 Gross Farm Receipts					
1	39.4	10.6	7.6	34.8	7.6
2	25.0	6.2	18.8	37.5	12.5
3	50.0	5.6	5.6	11.1	27.7
4	56.6	6.7	3.3	16.7	16.7
5	42.9	25.7	11.4	14.3	5.7
More than \$5000 Gross Farm Receipts					
6	65.2	8.7	8.7	8.7	8.7
7	42.9	0	7.1	28.6	21.4
8	86.4	0	4.5	9.1	0
9	60.0	10.0	7.5	20.0	2.5
10	59.8	6.1	7.3	12.2	14.6
Total for All Farms	51.9	8.8	8.3	20.2	10.8

^aNine farms omitted because of no report or included in Census economic classes 8 and 9.

^bIncludes 5 poultry and 25 dairy farms.

^cIncludes 2 fruit and nut farms.

TABLE XII
 TYPE OF FARM BY ECONOMIC AREAS, WESTERN OKLAHOMA^a

Economic Area	Type of Farm				
	Cash Grain % of Farms	Cotton % of Farms	Dairy or Poultry ^b % of Farms	Livestock Other than Dairy or Poultry % of Farms	General ^c % of Farms
1 (Beaver, Custer, Ellis, and Woodward counties)	40.8	4.2	8.5	38.0	8.5
2 (Grant and Kingfisher counties)	76.3	0.0	6.5	10.7	6.5
4A (Washita county)	41.3	28.3	6.5	7.6	16.3
4B (Comanche county)	25.0	5.0	15.0	40.0	15.0
Total for All Farms	51.9	8.8	8.3	20.2	10.8

^aNine farms omitted because of no report or included in Census economic classes 8 and 9.

^bIncludes 5 poultry and 25 dairy farms.

^cIncludes two fruit and nut farms.

farms and economic area 1, the northwestern counties, and Comanche county, area 4B, had the largest percentages of livestock farms.

Total farm assets, total assets, total debts, and net worth per farm differed significantly among income classes (Table XIII). These differences were prominent between those classes having less than or greater than \$5,000 gross farm receipts. Operators in classes 6 through 10 generally had higher average total farm assets, total assets, total debts, and net worths than did the operators in any of the first five classes. In each division of the income classes by the gross farm receipts, the classes which had non-work as the major off-farm source of income mostly contained higher average total farm assets, total assets, and net worths than did the classes with off-farm work as the major off-farm source. Operators in income class 9 had the highest average total farm assets, total assets, and net worth while those in class 5, the small full-time farms, had the lowest values for these items. The most indebtedness occurred in income class 7 and the least indebtedness occurred in income class 3.

Classes 1 through 5 had more farms in the non-commercial and lower commercial classes as defined by the Agricultural Census (Table XIV). The classes with the lowest average gross farm sales in each gross farm receipts division contained farms which received more than 50 percent of net cash family income from off-farm sources. Income class 10, containing the large full-time farms, had the largest average gross farm sales. Census data may perhaps be inadequate for the purpose of depicting part-time farming. Only 8.2 percent of the total farms were included in the non-commercial categories, and only 11.7 percent of the total farms were

TABLE XIII

FARM ASSETS, TOTAL ASSETS, TOTAL DEBTS, AND NET WORTH BY INCOME CLASSES

Income Class	Average Farm Assets				Average Total Assets	Average Total Debts	Average Net Worth
	Land	Livestock	Other	Total			
	\$	\$	\$	\$	\$	\$	\$
Less than \$5,000							
Gross Farm Receipts:							
1	12,001	1,682	2,844	16,541	23,625	3,396	20,229
2	20,015	1,786	2,632	24,644	43,775	3,143	40,419
3	13,572	1,628	3,668	18,868	23,404	2,113	21,409
4	25,099	1,799	4,052	30,950	38,078	3,258	34,652
5	11,782	1,526	2,373	15,681	18,886	2,235	16,647
More than \$5,000							
Gross Farm Receipts:							
6	23,509	2,429	6,506	32,444	41,664	5,935	35,583
7	55,286	4,856	7,520	67,665	83,169	8,992	73,170
8	22,565	3,656	7,182	33,403	44,230	7,452	36,714
9	57,287	7,587	9,076	73,950	90,218	7,800	83,455
10	26,981	3,809	6,790	37,729	44,182	6,035	37,995
Total for All Farms	25,141	3,090	5,180	33,461	42,632	4,869	37,637

TABLE XIV

CENSUS ECONOMIC CLASSES OF FARMS BY INCOME CLASSES

Income Class	Commercial						Non-commercial			Average Gross Farm Sales \$
	\$25,000 and over in Sales %	\$10,000- \$24,999 %	\$5,000- \$9,999 %	\$2,500- \$4,999 %	\$1,200- \$2,499 %	\$250- \$1,199 ^a %	\$250- \$1,199 ^b %	Less than \$250 %	Abnormal %	
Less than \$5,000 Gross Farm Receipts:										
1	0	0	0	35.3	29.4	5.9	17.6	11.8	0	\$2,011
2	0	0	0	33.3	36.1	5.6	11.1	11.1	2.8	\$1,921
3	0	0	0	72.3	27.7	0	0	0	0	\$3,560
4	0	0	0	60.0	30.0	10.0	0	0	0	\$2,983
5	0	0	0	65.7	20.0	11.5	0	2.8	0	\$2,867
More than \$5,000 Gross Farm Receipts:										
6	0	13.0	87.0	0	0	0	0	0	0	\$7,433
7	0	7.1	92.9	0	0	0	0	0	0	\$7,040
8	0	36.4	63.6	0	0	0	0	0	0	\$10,109
9	5.0	40.0	55.0	0	0	0	0	0	0	\$11,695
10	6.1	46.3	47.6	0	0	0	0	0	0	\$12,402
Total for All Farms ^c	1.9	17.9	29.3	24.5	14.7	3.5	4.4	3.5	0.3	\$6,609

^aOff-farm work--none, no report, or less than 100 days.

^b100 days or more off-farm work, or non-farm income of farmer and family greater than value of farm products sold.

^cThree farms omitted because of no report.

included in the non-commercial and lowest commercial class. Nevertheless, considerable off-farm work and part-time farming were present in the survey.

Income classes 1 and 2 contained smaller percentages of operators listing farming or ranching as their principal occupation than did the other classes (Table XV). This can be attributed to the small size of farms for these classes and the large dependency on off-farm income. The percent of farm operators living on the farm was also small for income classes 1 and 2. The full-time farms, classes 5 and 10, had the highest percentages of farm operators living on the farm.

Relationship of Off-farm Income to Employment Plans
and Farm Size Changes Expected by the Farm
Operator Over the Next Two or Three Years

Off-farm work and farm enlargement plans of farm operators by income class and age group are shown in Table XVI. Farm operators who were 65 years and older were excluded from this table as it was assumed they were either retired or planning to retire in the near future. The off-farm work plans and farm enlargement plans were mutually exclusive. That is, farm operators who were planning off-farm work were not asked questions pertaining to farm enlargement.

In income classes 1 through 5, the younger farmers planned more adjustments in off-farm work or farm enlargement than did the older farmers. Over 18 percent of the farm operators of less than 45 years of age had plans of off-farm work, whereas only 9.8 percent of the farm operators between the ages of 45 and 64 planned off-farm work. Over 35 percent of the younger farmers planned farm enlargement and only 18.5 percent of the

TABLE XV

PRINCIPAL OCCUPATION AND PLACE OF RESIDENCE OF OPERATOR BY INCOME CLASSES

Income Class	Principal Occupation						Place of Residence		
	Farming or Ranching %	Professional ^a %	Laborer, Clerical Service %	Business %	Retired ^b %	Other %	Lives on Farm %	Lives in Town %	Other ^c %
Less than \$5000									
Gross Farm Receipts:									
1	64.7	1.5	19.1	11.7	1.5	1.5	64.7	32.3	3.0
2	68.4	5.3	5.3	10.5	5.2	5.3	63.2	36.8	0
3	100.0	0	0	0	0	0	83.3	16.7	0
4	96.7	3.3	0	0	0	0	82.8	17.2	0
5	97.1	0	0	0	2.9	0	91.4	8.6	0
More than \$5000									
Gross Farm Receipts:									
6	95.7	0	0	0	0	4.3	87.0	13.0	0
7	100.0	0	0	0	0	0	85.7	14.3	0
8	95.7	0	0	4.3	0	0	73.9	21.7	4.4
9	97.5	0	0	2.5	0	0	85.0	12.5	2.5
10	98.8	0	0	1.2	0	0	95.1	3.7	1.2
Total for All Farms	88.7	1.1	4.0	4.0	1.1	1.1	81.1	17.5	1.4

^aDoctor, teacher, etc.

^bRetired from farming or non-farm occupation.

^cCommutes from permanent residence on another farm, visits farm periodically, etc.

TABLE XVI

OFF-FARM WORK AND FARM ENLARGEMENT PLANS OF FARM
OPERATORS BY INCOME CLASSES AND AGE GROUPS

Income Class	Number of Farm Operators by Age Group		Proportion of Operators by Age Group			
			Plan Off-farm Work ^a		Plan Farm Enlarge- ment	
	<45	45-64	<45	45-64	<45	45-64
1	36	29	19.4	13.8	33.3	17.2
2	9	16	44.4	12.5	33.3	31.3
3	11	4	18.2	0.0	36.4	0.0
4	6	21	0.0	14.3	66.7	19.0
5	9	22	0.0	0.0	22.2	13.6
Total, 1-5	71	92	18.3	9.8	35.2	18.5
6	14	9	14.3	22.2	35.7	22.2
7	3	11	0.0	0.0	66.7	9.1
8	11	12	18.2	25.0	36.4	16.7
9	16	22	0.0	0.0	43.8	31.8
10	34	42	5.9	2.4	38.2	16.7
Total, 6-10	78	96	7.7	6.3	39.7	19.8
Total, 1-10	149	188	12.8	8.0	37.6	19.1

^aIncludes either part-time or full-time off-farm work.

older group planned any farm enlargement. The farm operators in income class 5, the small, full-time farms, did not plan to engage in additional off-farm work regardless of age. There was little relation between the off-farm work plans and age of operators for income classes 6 through 10. The younger farmers did plan more farm enlargement, however. Operators in income classes 7 and 9, who depended upon non-work as the major off-farm source, indicated no interest in additional off-farm work.

The younger farm operators in income classes 1 through 5 had a larger average size of farm than did the older group, but they owned a smaller percentage of the land they operated and had a smaller average net worth (Table XVII). The young, full-time farmers in income class 5 particularly had a low equity in the land they operated and a small net worth. These same relationships generally held true in classes 6 through 10. An exception pertained to the average size of farm. The older farmers operated larger acreages for these classes. Considering all farms in classes 1 through 10, the equity and average net worth of the older operators were almost double that of the younger group.

Farm Resources Controlled by Farm Operators with Non-farm Sources of Income

The farmers receiving more than 50 percent of their net cash family income from off-farm sources controlled 29.1 percent of the total farm land and crop land in the survey (Table XVIII). For this group (income classes 1, 2, 6, and 7), the average size of farm and the average number of acres of cropland were smaller than in the other groups.

The group which received from 50 to 10 percent of their net cash family income from off-farm sources (income classes 3, 4, 8 and 9)

TABLE XVII
FACTORS AFFECTING FUTURE ACTIONS OF FARM OPERATORS BY INCOME
CLASSES AND AGE GROUPS

Income Class	Average Size of Farm Acres		Land Owned Land Operated %		Average Net Worth \$	
	<45	45-64	<45	45-64	<45	45-64
	1	228.0	222.3	38.1	60.4	18,340
2	295.3	398.9	23.3	73.4	47,175	49,569
3	314.8	197.8	20.2	34.1	17,395	23,181
4	406.7	286.7	57.4	89.2	31,384	35,902
5	553.6	218.1	12.0	74.0	8,560	21,204
Total, 1-5	306.4	265.7	29.6	72.7	21,155	29,478
6	495.0	543.6	40.5	49.4	30,888	40,425
7	573.3	944.0	37.2	83.5	30,531	85,962
8	584.1	546.2	21.2	39.9	21,582	50,585
9	516.0	1,396.3	53.2	51.7	42,444	114,869
10	569.1	611.3	17.9	49.7	20,624	51,873
Total, 6-10	547.2	814.8	29.7	54.1	27,546	68,288
Total, 1-10	432.4	546.1	29.7	58.6	24,550	48,777

TABLE XVIII

FARM RESOURCES OF FARMERS IN SURVEY BY PERCENTAGE OF NET CASH FAMILY INCOME
RECEIVED FROM OFF-FARM SOURCES^a

Percent of Net Cash Family In- come Received from Off-farm Sources (%)	Number of Farms (No.)	Farm Acreage (Acres)	Percent of Total Farm Acreage (%)	Average Size of Farm (Acres)	Crop Land Acreage (Acres)	Percent of Total Crop Land Acreage (%)	Average Number of Acres of Crop Land (Acres)
More than 50	143	51,648	29.1	361.2	28,999	29.1	202.8
50-10	111	66,719	37.7	601.1	34,047	34.2	306.7
Less than 10	117	58,876	33.2	503.2	36,627	36.7	313.1
Total for All Farms	371	177,243	100.0	477.7	99,673	100.0	268.7

^aThirty-three farms omitted because of no report for the net cash farm income, or because of inconsistencies between the gross farm receipts and net cash farm income reported. See Appendix Table IV for information on farm resources operated by dependency classes.

controlled the largest percentage of farm land--37.7 percent. The average size of farm for this group, 601.1 acres, was also the largest. However, the group which received less than 10 percent of their net cash family income from off-farm sources (the full-time farmers, classes 5 and 10) controlled the largest percentage of crop land and also had the highest average number of acres of crop land. The average size of farm for this group was 503.2 acres.

Summary of Major Findings

The facts obtained from the income analysis of the 404 farm operators surveyed in 1956 support the following propositions:

- (1) Farm families in western Oklahoma derive a substantial portion of their income from non-farm sources.
- (2) Off-farm work by the operators is the leading source of this non-farm income.
- (3) Off-farm work is more prevalent among the younger farm operators and those with low equities in assets managed, low net worths, or small farms.
- (4) The leading source of non-work incomes is royalties and mineral leases.
- (5) Operators with more than 50 percent of their income from off-farm sources manage about a third of the land resources in the area.
- (6) The "full-time" farmers manage about one-third of the land resources in the area.

- (7) The Agricultural Census inadequately portrays the degree and characteristics of part-time farming in western Oklahoma by days worked off farm by operator and number reporting off-farm work of 100 days or more.
- (8) Although off-farm work by farm operators in western Oklahoma has increased since 1940, this increase is overstated by the use of percentages of farm operators with some or 100 days or more of off-farm work because of the reduction in numbers of farm families in the period.
- (9) Part-time farming is thus not a new phenomena in the area. Rather, it appears to be persisting and increasing with time as a means of increasing farm family incomes.

Some implications and interpretations of these findings relating to adjustments will be taken up in the next chapter.

CHAPTER IV

IMPLICATIONS AND INTERPRETATIONS OF FINDINGS

The Economic Adjustment Problem of Farm Operators

In recent years, farm operators and their families in western Oklahoma have been confronted with the problem of how to maintain and increase their standard of living. An increase in the production and variety of consumer goods has resulted in attempts to raise the family's standard of living. Past farm sizes appear inadequate for these purposes. Rising production costs in relation to farm prices have reduced the net income from farming in this area.

Farm operators have been faced with reduced acreages of cash crops per area of crop land through wheat and cotton acreage allotments. More total crop land is now required to maintain acreages of the principle cash crops. A lack of close alternatives to these crops from the standpoint of income potential has intensified this problem. Periods of drouth and adverse weather add to the problem of increasing income from farming. The high degree of variability of farm income from year to year in the area mainly is attributable to the occurrence of adverse weather.

Alternatives in Adjustment

Several alternatives or combinations of alternatives are available to farm operators and their families who are trying to maintain or improve their standard of living.

The first alternative is enlarging the size of the farm business which may be accomplished in several ways. The farm operator may rent additional land and build up his total assets in order to increase his net family income. This alternative will depend upon the availability of farm land for rent in the area and the ability of the operator to increase incomes with increases in scale. If the individual farm operator has sufficient capital or access to credit, he may choose to purchase the additional resources. Capital limitations and/or credit restrictions may make this alternative infeasible for some farm operators. Farm enlargement may also take the form of both renting and purchasing additional resources. This alternative will depend upon the availability of farm land for rent, the ability of the operator to increase incomes with increases in scale, and the capital and credit limitations of the farm operator.

A second alternative in maintaining or increasing the standard of living of the farm family is that of improving the efficiency of production. Increased sizes and improved types of machinery can be purchased to reduce the labor requirements of the operator and thus permit larger acreages to be handled per man. This will, however, require additional capital. Other ways of increasing efficiency of production may be the introduction of fertilization, irrigation, and other recommended production practices. This alternative will be limited by the climate and allotments on cash crops.

A third alternative in maintaining or increasing the standard of living is that of seeking off-farm income as a supplement to income which can be earned from farming. Off-farm income can also be used for other purposes. It can be used to invest in non-farm property to secure a higher

total future income, or it can be used to invest in additional farm land in order to increase the earnings from farming. These investments would, however, require a strong capital position.

The alternatives as listed are not necessarily mutually exclusive. They may be complementary. For example, an increase in off-farm work income may be accompanied by an increase in the scale of operation, or an increase in efficiency. Also, an increase in off-farm work may be performed without an adjustment in the size of operation in farming, or a change in efficiency.

Off-farm sources of income may consist of either non-work or off-farm work sources. Non-work sources include income from such sources as royalties and mineral leases, interest and dividends, and social security, pensions, and welfare payments. These latter sources are of importance primarily to aged operators anticipating retirement.

Off-farm work by the operator and family can consist of seasonal work, or full-time off-farm employment. Off-farm work income can and has provided a solution to the problem of survival of farm operators in western Oklahoma during periods of drouth and adverse weather. Schickele presented the hypothesis that individual farm operators in the Great Plains area could increase their probability of survival by enlarging their farm operations.⁵ He pointed out that smaller yields are required by large farmers for survival during these periods of adverse weather. Off-farm work income can and has provided a desirable alternative to farm

⁵Rainer Schickele, "Farmers Adaptations to Income Uncertainty", Journal of Farm Economics, XXXII (1950).

operators in that it can be used to provide the necessary family income during these adverse periods, or it can be used for farm enlargement and thus increase the probability of survival as postulated by Schickele.

Possible Hypotheses Relating to How the Income
Dependency Classes Will Adjust

Based upon available data, several hypotheses can be formulated as to how the income dependency classes of farms in this study will adjust in the future so as to maintain or increase their standard of living. Within any class, it appears that the younger farm operators will do more adjusting in off-farm work or farm enlargement. The percentage of farm operators of less than 45 years of age indicating farm enlargement plans was nearly double that of the older group on both the small and large farms. Also, the percentage of young farmers indicating off-farm work plans was nearly double that of the older operators for the small farms, and was higher for the larger farms.

Another possible hypothesis relating to how the income dependency classes will adjust is that within any class, the farmers with low equities in assets operated and/or low net worths will do more adjusting in off-farm work or farm enlargement. The operators who had off-farm work or farm enlargement plans were generally those who had low equities and/or low net worths. This relationship reflects the desire of these farm operators to increase their total assets and net cash family income.

Adjustment into off-farm work appears to be more probable among the farm operators who have less than \$5,000 gross farm receipts. Operators of these smaller farms indicated greater interest in increasing off-farm

employment than did the operators of larger farms. This type of adjustment will probably be easier for the operators of smaller farms because of their capital limitations and credit restrictions, and the limitation of resources for rent within the area in relation to the demand.

Farm enlargement by individual farm operators likely will be preceded by enlargement of non-farm income except where the choice of farmers is to rent additional resources and the opportunity to do so exists. This will, of course, depend upon how earnings from employment of labor resources in agriculture compare with earnings from non-farm employment.

Plans to adjust in off-farm work or farm enlargement appear to be inversely related to the degree of full-time farming. The small, full-time farm operators did not plan any off-farm work or farm enlargement over the next two or three years. The large, full-time farm operators had low percentages of farmers with off-farm work and farm enlargement plans. This hypothesis would again depend upon how earnings from resources used in farming compared with comparable resources in non-farm employment.

Considering all farms which were classified, it appears that the adjustment problems of farm operators will vary according to their ability and willingness to adjust. The equity and net worth of individual farm operators will greatly influence the type of adjustment they pursue. Operators with low equities and/or net worths will probably adjust through off-farm work or through renting additional resources. Operators with high equities and/or net worths will probably do more adjusting by investing in non-farm alternatives or by purchasing additional farm land. The small, full-time farmers pose a problem with their unwillingness to adjust through either off-farm employment or additional farm enlargement. This problem also is present among the older operators with small farms.

In farm adjustment studies, it appears that greater attention needs to be given to capital requirements for adjusting, and methods of obtaining this capital, than heretofore given. Some knowledge by farm operators of the capital required for various farming adjustments and of the ways of obtaining this capital is prerequisite to taking advantage of recommended adjustments.

CHAPTER V

SUMMARY AND CONCLUSIONS

The major purpose of this study was to determine the amounts and characteristics of off-farm work and non-farm income of farm operators and their families in the commercial farming areas of western Oklahoma. Particular emphasis was placed upon the degree of dependence of these farm operators and their families upon off-farm sources for family income. The study was based upon an analysis of data in a 1957 survey of 404 farm families in eight western Oklahoma counties.

The farm families in the survey received about 45 percent of their family income from off-farm sources in 1956. Non-farm work by the farm operator was the leading source of this off-farm income. Off-farm work was more prevalent among the younger farm operators and those with low equities in assets managed, low net worths, or small farms. Off-farm work by farmers in western Oklahoma is not a new phenomena. Rather, it appears to be persisting and increasing with time as a means of increasing farm family incomes.

Non-work sources also contributed to the family income of many farm families, particularly those of the older operators. Royalties and mineral leases were the major source of non-work income.

Farm operators who received more than 50 percent of their net cash family income from off-farm sources controlled almost a third of the total land resources in the survey. The "full-time" farmers also controlled about a third of the total farm land and crop land.

The adjustment problems of farm operators in western Oklahoma who desire to raise their standard of living vary according to their ability and willingness to adjust. The equity in assets operated and net worth of individual farm operators greatly influence the type of adjustment they may pursue. The small, full-time farmers and aged operators with small farms pose a problem with their apparent unwillingness to adjust through either off-farm employment or farm enlargement.

A desirable alternative for farm operators who wish to maintain or increase their standard of living appears to be that of seeking off-farm income to supplement income from farming. Off-farm income also can be used for investing in farm or non-farm assets which add to future income earning capacity by the families. Off-farm work income can and has provided a means of survival for farm operators in western Oklahoma during periods of drouth and adverse weather.

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A P P E N D I X

APPENDIX TABLE I
ANALYSIS OF VARIANCE OF SIZE OF FARM

Source of Variation	Income Classes 1-5			Income Classes 6-10			Income Classes 1-10		
	Degrees of Freedom	Sum of Squares	Mean Square	Degrees of Freedom	Sum of Squares	Mean Square	Degrees of Freedom	Sum of Squares	Mean Square
Total	188	12,083,095.6	—	181	168,461,271.6	—	370	196,444,508.7	—
Classes	4	102,583.3	25,645.8	4	6,023,406.9	1,505,851.7	9	22,026,231.7	2,447,359.1
Individuals	184	11,980,512.3	65,111.5	177	162,437,864.7	917,728.1	361	174,418,277.0	483,153.1
F	.39	F _{.05} = 2.42		1.64	F _{.05} = 2.42		5.07**		

*Significant at .95 level.

**Significant at .99 level.

APPENDIX TABLE II

ANALYSIS OF VARIANCE OF CROP LAND PER FARM

Source of Variation	Income Classes 1-5			Income Classes 6-10			Income Classes 1-10		
	Degrees of Freedom	Sum of Squares	Mean Square	Degrees of Freedom	Sum of Squares	Mean Square	Degrees of Freedom	Sum of Squares	Mean Square
Total	186	2,533,752.4	--	181	10,781,431.0	--	368	18,578,892.0	--
Classes	4	108,681.5	27,170.4	4	250,332.9	62,583.2	9	5,622,722.9	624,747.0
Individuals	182	2,425,070.9	13,324.6	177	10,531,098.1	59,497.7	359	12,956,169.1	36,089.6
F	2.04	$F_{.05} = 2.42$		1.05	$F_{.05} = 2.42$		17.31**		

*Significant at .95 level.

**Significant at .99 level.

APPENDIX TABLE III

ANALYSIS OF VARIANCE OF AGE OF OPERATOR

Source of Variation	Income Classes 1-5			Income Classes 6-10			Income Classes 1-10		
	Degrees of Freedom	Sum of Squares	Mean Square	Degrees of Freedom	Sum of Squares	Mean Square	Degrees of Freedom	Sum of Squares	Mean Square
Total	188	31,995.8	—	181	22,355.3	—	370	55,130.2	—
Classes	4	4,401.6	1,100.4	4	1,664.9	416.2	9	6,845.6	760.6
Individuals	184	27,594.2	150.0	177	20,690.4	116.9	361	48,284.6	133.8
F		7.337**			3.56**			5.69**	

*Significant at .95 level.

**Significant at .99 level.

APPENDIX TABLE IV

FARM RESOURCES OF FARMERS IN SURVEY BY INCOME CLASSES

Income Class	Number of Farms No.	Farm Acreage Acres	Percent of Total Farm Acreage %	Average Size of Farm Acres	Crop Land Acreage Acres	Percent of Total Crop Land Acreage %	Average Number of Acres of Crop Land Acres
Less than \$5,000 Gross Farm Receipts:							
1	68	16,716	9.5	245.8	8,366	8.4	123.0
2	38	11,006	6.2	289.6	5,612	5.6	147.7
3	18	4,812	2.7	267.3	3,086	3.1	171.4
4	30	9,089	5.1	303.0	5,782	5.8	192.7
5	35	10,275	5.8	293.6	5,632	5.7	160.9
More than \$5,000 Gross Farm Receipts:							
6	23	11,822	6.7	514.0	8,009	8.0	348.2
7	14	12,104	6.8	864.6	7,012	7.0	500.9
8	23	12,979	7.3	564.3	8,643	8.7	375.8
9	40	39,839	22.5	996.0	16,536	16.6	413.4
10	82	48,601	27.4	592.7	30,995	31.1	378.0
Total for All Farms	371	177,243	100.0	477.7	99,673	100.0	268.7

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