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FARM FAMILY TRANSITION TO OFF-FARM EMPLOYMENT:
A COMPARISON OF HOUSEHOLDS IN THREE STAGES OF TRANSITION

By

Laurie Angela Cummings

MICHIGAN STATE UNIVERSITY
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ABSTRACT

FARM-FAMILY TRANSITIONS TO OFF-FARM EMPLOYMENT: A COMPARISON OF HOUSEHOLDS IN THREE STAGES OF TRANSITION

By

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This paper uses data from a survey of 710 Michigan farm families who actively sought assistance in transitioning from farm to off-farm employment during the period of 1986 to 1988. Respondents were divided into three transition groups depending on the degree to which they depend off-farm income. The three groups represent farm households that have completely transitioned out of agriculture, largely transitioned out, and those who are still primarily dependent on agriculture.

Results reveal that 33 percent have made a complete transition, 48 percent are part-time farming, and 19 percent are full-time farming. Those practicing part-time farming were found to have higher incomes than those who completely quit farming and those full-time farming.

Education, application of skills to off-farm employment, and the gender of household members seeking employment assistance were found to be significant factors in the ability to transition out of farming. Allocation of family labor was also found to be important--those who have made the greatest economic recovery most often had two family members working off-farm in 1990.

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CHAPTER I--INTRODUCTION

The number of U.S. family farms has declined steadily over the past several decades due to structural conditions in agriculture. Displacement from agriculture is continuing, as conditions in agricultural become increasingly unfavorable to family farms. As farm income becomes less and less viable, many are turning to off-farm income sources to replace farm earnings. Such transition from farming to off-farm occupations presents a tremendous challenge for American farm households.

This paper provides information to guide farm families who are attempting to transition from farming to other occupations. It presents results of a survey sent to financially distressed farm families in Michigan who attempted this transition in the 1980's. The paper divides respondents into three groups based on the degree to which they have transitioned out of agriculture and presents an examination of each group's employment, farm, job training and other adjustments since 1985.

1.1 STATEMENT OF THE PROBLEM

A critical problem facing farm households transitioning to off-farm employment is lack of information. Having depended on agriculture perhaps for a life-time, it is

difficult for displaced farmers to know how to make a transition to off-farm employment. Some may be overwhelmed by the variety of options they face, while others may feel that they have no options whatsoever. Faced with choices such as job training, farm-spouse employment, and part-time farming, it is difficult for displaced farmers to find the optimal course of action for themselves.

Detailed information on occupational and other choices for displaced farmers is lacking, and farm advisors can offer limited information on how to deal with the loss of a farm. An unclear understanding of what has and has not worked for transitioning farm families in the past denies valuable information to those now faced with this challenge.

1.2 PURPOSE OF THE PAPER

The purpose of this paper is to describe transition methods used by farm households in the past and thereby promote informed choices by transitioning farm families. It seeks to offer a detailed description of the employment alternatives available to dislocated farmers and an examination of the employment patterns and training activities used by displaced farmers in the past. The ultimate goal is to inform transitioning farm families of the realistic alternatives available to them.

This paper is also intended to provide guidelines to those who design public programs for farm families in economic

distress. This analysis should be particularly appropriate for those who are involved in the re-training of displaced farmers, since it focuses heavily on the employment changes and training experiences of families who have already attempted to transition.

A final purpose of this paper is to inform leaders of rural communities of the employment changes being made by financially distressed farm households. As farm families continue to enter the rural labor market they become more and more of a rural issue than a farm issue. It is important that information on off-farm employment be made available to rural leaders, so that appropriate community services may be designed to address farm family problems and needs.

1.3 IMPORTANCE

Changes in U.S. agriculture will continue to produce farm family exits for many years to come. A deeper understanding of farm family transition will be needed if these dislocated workers are to be redirected into productive pursuits. Although a substantial amount of information may exist about displaced workers in general, very little information pertains specifically to farmers. Since displaced farmers face a unique set of circumstances, general information on displaced workers has limited application to farmers. The discussion below highlights a few of these circumstances.

Displacement from agriculture is compounded by a variety of factors. Farming is closely tied with family, the home, and life-styles. A transition to off-farm employment is therefore disruptive to many facets of life. It also represents a break in tradition for many farmers, as well as abandonment of the independence that accompanies self-employment. These social and psychological considerations represent additional obstacles for workers displaced from agriculture and may be reflected in their decision-making throughout the transition process.

Another factor which makes displacement from agriculture unique is that the farm may be partially retained even though off-farm employment is the primary income source. In this case, ownership of land and other assets represents a possible resource for transitioning farmers. The farm is also a possible liability for farmers throughout the transition process, as farm debt is sometimes retained even after disposition of the business. The farm therefore represents a factor which does not apply to dislocated workers in other sectors.

An additional factor unique to agriculture is that dislocated farmers sometimes have the option of making an employment transition gradually or in stages. The displaced auto-worker or steel-mill employee who is laid-off is simply unemployed and cannot choose to work part-time at the auto

factory and part-time at another occupation. He or she therefore has a different set of options available from the farm operator who can choose to down-scale the business over different time periods. This raises issues about the effectiveness of using different combinations of farm and off-farm income when facing displacement from agriculture.

Given the special circumstances of displaced farmers, it is very important for policy makers, farm advisors, and farm families themselves to understand the process of farmer transitions. Options and resources which could facilitate successful transitions to off-farm employment may be overlooked if not properly understood. Given limited family resources and time, farm households need meaningful information if they are to weigh carefully their options for coping with financial distress.

1.3 DISCUSSION AND DEFINITION OF TERMS

A. Transition Out of Farming

As farm family "transition" is the central issue of this paper, a clear understanding of this term is essential to the analysis. At first glance, it might seem as though all ties must be severed with agriculture for a farm family to have successfully transitioned out. However, as will be discussed below, it is not necessary to exit agriculture completely to have successfully transitioned out.

Transition out of agriculture is an important objective to many financially distressed farm families not because they dislike farming, but because it is a means of restoring financial stability and financial well-being. When agriculture fails as a family's primary income source, off-farm income is the logical alternative. However, this does not preclude the possibility that farm income can continue to contribute to household earnings. The central issue in transition out of agriculture, then, is the degree of dependence on farm income.

Throughout this paper, farm family "transition" out of agriculture will describe a shift from dependence on farming as the primary source of household income to off-farm income as the primary source of household income. Under this definition, the farm may be retained in some form, but off-farm income is the dominant income source to the household. Any remaining farm earnings therefore represent a secondary, supplementary income source.

B. Off-Farm Employment

Off-farm employment is defined as work done off one's own farm or work for pay or profit done at home that is separate from the farm business. Off-farm employment therefore includes work done for pay on any farm other than one's own. Full-time off-farm employment will be defined as 35 hours or more of off-farm employment per week.

C. Employment Patterns

This paper will discuss general employment "patterns" used by farm families in transition. Employment patterns will be defined as the way in which households allocate family labor to farm and off-farm employment. For example, one pattern might be for wives to work off-farm, while their husbands work on the family farm. Another pattern might be for both survey respondents and their spouses to work off-farm. Retirement is another possible transition pattern. ----- 7

The discussion of employment patterns has been included in addition to that of occupational and other employment variables, because it adds another dimension to our understanding of the transition process. Detailed employment data in this study are available for only those household members who participated in the Dislocated Farmer Program. However, in reality, transition from farming usually involves entire households, due to the close ties between the family and the farm. By examining the employment changes made by all household members, we can better understand the way in which farm families cope with transition from agriculture and better inform others of the alternatives available to them.

D. Job Training Partnership Act's Dislocated Farmer Program

The sample for this study was drawn directly from the files of the Job Training Partnership Act's Displaced Farmer

Program (DFP) in Michigan. This program was started in 1986 in response to the crisis in agriculture and the financial hardship it had caused Michigan farm families. It was funded under Title III of the Job Training Partnership Act and administered by Michigan State University's Cooperative Extension Service. It served farm operators and their spouses from all of Michigan's 83 counties from 1986 to 1988, providing services to 710 people in all.

The goal of this program was to ease the transitions of dislocated farmers out of agriculture. It provided them with job training, job search assistance, career counselling and various other services to promote redirection into to off-farm employment. In order to qualify for this program, farm families had to be financially stressed, as measured by the following three criteria:

1. The applicant had to have a debt-to-asset ratio of 40 percent or higher; or
2. The applicant had to have filed for bankruptcy; or
3. The applicant had to have received a foreclosure notice.

Further, the applicant had to have contributed a significant amount of labor to the farm operation. Farm operators and farm spouses had to meet one or more of these criteria to be admitted into the program. (Applicants could also be employees of these farms, although this was not common.)

Four of the services provided by the DFP will be examined in this paper. It should be noted, however, that not all of these services were available in every area. Job Club, for example, was available in only a few areas.

A primary job training service offered was classroom training (CRT), in which community colleges and other educational facilities provided training. Participants in the program could enroll in CRT to either prepare for a specific occupation or to upgrade basic skills. On-the-job training (OJT) was also available to displaced farmers. Through OJT, recipients were employed either in private or public sectors, and their employers were partially compensated with JTPA funding.

Job search services were also available. Some participants received employment through job placement, where they were placed in un-subsidized employment. Other job search services included development of resume-writing and interviewing skills. "Job Clubs" were offered in some areas. Through Job Clubs, dislocated farmers could receive emotional support, information on labor markets, and job search assistance. Participants in Job Clubs worked in small groups to lend personal support and to share information.

Farm families interested in receiving assistance could enroll in this program at Cooperative Extension offices across Michigan. The use of the Cooperative Extension Service is unique in Michigan, as other states administer JTPA Title-III

programs under Service Delivery Areas not specifically designed for farmers. By offering services at Cooperative Extension Service offices, each participant could receive personalized guidance and avoid any stigma that might be attached with general social service agencies. (Bureau of National Affairs, Inc. 1988)

The assumption will be made throughout this paper that all participants in this program had the intention of transitioning out of agriculture. This assumption is based on the fact that their severe farm financial problems left them a questionable possibility of regaining a successful farm businesses. Second, since the objective of the Dislocated Farmer Program was to retrain farmers for employment in other occupations, it can be assumed that participation in this program reflected an intention to change occupations and thereby transition out of agriculture.

E. Part-Time Farming

Part-time farming is a term commonly used to describe farm households in which the farm is still in operation, but off-farm earnings contribute a substantial share to total household income. It is not unusual for farm operators to take some type of off-farm employment throughout the year, often part-time or seasonally, to augment total income or decrease income variability. However, this seasonal or part-time off-farm employment is generally timed to accommodate the

farming business and interferes minimally with operation of the farm. Part-time farming, on the other hand, occurs when off-farm earnings are the primary income source and the farm business accommodates off-farm employment. (Barlett, 1986) Conceptually, part-time farming is distinguished from full-time farming by the degree to which off-farm employment takes precedence over farm employment.

F. Respondent and Spouse

The term "respondent" in this paper will refer to that person who participated in the DFP and who, therefore, answered the questionnaire. A "spouse" is that person's husband or wife. Although in the literature on agriculture the term "spouse" often refers to farm wives, in this paper it is not related to gender. For discussions in which gender is a variable, the terms "husband" and "wife" will be employed.

1.4 OBJECTIVES

The overall objective of this paper is to inform transitioning farm families of the employment alternatives available to them by identifying transition patterns used by farm families in the past. In order to pursue this broad objective, five specific objectives will be examined:

1. To describe the off-farm employment of farm families who have attempted to transition out of agriculture, including their occupation, industry of employment, hours and wages;

2. To identify general employment patterns used by transitioning farm families, including farm operator employment, farm wife employment and combinations of the above;
3. To assess the effectiveness of job training and job search assistance in facilitating transition out of agriculture;
4. To assess the change in farm size and characteristics associated with different stages of transition;
5. To identify personal and household adjustments associated with different transition levels, including adjustment in use of time, changes in household spending, and use of community resources.

1.6 ORGANIZATION OF THE PAPER

Chapter 2 of this paper will provide background on farm financial difficulties and outline relevant research on off-farm employment and farmer transitions. A discussion of rural labor markets is also included to highlight the external constraints facing farmers in transition.

Chapter III introduces the questionnaire upon which this paper is based and describes the methods and procedures of the study.

Chapter IV describes the personal and economic characteristics of survey respondents and their families. It then breaks respondents into three groups based on the degree

to which they had transitioned out of agriculture in 1990. Employment, income, farm, and other characteristics of respondents in each of these three groups are then compared and contrasted. Finally, employment patterns and detailed employment information will be provided for each group. A discussion of how these findings relate to the above-stated objectives follows.

Chapter V summarizes the above findings and assesses their implications for transitioning farm families. It then draws conclusions about the merits of different transition patterns and assesses the affects of different patterns on household income and well-being. Finally, the paper presents recommendations for farm families and policy makers.

CHAPTER II--REVIEW OF LITERATURE

During the farm crisis of the mid-1980's a unique set of circumstances created a major downturn in American agriculture. Many farm families were forced to exit farming or to take off-farm employment to survive financially. Economic conditions have become somewhat more favorable to the farmer since this crisis, and American agriculture is now recovering. However, the problems of many farm families are far from over, because structural changes within agriculture are expected to continue to stress the American farmer for years to come.

2.1 THE FARM CRISIS

The farm crises is important to this study because of the financial hardship and increased farm exits it created. In the mid-1980's farmers across the nation experienced a devastating financial crisis in U.S. agriculture. Low prices for agricultural goods, falling exports, high interest rates, and other factors resulted in loan delinquencies and farm losses. These nation-wide farm problems were compounded in Michigan by severe flooding in 1986.

As farm businesses suffered from bankruptcy and foreclosure, it became apparent that farm financial difficulties were not limited to marginal farmers, but affected many farm businesses which had been quite profitable previous to the crisis. Those farmers most at risk of severe

financial difficulties younger, better educated and had expanded their operations significantly in the late 1970's. (Bultena 1986) Further, those who suffered the most commonly operated mid-sized "family" farms and depended on agriculture for a large share of household income.

2.2 STRUCTURAL CHANGE

Farm financial problems are not limited to the financial crisis of the 1980's, but are also tied to permanent changes within the structure of the agricultural sector. In order to understand farm family financial difficulties, one must understand the changes that U.S. agriculture is undergoing.

Farm numbers have been steadily declining in the U.S. throughout this century and the decline is expected to continue over the long run. As will be discussed in later sections, the greatest share of farm exits caused by structural change have been born by mid-sized family farms. (Stam 1991) Since it is expected that structural forces will continue to displace family farms far into the future, American agriculture is expected to face chronic problems of farmer displacement.

Two primary trends have been observed in U.S. agriculture over the past several decades due to structural change: decline in farm numbers and growth in farm size. Table 2.2a demonstrates the continuing decline in the total number of U.S. farms and the rise in number of large farms.

The table shows that large family farms and very large farms have grown both in absolute number and as a proportion of total farms. The trend is reversed for small family farms and rural residences, even though these farms still represent the largest farm group in terms of absolute numbers. The total number of U.S. farms decreased by over 72,000 in this eight-year period, implying a substantial increase in farm exits. In Michigan, this trend has resulted in a decline in farm numbers from 68,000 in 1977 to 60,000 in 1986. (Michigan Agricultural Experiment Station 1988, p. 11)

Table 2.2. Change in U.S. Farm Numbers Since 1974

<u>*FARM SIZE</u>	<u>NUMBER OF FARMS</u>		
	<u>1974</u>	<u>1978</u>	<u>1982</u>
VERY LARGE	16,698	22,674	27,800
LARGE FAMILY	35,195	48,416	58,668
FAMILY	526,773	573,849	548,663
SMALL FAMILY	621,076	598,383	507,832
RURAL RESIDENCE	1,112,033	1,012,151	1,096,337
ALL FARMS	2,311,375	2,255,493	2,239,300

Source: Reimund (1986, P.24)

*Farm Sizes in 1985 Real Sales:

Very Large: Sales over \$500,000
 Large Family: Sales of \$250,000-\$449,999
 Family: Sales of \$40,000-\$249,999
 Small Family: Sales of \$20,000-\$39,999
 Rural Residence: Sales of \$10,000 or less

As large farms grow in number and smaller farms decline, the opposite is true for share of income. Reimund found that large family farms and very large farms increased their share of farm sales by 7.3 percent and 3.6 percent, respectively, between 1974 and 1982. (1986, p. 26) The largest drop in share of farm sales was realized by small family farms, as their share of sales decreased by 5.4 percent during this five-year period. Although small family farms represented 22.7 percent of the total number of farms in 1982, they captured only 8.2 percent of wealth.

These figures illustrate the tendency of smaller U.S. farms to trail larger farms in income generation and highlights the continual financial stress on farm families. The numbers on farm exits demonstrate that this financial stress is forcing many farms to exit agriculture altogether. The primary point to be drawn from this discussion on structural change is that the decline of the family farm is not a passing phenomenon, but is here to stay. Farm family transition to off-farm employment, therefore, is an issue that will remain important well into the future.

2.3 OFF-FARM EMPLOYMENT

Given that structural change in agriculture is placing great financial pressure on American farmers, we would expect their need for off-farm income to grow. Indeed, many farm families are using off-farm income to supplement farm income.

Reliance on off-farm employment is an important option to financially stressed, because it provides an alternative to a complete exit out of agriculture.

A. Off-farm Income and Farm Size

Off-farm income has been growing steadily as a proportion of all agricultural income for decades. Table 2.3a demonstrates the growth in off-farm income by farm size between 1970 and 1988.

Table 2.3a. Growth In Off-Farm Income (In Millions)

<u>YEAR</u>	<u>SALES CLASS</u>		
	<u>LARGE FARMS</u>	<u>MEDIUM-SIZED FARMS</u>	<u>SMALL FARMS</u>
1970	413	656	16,548
1975	1,174	1,604	21,123
1980	2,882	3,118	28,694
1985	4,302	4,705	33,596
1988	5,809	4,696	41,084

Source: USDA (1988)

*Farm Sizes by Nominal Sales Class:

Large Farms: Sales over \$100,000
 Medium-Sized Farms: Sales of \$40,000-\$99,999
 Small Farms: Sales of \$5,000-\$39,999

As the data show, the overall dependence on off-farm income has been growing steadily. However, small farms, with sales under \$40,000, greatly outweigh farms in other size

categories in their dependence on off-farm income. In 1988, for example, small farmers earned more than seven times the off-farm income of large farmers. (Kraybill 1986) This trend holds true for farm size based on acreage too, as Kraybill found a negative relationship between off-farm income and acres farmed. Clearly, smaller farms, (which are generally the most financially distressed) are relying the most on off-farm income.

B. Educational Attainment and Off-farm Employment

Studies of farm populations agree that those who rely heavily on off-farm income have achieved higher educational levels than those who rely primarily on farm income. Wozniak and Scholl (1988a) found that farm operators and spouses who are highly educated are significantly more likely to work off-farm. A study conducted by Kraybill supported this finding. (Kraybill 1986) Apparently, higher educational attainment gives farmers greater options in finding off-farm employment and a higher wage incentive. In the present study, we would therefore expect to find more highly educated farmers to depend heavily on off-farm employment throughout their transition process.

C. Off-Farm Employment and the Farming Operation

Off-farm income is also related to the type of farm operated. Kraybill found a negative association between off-farm employment and the operation of dairy and livestock

enterprises. (Kraybill 1986) This is supported by a Michigan Agricultural Experiment Station study (1988) which found that dairy farmers depend on off-farm income much less than other types of farmers. Because dairy and livestock are labor-intensive enterprises, time constraints render it difficult to both work off-farm and manage these operations. Given this discussion, we would expect farmers in this study to have reduced or eliminated their dairy and livestock operations since the beginning of the transition process.

2.4. PART-TIME FARMING

While part-time farming *per se* is not a focus of this study, it is discussed here because it closely parallels the situation of many farmers in this study.

As discussed in Chapter 1, "part-time farming" is a term commonly used to describe farm households which not only have off-farm employment, but in which it is the dominant source of income. It usually involves full-time off-farm employment by either the farm operator or the farm spouse. Part-time farming is an important concept to this study, because many farm households have turned to part-time farming to facilitate transition out of agriculture. Another reason that part-time farming is important to this study is that a great deal is known about part-time farming and many of the concepts and principles apply to the experiences of transitioning farm families.

It should be remembered throughout this discussion, however, that part-time farming is not always tied to farmer transitions. Motives for part-time farming can vary. Barlett conducted a study of part-time farmers in Georgia and found that the majority of them (68 percent) practiced part-time farming not for economic motives, but for life-style considerations. (Barlett 297, 1986) Many claimed that they wanted to retain their farms because they gained personal satisfaction from farming, but that they did not farm full-time because they desired the income and financial security that accompany off-farm employment.

Many part-time farmers in Barlett's study, in fact, had negative net farm income and used their off-farm earnings to support the farm. Heffernan found that off-farm employment was highly correlated with farm survival. (Heffernan 1986b) This implies that off-farm employment is sometimes added to keep the farm in business, rather than to augment family income. Conversely, it appears that for many, the contribution of farm income to household earnings is not the prime motive for retaining the farm.

However, some farmers in Barlett's study did begin part-time farming not for lifestyle reasons, but to satisfy economic needs. Farmers in Barlett's study who began part-time farming in response to economic hardship were a minority (17 percent). This group is clearly separate from those who retain the farm for life-style reasons and are similar to the

subjects of the present study in that off-farm employment was obtained as part of the transition process.

Barlett called those who began part-time farming for financial, as opposed to life-style reasons, the "transitional farmers". They largely turned to off-farm income in response to financial stress, but chose to retain the farm in some form, rather than to completely exit agriculture. Those farmers in the present study who rely on off-farm employment for the majority of their income, but have also retained the farm, will therefore be referred to as "part-time farmers". However, it should be remembered that these are not typical part-time farmers, but are in the minority transitional group.

Many transitional part-time farmers work 35 or more hours per week off of the farm, resulting in tremendous demands on time resources. In 1990, a study of Michigan farm families found that most operators and spouses who worked off of the farm in response to economic distress did so full-time, rather than part-time. (Moser, 1990) In the present study, then, we would expect to find a majority of part-time farmers working full-time off-farm.

Part-time farms are generally smaller than full-time farms. In the context of the previous discussion of farm structure, part-time farmers are most often found in the smallest size categories. Between 1987 and 1990, over 87 percent of farmers who were in the smaller annual sales

classes of under \$40,000 were part-time farmers. (Stam, et al., 1991) Whether transitional part-time farmers follow this trend to smaller farms will be examined in this paper.

Part-time farming is highly prevalent in Michigan, where all survey participants lived in 1985. Approximately 75 percent of farms in Michigan are part-time farms, receiving the majority of their income from off-farm employment. (Michigan Agricultural Experiment Station 1988, p. 15) Michigan farmers depended on farming for only 35 percent of total household income in 1985, which is considerably less than farmers in other states (Michigan Agricultural Experiment Station 1988, p. 15). It appears, then, that part-time farming is a viable option for Michigan farmers in general. Whether this arrangement is profitable for transitional part-time farmers in Michigan will be assessed in later sections.

2.5 FARM EXITS AND TRANSITION OUT OF AGRICULTURE

Farmer transition out of agriculture has only recently captured the attention of researchers. Much of the literature focuses on the status of ex-farmers after their transitions from agriculture have taken place. The literature rarely explores the process of transition itself, and most of it concentrates on comparisons between full-time and ex-farmers.

The following section explores what the literature has revealed so far about farmer transitions to off-farm employment. It is important to note that literature on farmer transitions distinguishes between those who have quit farming

and those who have not. It does makes no comparisons with farm families that have made a *partial* transition by retaining the farm altered form or reduced size. In fact, many families have transitioned to part-time farming, rather than quitting agriculture altogether.

A. Employment

Moser and Vlasin (1990) completed a study of economic distress among farm families in Michigan. They found that about 29 percent planned to retire or had retired. Given that the average age of farmers in the U.S. is rising, retirement and early retirement are becoming important avenues out of agriculture for more and more displaced farm families. Moser and Vlasin also found that 34 percent had quit or planned to quit agriculture altogether. They found that 52 percent of farm operators and 49 percent of their spouses had taken off-farm employment in 1988 and that most who did so worked full-time.

Leistritz conducted a comparison of farmers who exited agriculture with those still farming. (Leistritz 1989) He found that 83 percent of those who quit were employed, 8 percent unemployed, and 3 percent retired. Those who had quit were concentrated in the agricultural, construction and manufacturing industries. This study also found that those who quit farming were younger and more highly educated than those who remained in agriculture.

These findings are contrary to those of Bentley, who found that those who quit farming in response to economic distress were less educated. (Bentley 1990) In his random sample, one-fifth had quit farming due to financial hardship. Of these, 53 percent of operators and 34 percent of their spouses were working off-farm. (This employment rate for operators is consistent with the findings of Moser and Vlasin, although the employment rate for spouses is about 15 percentage points lower.)

Bentley and Saupe conducted a study of farm exits and distinguished between those who left agriculture in response to economic distress and those who left voluntarily. (Saupe 1990) The majority of those who left voluntarily did so to retire. Those who were forced from agriculture were found to be older and less educated than those who remained in agriculture. For those who were working off-farm, 40 percent had production jobs, 40 percent had service jobs and 10 percent had executive positions. (Saupe 1990, p. 48) About one-fourth had received job training.

B. Farm Characteristics

Leistritz found that farmers who quit farming in response to economic stress had about the same farm size and characteristics before exiting as those currently farming have. (Leistritz 1989) For example, pre-exit farm size, measured by gross farm sales and number of enterprises

operated, were very similar to that of farmers currently in operation. The primary difference between those currently farming and those who left agriculture was found in net farm income. Net farm income before exiting was not only much lower for those forced out of agriculture, but was negative in many cases.

Studies have also been completed to assess the farm financial position and land ownership of families that quit agriculture. Bentley and Saupe conducted a study which found that about one-third of farmers who were forced to leave agriculture retained some farm debt. (Saupe and Bentley, 1990) Leistritz also found that retention of farm debt was common for former farmers. This same study found that fewer than half of households forced from farming retained ownership of any farmland and that net worth had declined, despite the addition of off-farm earnings.

C. Income

The literature does not agree on the income status of those who had quit agriculture. Leistritz found that household income was about the same for those who quit farming and those who did not. He also found that although those who quit had higher household incomes than they did while farming, their assets were considerable lower. Saupe found that family income was about \$12,000 higher for current farmers than for those who quit. However, this study found that income had

increased for these ex-farmers by about \$7,000 in the five-year period after leaving agriculture. Therefore, it appears from this study that the off-farm employment of former farmers has helped to restore family income, but not to the levels enjoyed by those still farming.

It is unclear from the literature whether a complete transition out of agriculture is preferable financially to remaining in farming. Studies agree, however, that those who made a complete transition have been able to increase household income above the levels experienced during financial crisis. (It should be remembered that any farm debts remaining may somewhat off-set these increases in household income.)

D. Community Resources

The literature on farm financial distress agrees that farmers generally do not rely on community resources to facilitate recovery from financial distress. Research conducted by the Employment and Training Administration, The Michigan Agricultural Experiment Station, and by Moser and Vlasin all support this assertion. However, 43 percent of those in the Leistriz study did use some community-provided job-search assistance.

E. Time Adjustments

Moser and Vlasin found that adjustments to financial distress, including the addition of off-farm income caused an

"enormous increase in time required by the operator and spouse." (Moser, 1990) As more and more time is allocated to off-farm employment, less time is available for household production, family responsibilities, and leisure. Little is known about the particular adjustments in time-use made by farm families in transition, however. Given the added demands on time caused by off-farm employment we would expect that those in the complete and high stages of transition to have made more adjustments in use of time resources than those who are primarily agriculture-dependent.

2.6 RURAL JOB OPPORTUNITIES

The changing structure of rural labor markets and lack of job opportunities in rural areas are major obstacles to farm families attempting to transition to off-farm employment. These obstacles are growing, as many industries which were once central to rural economies are on the decline. It is important to understand the changes occurring in rural labor markets, because to a large degree they dictate the choices available to transitioning farm families.

Employment in rural areas is largely concentrated in the manufacturing and construction industries. (Brown 1987) Rural manufacturing has superseded agriculture in terms of rural employment for decades. However, manufacturing, while still a major industry in rural areas, is on the decline. Similarly, natural resource-based industries are on the

decline, as demand for raw materials diminished and overseas competition increases.

While manufacturing, construction, natural resource-based industries are on the decline, service industries are on the rise. One recent study found that service jobs employed more rural workers than manufacturing. (Task Force on Agricultural and Community Vitality 1988). While the service sector offers some high-skilled jobs (such as finance), many (such as retail) are fairly low-skilled.

It is obvious that the industrial make-up of rural economies is changing and that rural workers must adjust to these changes. However, one trend remains the same: many jobs in rural areas are low-wage, blue-collar jobs. (Task Force On Agriculture and Community Vitality 1988) These jobs are also a strong source of rural underemployment and many are seasonal. (Lichter 1987) This means that rural workers may be unable to receive incomes commensurate with the skills they possess. From this discussion, it is obvious that rural labor markets facing displaced farmers often offer low-paying, unstable jobs.

However, diversity is great among rural economies. Employment can also be found in rural colleges, prisons, and mental institutions (Heffernan 1986b). Some rural areas are beginning to attract industrial parks, which often bring opportunities for high-skilled employment. In Michigan, tourism is also a source of rural employment in some areas.

For rural women, clerical and other service occupations are common sources of employment. With the growth of health-care institutions in rural areas, nursing and related occupations should remain an important source of employment for rural women.

2.7 JOB TRAINING FOR DISPLACED FARMERS

Displaced farmers face particular obstacles when it comes to finding off-farm employment. Due to a possible life-time of on-farm self-employment, farmers often lack job search skills and confidence. (Employment and Training Administration 1989) Lack of transferable job skills, however, was not found to be a significant factor in the ability of displaced farmers to find off-farm employment. (Employment and Training Administration 1989) Farmers gain mechanical, construction, and other skills on the farm which are highly transferrable to other industries.

Summaries of the results of JTPA programs for displaced farmers across the nation have been compiled. They reveal that job search assistance seemed to be the most in demand, as 85 percent of displaced farmers in these programs enrolled for this service. The employment rate for dislocated farmers in this study was 69 percent, but varied between 21 and 81 percents across different states. Most displaced farmers who went through these programs were employed in semi-skilled jobs and earned an average wage of \$6.61. (Employment and Training Administration, 1989)

CHAPTER III--PROCEDURES

3.1 THE QUESTIONNAIRE

Data for this survey were taken from a twenty-page questionnaire mailed to farm families throughout the state of Michigan. The survey contained questions pertaining to the background of the respondent, employment, income, farm status and other topics relevant to farm family transitions. Many questions contained in the survey asked respondents to compare information from 1985 with that of 1990 in an effort to isolate changes made in response to economic stress. (Survey questions relevant to the study are found in Appendix A.)

The survey used in this paper was conducted as part of a project entitled, "Economic, Social and Personal Well-Being of Michigan Farm Families in Transition." It was funded by the Michigan Agricultural Experiment Station at Michigan State University (MSU) and administered by the Departments of Family and Child Ecology and Agricultural Economics of MSU. Its purpose was to examine farm family transitions to off-farm employment, as well as to assess the impact of the Displaced Farmer Program.

Under this project, questionnaires were sent to all 710 participants of the Michigan Displaced Farmer Program (DFP). A second, similar questionnaire was sent to a random sample of Michigan farm households in order to assess their farm financial adjustments and for comparison with the participants of the DFP. Only data from the sample of DFP participants

will be used in this paper, however. In addition to employment, income, and other variables relevant to the present study, the questionnaire also posed questions related to stress, changes in family roles, and other issues of family well-being. These data are not presented addressed in this study, but are available for examination upon request.

3.2 DATA COLLECTION

Data were collected in the winter and spring of 1991. Mailing procedures were loosely based on the method devised by Don Dillman and were intended to maximize response rates. (Dillman 1978) In February, a postcard was sent to all prospective respondents explaining the purposes of the questionnaire and requesting their participation. In March, questionnaires were sent to the 710 participants of the Displaced Farmers program. A follow-up postcard and questionnaire were sent two weeks later to all non-respondents. When forwarding addresses were available, questionnaires were resent to those who had relocated. Responses were returned by survey participants in a postage-paid envelope, hand-coded as necessary, and data entry completed.

The response rate was 29 percent, with 205 of the 710 persons in this sample responding. It should be noted that 117 respondents (or 16 percent of the sampling frame) were unable to be located, having moved for financial or other

reasons. (After these people were eliminated from the sampling frame, the response rate became 35 percent.) Therefore, survey respondents who adjusted to financial stress by relocating to find employment were under-represented in this study. Also, a disproportionate number of responses were received from 3 of the 83 counties (Tuscola, Sanilac and Gratiot), possibly indicating higher accessibility to the services of the Displaced Farmer Program in those areas.

3.3 DATA ANALYSIS

The objective of data analysis in this paper is to identify patterns and relationships between employment and other variables and the degree to which farmers have transitioned out of agriculture. Since relatively little is known about the process of transition, this research is largely exploratory in nature. No assumptions of causality among variables will be made, since the purpose of this paper is simply to identify these relationships and patterns. Nor will the analysis attempt to reveal those variables which have the strongest impact on farmer transitions.

The following describes the data analysis to be presented in this paper. Categorical variables describing employment patterns, job training, farm characteristics, and resource adjustments were cross-tabulated with a variable measuring the

degree to which parties have transitioned out of agriculture. Where significant relationships were found, or where cross-tabulations indicate noteworthy results, they are presented in tables.

Chi-square tests were used to determine significant associations between transition status and all categorical variables. ANOVA tests were performed on discrete variables. For both cross-tabulations and ANOVA tests, a significance level of .10 was required for a relationship to be considered significant. For most significant relationships, the exact significance statistic is provided. The following discussion will outline some of the specific variables which have been generated in order to conduct data analysis.

A. Transition Groups

Respondents to the survey were divided into three groups based on the degree to which they have transitioned out of agriculture. Again, transition in this study is defined conceptually by the degree of dependence on off-farm income for the household.

In order to measure transition for each respondent, a ratio of the amount of net farm income to the amount of total household income was computed. Therefore, transition is measured by the following ratio:

$$\text{TRANSITION STAGE} = \frac{\text{net farm income in 1990}}{\text{household income in 1990}}$$

With this ratio computed for every survey participant, respondents were then placed into groups based on the above ratio.

Those who had a ratio of .33 or less were placed in the High Transition Group, indicating that the clear majority (67 percent) of their income in 1990 had been derived from non-farming sources. Those who had a ratio of .67 or more were placed in the Low Transition Group, since two-thirds or more of their household income had been derived from farming. Those who had a ratio of between .33 and .67 were not used in this survey, as only seven people fell into this category.

One final transition group is those who have completely exited farming and have, therefore, made a full transition out of agriculture. These people were placed into the Complete Transition group. Below is a summary of how these three groups were defined.

Complete Transition Group--Not Farming

High Transition Group--Less than 33% of Income from Farming

Low Transition Group--More than 67 % of Income from Farming

Difficulties were encountered in isolating those who have made a complete transition because of inconsistencies in survey responses. For example, some people indicated that they had left farming before the year 1990, yet had responded also that they had grown field crops in 1990. Therefore, three different variables were used to identify those who had

actually quit. To have "quit" farming in this study means that the respondent 1) indicated on the questionnaire a year that he or she had "left farming"; 2) operated no enterprises in 1990; and 3) had no net farm income in 1990. One-fifth of all respondents have completely transitioned out of agriculture by this definition.

Due to incomplete responses on the questionnaire, only 139 of the 205 respondents were able to be identified by transition level. Therefore, the analysis of farmer transition in this paper was based on the experience of 68 percent of the total number of responses received. An alternative method of identifying people by the number of hours they worked on and off of the farm was tried in an attempt to include more of the responses in this analysis. However, this resulted in an even smaller number of usable responses.

B. Description of Employment

Respondents were asked to provide an employment history for themselves dating from 1985. They were instructed to include their farm as well as their off-farm employment. From this history, data were collected for each of their past jobs since 1985.

Based on the job title, description of main duties and employer's name, the Dictionary of Occupational Titles (DOT) codes were used to code each present and past job. Since there are over 900 of these codes, they were collapsed into

nine categories, based on the skill-level and type required to perform the job. (Appendix C lists the exact occupational titles included in each occupational group and provides the number of respondents employed at each job. Only those titles which were found in the results were listed, so that, for example, since no one in the survey indicated that they were a dentist, this occupation is not listed under the appropriate category of "Professional Occupations".)

Since occupational choice is an important issue in this study, it is important to understand the criteria under which these titles were categorized. The following section describes each of the occupational groups to be used in this study.

Professional Occupations These are those occupations which generally require a four-year degree or highly-specialized training. Chemical engineering and elementary school teaching are examples of occupations placed in this category.

Business and Managerial Occupations These occupations generally require management skills or specialized training in business. Examples of occupations placed in this groups are accountants and real estate managers and officials.

Clerical/Administrative Occupations All office support occupations are included in the category. Examples of occupations found in this grouping are medical

receptionists and file clerks.

Sales Occupations This grouping includes all occupations in sales, ranging from insurance sales to sales clerks.

Service Jobs Service jobs in this grouping generally require little or no training, such as waiters and janitors. There is no overlap between these occupations and other service-based occupations, such as clerical occupations.

Agricultural Occupations This grouping includes all occupations which relate directly to the production of agricultural goods, such as farmers and farm labor. Agricultural occupations not resulting directly in production, such as sales of agricultural supplies, are not included in the category.

Manufacturing, Processing and Miscellaneous Production Occupations This is the largest category in terms of the number of occupational titles which it encompassed. It includes a number of production and repair jobs, from casting and molding to auto body workers.

C. Employment Patterns and Adjustments

The purpose of examining employment patterns is to determine what adjustments or changes were made within the family unit in order to transition out of agriculture. To fulfill this objective, several variables were created for each respondent.

First, a variable was generated based on who in the household was working in 1990, either the JTPA program participant (the respondent) or the participant's spouse. The four possible values for this variable included 1) respondent only working off-farm; 2) respondent and spouse working off-farm; 3) spouse only working off-farm; and 4) neither respondent or spouse working off-farm. Since this variable was based on the employment of the survey respondent, it reflects the effects of enrollment in the JTPA program on employment within the household.

A similar variable was created to reflect the role of gender in employment patterns. Possible results for this variable include 1) husband only working off-farm; 2) husband and wife working off-farm; 3) wife only working off-farm; and 4) neither husband nor wife working off-farm. This variable, like the one described above, was cross-tabulated with transition group to identify any association between gender-based employment pattern and ability to transition out of agriculture.

Retirement is another possible transition pattern. A variable to reflect retirement was generated for appropriate respondents in the survey. Respondents had been asked to indicate whether they were retired or not. However, response to this question was unrealistically low, as only one person indicated retirement. Therefore, to determine if a respondent was retired or not, age and lack of employment were used. Any

respondent who was not employed and who was over the age of 55 was assumed to have been retired.

Part-time and full-time off-farm employment were other employment patterns included in the analysis. Part-time employment was defined as employment in which the respondent worked fewer than 35 hours per week. Full-time employment was defined as employment for which a respondent worked 35 or more hours per week.

Respondents were asked to indicate how many hours they worked on the farm per year during each job that they have held since 1985. However, response to this question was very low. Consequently, it is not possible to describe in detail part-time and full-time farm employment based on labor hours.

It is important to assess the degree to which these employment patterns represent changes from the pre-transition period. This is because it is possible, for example, that a respondent's spouse was working off of the farm in 1985 before the effort to transition out of agriculture began. In this case the employment pattern of "spouse only employed off-farm" might not necessarily represent an effort to transition out of agriculture.

Therefore, variables were used to identify the changes in the allocation of family labor since 1985. Variables were generated to assess whether respondents and their spouses had either begun off-farm employment since 1985 or had ceased to work off-farm since 1985.

Similarly, change in the income of spouses were examined. Since detailed employment information was not available for spouses, income changes were used to determine changes in the spouse's employment since 1985. Also, respondents were asked if any member of their household, including children, siblings and parents had an increase of over \$10,000 from off-farm income since 1985. Responses to this question were used to identify any employment changes related to other household members.

Various miscellaneous indicators of employment adjustments and changes were also used. For example, the number of past jobs which respondents had held were used to explore patterns related to job changes.

D. Job Training and Skills

To assess the role of job training in transition out of agriculture, several variables were used. The number and type of services received through JTPA are described to explore any possible association between use of these services and ability to transition out of agriculture. For those who received job training, it was determined whether employment was obtained in the field or training and, if not, why. Finally, the application of several different farm skills to current employment were examined to determine if this had any bearing on the ability to find off-farm employment.

E. Farm Size and Characteristics

To identify any patterns of farm changes associated with different stages of transition, several farm variables were examined for the two groups that are still farming. Additionally, farm information from 1985 were compared for the three groups to identify any differences.

F. Personal and Household Adjustments

Because many resource adjustments may factor into the way farm families transition out of agriculture, analysis is provided on the personal and household-level adjustments which the three groups made. Adjustments include household spending adjustments, time adjustments, and use of community resources.

CHAPTER IV--FINDINGS AND ANALYSIS

4.1 PROFILE OF RESPONDENTS IN 1990

This section briefly describes characteristics of all 205 respondents to the survey. When discussing the personal characteristics of survey respondents, it should be remembered that sampling was not random. Rather, all respondents were severely financially distressed between 1986 and 1988 and had actively sought assistance in exiting agriculture.

The majority (61 percent) of the 205 survey respondents were male. Their average age was 43 years, which is slightly younger than the average age of the Michigan farm population. (Michigan Census of Agriculture 1989) This reflects the younger age typical of those most severely hit by the farm crisis. Almost 90 percent of the respondents were married, with nearly 43.5 percent having been married for over 10 years. The average family size was 3.6 persons. The data indicate that for those still farming, farming operations were slightly smaller than the 1990 average for Michigan of 200 acres. (MASS 1991, p. 5) Over 50 percent of those still farming reported field crops or dairy as their primary enterprise. Livestock was the second-most prevalent enterprise, operated by 15 percent of survey respondents.

The 1990 average gross farm sales for the 205 survey participants of \$79,251 is higher than the 1989 average for Michigan of \$66,251. However, net farm income is lower, as survey participants netted \$8365.50 and the 1989 average for

Michigan is \$13,902. A near majority of 46 percent were financially stressed as measured by a debt-to-asset ratio of over 40 percent, and 16.8 percent were highly stressed, with a debt-to-asset ratio over 70 percent.

4.2 CHARACTERISTICS OF TRANSITION GROUPS

The remaining portions of this paper pertains only to those 139 survey participants who were able to be classified into one of the three transitions groups. It therefore discusses 139 of the 205 respondents. It should be remembered that the Complete Transition Group is no longer farming, while the High Transition Group depends on farming for less than 33 percent of household income and the Low Transition Group depends on farming for 67 percent or more of family income. Table 4.2a below shows the distribution of respondents into the three transition groups described above.

Table 4.2a DISTRIBUTION OF TRANSITION GROUPS

	<u>Percentage</u>	<u>Number</u>
Complete Transition Group (Quit Farming)	33	46
High Transition Group (Part-Time Farming)	48	67
Low Transition Group (Full-Time Farming)	19	26

Transition Status in 1985

The data show that in 1985, all respondents were at roughly the same stage of transition. To measure 1985 transition status, the average percentage of household income derived from the farm for all 139 respondents was calculated, and determined to be 66 percent. This percentage indicates that on average these subjects depended on agriculture for about two-thirds of their income at the beginning of the transition process and were, therefore, full-time farming. To test whether members of the three transition groups were similar in their degree of dependence on farming in 1985, ANOVA tests were applied to the percentage of household income from farming. No statistical differences were found, and the significance statistic produced from the ANOVA analysis was .99, clearly insignificant. Therefore, the differences in dependency on farm income observed in 1990 were not yet existent in 1985, and we can conclude that transition status was roughly the same for all subjects.

A. Gender

There was a significant difference in gender between the three groups. Table 4.2b below presents the percentage of respondents in each group by gender. Chi-square analysis revealed that the variables of gender and transition level are significant at the .06 level.

Table 4.2b Transition Group and Gender

	<u>MALE</u>	<u>FEMALE</u>
Complete Transition Group	74%	26%
High Transition Group	64	36
Low Transition Group	46	54

B. Age

The mean age of respondents included in this analysis is 44.10. Chi-square analysis revealed no significant relationship between stage of transition and age of the respondent. ANOVA test confirmed this finding. However, as Table 4.2b demonstrates, Low Transition farmers are under-represented in the lowest age category.

Table 4.2c. Transition Group and Age

	<u>20-34</u> <u>YEARS</u>	<u>35-44</u> <u>YEARS</u>	<u>45-54</u> <u>YEARS</u>	<u>55-65</u> <u>YEARS</u>	<u>65 AND</u> <u>OVER</u>
Complete Trans.	24%	30%	26%	17%	2%
High Transition	19	31	33	12	4
Low Transition	4	54	19	23	0

C. Household Characteristics

The average age of respondents in this analysis was 44 years. The average family size was 3.6 people, and most respondents (89 percent) were married. Table 4.2d below shows the distribution of responses across five regions of Michigan. (See Appendix B for a list of counties found in each region.)

This table demonstrates the disproportionate number of responses found in the East Central region of Michigan.

Table 4.2d. Transition Group and Region of Residence

	<u>COMPLETE TRANSITION GROUP</u>	<u>HIGH TRANSITION GROUP</u>	<u>LOW TRANSITION GROUP</u>
Upper Peninsula	2%	6%	8%
North	0	6	0
East Central	69	52	24
West Central	18	11	8
South	11	24	12

No significant differences were found between the three groups in terms of marital status, family size, age of respondent, county of residence, or population of the nearest community where they could find employment. However, there was a difference at the .04 level in the number of years respondents had been married. Table 4.2e shows that those in the Complete Transition Group were significantly less likely to have been married for 11 to 25 years, and much more likely to have been married less than 10 year than the other groups.

Table 4.2e Transition Group and Years Married

	<u>0-10</u>	<u>11-25</u>	<u>% & U</u>
Complete Transition Group	35%	27%	38%
High Transition Group	16	53	31
Low Transition Group	12	42	46

A significant relationship was also revealed in terms of the ages of respondents' children. Respondents indicated whether or not they had children in the following age groups: under 5 years, 6 to 10 years, 11 to 17 years and over 18 years. No significant association between transition groups and age of children were found for children 10 years of age and younger or for children 18 year or older. However, Chi-square analysis show an association significant at the .05 level between stage of transition and families with children between the ages of 11 to 17.

The results reveal that those who had quit farming were least likely to have children in this group, members of the High Transition Group were more likely and those in the Low Transition Group were the most likely. Why low-transition families had proportionately more teenagers is unclear.

D. Educational Achievement

Significant associations were revealed between transition and educational achievement at the .05 level. Table 4.2f shows the percentage of respondents in each group who have achieved each level of education. No clear pattern emerges from the data, although high-transition farmers were the most likely to have had some college education and complete-transition farmers were the least.

Table 4.2f Transition Group and Educational Attainment

	<u>SOME H.S.</u>	<u>H.S DEGREE</u>	<u>SOME COLLEGE OR DEGREE</u>	<u>SOME POST-GRAD OR DEGREE</u>
Complete Trans.	0%	70%	28%	2%
High Trans.	3	37	55	5
Low Trans.	5	52	43	0

E. Income and Household Resources

Table 4.2g shows income levels for the three transition groups in 1990. Chi-square analysis revealed that there is a significant association between transition status and income levels at the .02 level. The table demonstrates that while full-time farmers clearly enjoyed the least household income in 1990, for the other two groups, income was more variable. Comparison of mean 1990 income for the transition groups shows that high-transition farmers had the highest income, with an average of \$27,873 in 1990 income, while Complete Transition respondents had \$23,333, and low-transition farmers had only \$16,923.

Table 4.2g Transition Group and 1990 Income Level

	<u>\$0 TO \$14,999</u>	<u>\$15,000 TO 29,999</u>	<u>\$30,000 TO 44,999</u>	<u>\$45,000 AND ABOVE</u>
Complete Trans.	31%	45%	17%	7%
High Trans.	25	34	21	19
Low Trans.	50	46	4	0

Income data for 1985 also reveal significant differences in household income. The mean household income for each of the three transition groups is given below. High-transition farmers had the highest household income in 1985, low-transition farmers the least.

	<u>MEAN HOUSEHOLD INCOME IN 1985</u>	<u>MEAN HOUSEHOLD INCOME IN 1990</u>
Complete Trans.	\$14,167	\$23,333
High Transition	\$18,561	\$27,873
Low Transition	\$13,461	\$16,923

Income has increased an average of \$8,500 since 1985 for the respondents. Changes in household income between 1985 and 1990 are presented in Table 4.2h. Chi-square analysis revealed a significant relationship between change in household income and 1990 transition status at the .03 level. It can be seen from the table that the Complete Transition group enjoyed the largest increases in household income, while full-time farmers enjoyed the least. This is confirmed by comparing mean changes in household income.

Table 4.2h. Transition Group and Change in Household Income

	<u>NO CHANGE IN INCOME</u>	<u>HOUSEHOLD INCOME DECREASED</u>	<u>INCOME UP LESS THAN \$10,000</u>	<u>INCOME UP MORE THAN \$10,000</u>
Complete Trans.	21%	8%	42%	29%
High Trans.	17	17	30	36
Low Trans.	46	8	35	11

AVERAGE INCREASE IN
HOUSEHOLD INCOME SINCE 1985

Complete Trans.	\$9,868
High Trans.	\$9,697
Low Trans.	\$3,461

4.3 EMPLOYMENT CHARACTERISTICS OF RESPONDENTS

Of the 139 farmers included in this analysis, 73 percent reported that they had worked off-farm in 1990, 55 percent full-time. For High Transition farmers, 61 percent had worked on the farm and 77 percent of the Low Transition farmers reported that they worked on-farm. Overall, 76 percent were employed either on or off of the farm, 16 percent were retired, and 7 percent were not employed or did not supply employment data. About 60 percent of respondents provided information to indicate that they had been employed in 1985, either on or off of the farm. (It should be noted that it was possible for a member of a full-time farming household to not have worked on-farm, if a spouse or other household member was employed on the farm.)

This section will describe the current employment of the three transition groups. (Employment patterns will be discussed in the next section.) These findings are based on the employment history provided by respondents. Approximately 75 percent of all respondents in these groups provided employment information for 1990 and early 1991.

A. Occupation

No significant association was found between transition group and occupation at the .10 level. Table 4.3b shows the percent of respondents in each group who worked in the seven occupational groups. The numbers in parenthesis indicate the number of people in each category. (Appendix C lists the specific occupations under each occupational grouping. The reader should refer to this list to gain an appreciation of the wide variety of jobs held by survey participants.)

Table 4.3a Transition Group and Current/Most Recent Occupation

	<u>OCCUPATIONAL CODES¹</u>						
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Complete Trans.	5% (2)	12% (6)	9% (4)	7% (3)	7% (3)	10% (5)	50% (23)
High Transition	8% (5)	11% (7)	14% (9)	5% (2)	14% (9)	13% (9)	35% (23)
Low Transition	8% (3)	8% (3)	0% (0)	4% (2)	15% (4)	38% (10)	27% (7)

¹The Occupational codes represent the following:

- 1=Professional Occupations
 - 2=Business and Managerial Occupations
 - 3=Clerical/Administrative Occupations
 - 4=Sales Occupations
 - 5=Service Occupations
 - 6=Agricultural Occupations
 - 7=Manufacturing, Processing and Miscellaneous Production Occupations
-

B. Industry of Employment

Respondents were asked to indicate the industry of their current employment (or most recent employment, if unemployed). A significant association was revealed between transition group and industry of employment at the .06 level. Not surprisingly, agriculture was the industry most common to the Low Transition group. Table 4.3b shows the percentages of respondents in each group working in six different industries. (The number in parentheses indicates the number of people who responded that they worked in each industry.)

Table 4.3b Transition Group and Industry of Employment

	<u>INDUSTRY CODES¹</u>					
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
Complete Trans.	24% (11)	11% (6)	22% (10)	8% (4)	8% (4)	27% (12)
High Transition	7% (5)	11% (7)	25% (17)	14% (9)	5% (3)	37% (25)
Low Transition	16% (4)	0% (0)	47% (12)	0% (0)	0% (0)	32% (21)

¹The industry codes above represent the following:

- 1=Manufacturing
 - 2=Retail and Wholesale Trade
 - 3=Agriculture
 - 4=Communications and Other Public Utilities
 - 5=Finance, Insurance and Real Estate
 - 6=Service, Including Government
-

C. Hourly Wage

Chi-square analysis revealed no significant differences between the groups in terms of wage categories presented below. The average hourly wage for all respondents was \$8.38 per hour. ANOVA tests confirmed that hourly wages were roughly the same for all three groups. Table 4.2c shows the distribution of wages for these groups across three different wage levels, as well as the average hourly wage for each group.

Table 4.3c Transition Group and Hourly Wage

	<u>\$0 to</u> <u>\$4.99</u>	<u>\$5.00</u> <u>TO \$9.99</u>	<u>\$10.00</u> <u>AND ABOVE</u>	<u>MEAN</u> <u>WAGE</u>
Complete Trans.	16%	61%	23%	\$7.96
High Transition	12	55	32	\$8.69
Low Transition	13	37	50	\$8.42

Interesting differences emerged between the hourly wages of male and female respondents. A ratio of wages earned by female respondents to wages of male respondents was created and found to be .71. That women earned an hourly wage only 71 percent of that of males adds importance to our discussion of employment patterns and income, below. Since low-transition households rely on women wage-earners more than the other two groups, this wage differential help to explain their lower incomes.

D. Part-Time and Full-Time Employment

Table 4.3d shows the results of cross-tabulation between transition status and hours worked per week in respondents' current or most recent employment. Part-time employment means that respondents worked less than 35 hour per week and full-time indicates 35 or more hours. No significant differences were found between the groups in terms of full- and part-time employment.

Table 4.3d Transition Group and Full- or Part-time Employment

	<u>PART-TIME</u>	<u>FULL-TIME</u>
Complete Transition	18%	82%
High Transition	25	75
Low Transition	46	54

E. Duration of Job

Significant associations were revealed between transition status and the length of time respondents had held their current employment, up to six years. It should be noted, however, that employment on the family farm is included in this analysis. Since the low level transition group is largely still working on the family farm, where they may have worked for years, they are much more apt to indicate that they had worked up to six years at their current job.

It is also interesting to note that the Complete Transition Groups was most likely to indicate that they had worked only one year or less at their current job. Table 4.3f

presents the results of this analysis, where "1" means that the respondent's current job has been held for one year or less, "2" means that it has been held two years or less, etc.

Table 4.3e Transition Group and Duration of Job

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
Complete Trans.	35%	14%	31%	7%	3%	7%
High Transition	16	25	18	18	9	14
Low Transition	23	15	8	8	0	46

4.4 EMPLOYMENT PATTERNS AND ADJUSTMENTS

At the time of the survey, 75 percent of respondents and 63 percent of their spouses worked off-farm. This section describes the distribution of off-farm employment within the family unit. It also examines retirement and other findings related to employment within the family.

A. Patterns of Respondent and Spouse Employment

As Table 4.4a presents results from the cross-tabulation between this pattern and transition group. Chi-square analysis revealed a highly significant relationship (.004) between transition status and patterns of respondent and spouse employment.

The table shows that both the respondent and spouse were working off-farm in 1990 most often for the High Transition Group. For the Low Transition Group, the strongest pattern

was for the respondent to work off-farm, while the respondent's spouse did not. For those who quit farming, it was most common for both the respondent and spouse to work off-farm, although a notable pattern of respondents alone working off-farm was also observed.

Table 4.4a Transition Group and Pattern of Respondent/Spouse Employment

	<u>RESPONDENT ONLY WORKS OFF-FARM</u>	<u>RESPONDENT AND SPOUSE WORK OFF-FARM</u>	<u>SPOUSE ONLY OFF-FARM</u>	<u>NEITHER WORK OFF- FARM</u>
Complete Trans.	35%	41%	17%	7
High Transition	19	61	15	4
Low Transition	42	23	11	23

B. Patterns of Husband and Wife Employment

About 70 percent of husbands and 69 percent of wives in this analysis were working off-farm in 1990. Table 4.4b shows the results of the cross-tabulation between transition and this pattern of employment. A highly significant association (.00007) between transition status and pattern of husband and wife employment was found.

The data show that both husbands and wives were off-farm most often for the Complete and High Transition Groups. For farming-dependent households, it was most common for neither husband nor wife to work off-farm. It is interesting to note that for almost one-third of these families, the wife worked off-farm, while the husband did not. Given the lower earnings typical of female wage-earners, this may be significant in explaining the lower household income for this group.

Table 4.4b Transition Group and Pattern of Husband and Wife Employment

	HUSBAND ONLY WORKS <u>OFF-FARM</u>	HUSBAND AND WIFE WORK OFF-FARM	WIFE ONLY WORKS <u>OFF-FARM</u>	<u>NEITHER</u> WORK OFF- FARM
Complete Trans.	26%	56%	9%	9%
High Transition	16	58	21	4
Low Transition	19	15	31	35

Overall, the labor force participation rate for women in this study (including both female respondents and wives of male respondents) was 69. percent. Table 4.4c shows the percentage of households in each group where a female household member was working either on or off-farm in 1990. The association between stage of transition and female labor force participation rates were found to be significant at the .01 level. (It should be remembered that these rates include farm, as well as off-farm employment, and will therefore be

higher than indicated by the pattern of husband and wife employment.)

Table 4.4c. Transition Group and Labor Force
Participation Rate of Women

	<u>PERCENT</u>
Complete Transition	65
High Transition	81
Low Transition	50

C. Employment Changes

1. Changes in Respondent Employment:

No significant differences were found in the number of past jobs held by respondents since 1985, indicating that job changes were not more frequent for one group than the other.

Tests were performed to identify any relationships between transition and changes in off-farm employment status of respondents. Due to this, a variable was created which showed, for example, whether respondents were not working off-farm in 1985, but were in 1990. Conversely, this variable determined if respondents had been off-farm in 1985, but were not in 1990. No significant association was found between this variable and transition status.

2. Changes in Spouse Employment:

A similar variable was created to determine changes in the off-farm employment status of spouses. Again, no significant association was found between transition group and

change in spouse employment.

However, significant differences at the .03 level were found when the proportion of 1990 household income contributed by spouses' off-farm employment was examined. When compared by transition group, it can be seen that in high-transition households, spouses contributed the highest proportion to total household income, while for low-transition households, spouses contributed the least. Table 4.4e presents the mean amount of income from off-farm employment contributed by spouses in 1990.

Table 4.4d Transition Group and Percentage of Household
Income from Spouse Off-Farm Earnings

<u>PERCENTAGE</u>	
Complete Transition	42%
High Transition	52
Low Transition	41

In order to more fully understand the spouse's role in transition, a variable was created to measure whether spouse income had decreased, increased, or remained the same since 1985. However, no significant differences were found between the three groups for this variable. Similarly, no significant differences were found when respondents were asked if any other household members had experienced an increase of \$10,000 or more in off-farm income since 1985.

D. Commuting Distance and Relocation to Find Employment

No significant association was found at the .10 level between transition status and miles commuted to work. Neither was it found for relocation to other communities to find employment. It must be remembered, however, that difficulties were encountered in locating those people who had moved. Therefore, these people are under-represented in this paper.

E. Dual-Job Holders

Only nine percent of respondents in this analysis held more than one job in 1990. No significant association was found between those who had held dual jobs and transition group. Six, thirteen, and four percent of the Complete, High, and Low Transition groups, respectively, held two jobs concurrently.

4.5 JOB-SKILL DEVELOPMENT

Overall, 75 percent of the respondents (105 people) in these three groups had either classroom or on-the-job training through the Displaced Farmer Program. However, no significant relationship was found between transition status and having had DFP job training. Table 4.5a shows the results of a cross-tabulation between transition stage and use of DFP job training.

Table 4.5a Transition Group and Job Training

	<u>HAD DFP JOB TRAINING SINCE 1985</u>
Complete Transition	78%
High Transition	76%
Low Transition	69%

A. Services Offered Through JTPA

Differences between these groups did emerge, however, when the type of job training used was taken into consideration. The distribution of services used by transition groups is given below in Table 4.5b. It can be seen that classroom training was the most commonly-used service for the High Transition group, while job search assistance was the most commonly-used service for those who quit farming. Job Club was used most by those who are primarily agriculture-dependent.

Table 4.5b. Transition Groups and JTPA Services

	<u>CLASSROOM TRAINING</u>	<u>ON-THE-JOB TRAINING</u>	<u>JOB CLUB</u>	<u>JOB SEARCH ASSISTANCE</u>
Complete Transition	50%	39%	37%	54%
High Transition	58	28	22	49
Low Transition	42	38	50	46

Those who had received job training were asked if they were currently employed in the field for which they trained.

No significant differences were found between the three groups in terms of job training. Similarly, when asked to indicate the reason why they were not employed in the field for which they trained, no significant differences were found.

B. Farm Skills Used On The Job

Respondents were asked to indicate which farm skills they used in their current job. Significant relationships emerged between transition status and the use of those farm skills which are listed in Table 4.5c. The table shows the percentage of respondents in each groups that have used each skill. It is interesting to note that the those who have made a complete transition are over represented in the use of machinery-related skills, while those in the High Transition group were more likely to have used farm management and financial skills.

Table 4.5c Transition Group and Farm Skills Used Job

	<u>SKILLS USED¹</u>						
	1	2	3	4	5	6	7
Complete Trans.	57%	52%	24%	2%	20%	43%	17%
High Transition	37	34	37	16	34	58	4
Low Transition	23	19	8	15	8	35	4

¹Skills:

- 1=Operating Equipment and/or Machinery
- 2=Mechanical/Repair Skills
- 3=Managerial Skills
- 4=Computer Skills
- 5=Financial Skills
- 6=Problem-Solving Skills
- 7=Gardening Skills

C. Community Services and Job-Skill Development

Respondents were asked to indicate whether they had used any of several different services offered in their community and to rate to what degree these services were helpful. For those services which relate to job-skill development, significant associations were found only between transition status and use of the Michigan Employment Security Commission's (MESC's) Job Service. Overall, job search services were the most commonly-used community service. Table 4.5c shows the results of the cross-tabulation between transition status and use of this service.

Table 4.5c. Transition Group and Use of MESC's Job Service

	<u>NO</u> <u>HELP</u>	<u>SOME</u> <u>HELP</u>	<u>LOTS</u> <u>OF HELP</u>	<u>DID NOT</u> <u>USE</u>
Complete Transition	21%	47%	16%	13%
High Transition	54	19	7	20
Low Transition	26	21	10	42

It appears from the data that those completely out of agriculture found these services the most helpful, while the high-transition group found them the least helpful. Over 40 percent of the low-transition farmers did not use MESC services at all.

4.6 FARM SIZE AND CHARACTERISTICS

A. 1985 Characteristics

It is important to understand the size and characteristics of the respondent' farms in the pre-transition period in order to appreciate any changes that have occurred. This section will briefly discuss the 1985 farm characteristics of respondents.

In 1985, the farmers in this sample farmed an average of 495 acres and owned an average of 163 acres. Average gross sales were \$132,630 in 1985 and average net farm income was \$3,582. Tests of significance for the above variables found no association with 1990 transition status. From this, we can conclude that these 1985 farm characteristics were not different for the three groups in 1985.

Respondents were asked which enterprise generated the majority of sales on their farms in 1985. Growing field crops was the primary farming activity for all three transition groups. The results of the cross-tabulation between transition group and 1985 primary enterprise are given in Table 4.6a below.

Table 4.6a. Transition Group and 1985 Primary Enterprise

	<u>NONE</u>	<u>FIELD CROPS</u>	<u>DAIRY & LIVESTOCK</u>	<u>FRUITS & VEGETABLES</u>	<u>POULTRY & OTHER</u>
Complete Trans.	3%	34%	52%	10%	0
High Transition	2	42	42	7	7
Low Transition	8	42	37	12	0

B. 1990 Farm Characteristics

Since those in the Complete Transition group are no longer farming, the following section will apply only to those in the High and Low Transition groups. Results of ANOVA tests reveal differences between these two groups for acres farmed in 1990, but not for acres owned. In 1990, the High Transition farmers farmed an average of 157 acres and owned an average of 132 acres. Those in the low transition group farmed an average of 466 acres and owned an average of 154.

As with acreage, significant differences were found between these farmers in terms of gross farm sales. On average, high-transition farmers grossed \$42,224 in 1990, while low-transition farmers grossed an average of \$127,747.

Additionally, a variable was created to measure change in gross sales since 1985. For high-transition farmers, sales decreased an average of \$64,711, while for full-time farmers it decreased an average of only \$8,023. Since sales class is often used to measure farm size, this data indicates a larger down-scaling for former than for the latter. Clearly, in terms of both acres farmed and gross sales, high-transition farmers now operate much smaller farms than full-time farmers.

Interesting differences were also found for net farm income. On average, High Transition farmers faced losses in net farm income of \$2,556, while low-transition farmers averaged positive net sales of \$35,469. In 1990, debt-to-asset ratios were again found to be independent of transition

status. Fifty percent of low-transition farmers and 38 percent of high-transition farmers had were financially stressed, as indicated by debt-to-asset ratios of over 40 percent. Almost one-fourth of full-time farmers were highly stressed in 1990, having a debt-to-asset ratio of over 70 percent. Both 1985 and 1990 debt-to-asset ratios are given in table 4.6b, below.

Table 4.6b. Transitions Group and Debt-to-Asset (D/A) Ratio

	<u>1985 D/A RATIO</u>			
	<u>0 to 10%</u>	<u>11 to 40%</u>	<u>41 to 70%</u>	<u>Over 70%</u>
Complete Trans.	0	24	48	29
High Trans.	6	14	42	38
Low Trans.	0	27	32	41

	<u>1990 D/A RATIO</u>			
	<u>0 to 10%</u>	<u>11 to 40%</u>	<u>41 to 70%</u>	<u>Over 70%</u>
High Trans.	30	32	30	8
Low Trans.	18	32	27	23

In 1990, field crops were again the primary enterprise operated for those still farming. While enterprise and transition were not found to be significantly associated, about 27 percent fewer farmers in the High Transition group had dairy and/or livestock operations in 1990 than in 1985. Further, a variable was created to measure change in the number of enterprises operated since 1985. High transition farmers dropped an average of .43 enterprises, while low-transition farmers dropped an average of .16 enterprises.

C. Changes in the Farming Operation

Respondents were asked to indicate which reduction adjustments in the farm they had made in response to financial stress since 1985. No significant differences were found between the number of adjustments the two groups had made. However, differences in the types of adjustments made by part- and full-time farmers were found for eight different reduction adjustments. Table 4.6c shows the percent of respondents in each group who had made these eight adjustments.

Table 4.6c. Transition Group and Reduction Adjustments

	<u>HIGH TRANSITION FARMERS</u>	<u>LOW TRANSITION FARMERS</u>
Postponed Machinery/Equipment Purchases	58%	81%
Reduced Fertilizer/Chemical Applications	43	85
Re-negotiated Loans to Reduce Interest Rates	46	58
Reduced Household Living Draw From the Farm	48	50
Changed Enterprises Operated	36	15
Re-negotiated Rental Agreements To Reduce Rent	16	27
Purchased Crop Insurance	16	35
Reduced Amount of Hired Labor	36	46

Respondents were also asked which farm expansion adjustments they had made to financial stress since 1985. Expansion adjustments were found to be associated with transition status for only three adjustments. Table 4.6d

presents the percentage of respondents in the low- and high-transition groups who made these adjustments.

Table 4.6d. Transition Group and Expansion Adjustments

	<u>HIGH TRANSITION FARMERS</u>	<u>LOW TRANSITION FARMERS</u>
Purchased Equipment/Machinery	5%	19%
Bought Land	3	11
Rented Additional Land	13	23

4.7 PERSONAL AND HOUSEHOLD ADJUSTMENTS

A. Adjustments in Household Spending

Respondents were asked what adjustments their households had made since 1985 in response to financial need. Table 4.7a presents the five most commonly-used adjustments with the percentage of respondents in each group that made each adjustment. No significant association was found between transition status and use of any of these five financial adjustments. However, it is interesting to note that high-transition farmers were under-represented for three of the five adjustments, which is consistent with the finding that this group was better off financially than the other two.

Table 4.7a. Transition Group & Household Financial Adjustments

	<u>COMPLETE TRANS. GROUP</u>	<u>HIGH TRANS. GROUP</u>	<u>LOW TRANS. GROUP</u>
Postponed Major Household Purchases	91%	90%	85%
Cut Back on Social Activities and Entertainment	96	78	85
Changes Food Shopping and Eating Habits	89	78	77
Family Member(s) Took Off-Farm Job	72	81	77
Used Savings to Meet Living Expenses	76	78	73

B. Adjustments in Use of Time

Respondents were given a list of ways in which they could cope with a lack of time and were asked to indicate how often they had done them since 1985. No significant relationships were found between either number or type of time adjustments and transition group.

C. Use of Community Resources

Respondents rated the usefulness of the resources offered in their community which they had used since 1985. Chi-square analysis revealed no significant relationships between transition and use of community resources, with the exception of unemployment compensation. About 40 percent of respondents

in the Complete Transition group used unemployment compensation, while 28 percent and 19 percent of those in the High and Low Transition groups used it, respectively. This makes sense given that the complete-transition group was most likely to become eligible for unemployment compensation by taking full-time off-farm employment. (Use of employment-related community services is discussed in 4.5c on job training.)

4.8 DISCUSSION

The data analysis in the previous section used chi-square analysis and tests of variance to identify relationships between the transition status of respondents and various personal, employment, job training, and farm variables. This section will evaluate these findings and present an analysis of the overall transition experiences of each group.

The findings presented in the previous section revealed that all three groups were similar in terms of farming size and characteristics in 1985, which marks the beginning of the transition period. More importantly, they were very similar in 1985 in terms of their dependence on farm income. Since dependence on farm income constitutes the definition of transition in this study, we can conclude that all of the respondents were at a similar stage of transition in 1985.

Somehow, between the five year period of 1985 and 1990, these previously-similar farmers diverged into three distinct

groups. We have seen that of the 139 farmers who sought assistance in transitioning out of agriculture in the mid-1980's, 33 percent made a complete transition out of agriculture and are no longer farming. Almost half (48 percent) of the 139 farmers have become part-time farmers and rely primarily on off-farm income to support themselves. A minority (19 percent) of those who attempted to transition out are still heavily farming-dependent.

Based on the previous data analysis, this section will attempt to sort-out those variables which are related to the current transition status of these three groups.

4.9 PERSONAL CHARACTERISTICS AND TRANSITION

A. Demographic Characteristics

An interesting pattern emerges when gender is considered in this analysis. Referring to the findings on gender, it is clear that as transition level increased from low to complete transition, the percentage of male respondents in the study steadily increased and the percentage of females decreased. This association between gender and transition is significant to the study, because survey respondents in the study were those household members who actively sought assistance in transitioning out of agriculture. From this it can be concluded that the gender of family members seeking relocation assistance is related to success in transitioning.

B. Educational Attainment and Transition

A relationship was found between educational achievement and transition out of farming. The higher educational status of the high-transition farmers agrees with the literature, which told us that educational achievement and reliance on off-farm income are positively related. It also may help to explain the fact that High Transition farmers saw the most success in income generation. As the most highly educated group, they enjoyed the highest hourly wages and household income of the three groups.

4.10. EMPLOYMENT CHARACTERISTICS AND TRANSITION

A. The Complete Transition Group

Almost one-fifth of respondents in the Complete Transition Group had retired as of 1990 and 76 percent were employed. Those who were employed were commonly found in either the manufacturing, agricultural or service industries. This differs somewhat from Saupé's findings that 40 percent of those who quit agriculture worked in service industries. Exactly half of these respondents held manufacturing occupations, or so-called "blue-collar" jobs, which may, in part, be explained by the fact that over half of respondents in this group were male. This group earned an hourly wage slightly lower than the other two groups and were employed full-time the most among the three groups.

B. The High Transition Group

Eighty-one percent of farmers in this group indicated that they were employed in 1990 and 13 percent were retired. They were most commonly employed in the service industry. Although manufacturing occupations were the most common for high-transition farmers, their occupations were much more dispersed across the seven occupational groupings than were the other two groups. They earned the highest hourly wage of all three groups and were largely employed full-time. For about 65 percent of these families, it was the male who sought employment assistance and worked off-farm.

C. The Low Transition Group

Over one-fifth (23 percent) of low-transition farmers were retired in 1990, as calculated by crossing age with unemployment. Not surprisingly, of the sixty-five percent who indicated that they were employed in 1990, almost half were employed in the agricultural industry. Agriculture was also the most common occupation for this group, but over one-fourth were employed in manufacturing occupations. Low-transition farmers were under-represented in the "white-collar" occupations, and almost half worked only part-time. It

appears that low-wage, low-skilled, part-time, employment is a common pattern for this group.

It should be remembered that transition status has been determined at the household level for this study. Respondents in this farming-dependent group many not work on the farm themselves, but their spouses may. Therefore, the reader should not be surprised by the fact that only 38 percent were employed in agricultural occupations.

4.11. EMPLOYMENT PATTERNS AND TRANSITION

The way in which households allocate family labor to off-farm employment was found to be highly related to ability to transition out of agriculture. The findings presented employment patterns which were based on the labor allocation of the JTPA program participants and their spouses. (It should be remembered that about 60 percent of respondents are male, about 40 percent female.) Patterns of husband and wife employment, as well as employment changes, spouse income, and other employment patterns were also explored. This section will summarize the employment patterns and adjustments made by each transition group in this analysis.

A. **The Complete Transition Group**

For those who have made a complete exit from agriculture, the most common allocation of respondent and spouse employment was for both to work off-farm. However, a strong pattern of off-farm employment by respondents alone was also observed, with 35 percent falling into this category. When gender is

added to the analysis, a strong pattern of simultaneous husband and wife off-farm employment was observed. For households in which only one spouse was working, it was the husband for over one-fourth of the Complete Transition Group.

Remembering from the discussion on gender that most survey participants in this group are male, it appears that the dominant employment pattern for those who are completely out of agriculture is for the male to seek job re-training assistance and to work off-farm. Further, remembering that over 80 percent of respondents who have completely transitioned out of agriculture work full-time, a pattern of full-time, off-farm employment for male household members emerges.

Although the male is most somewhat more likely to seek job training and search assistance, about half of the wives also work off-farm. This is supported by the fact that, on average, spouses in this study contributed about 40 percent of household income in 1990. In general, female household members contribute less than half of household income due to wage differentials between men and women. Since most spouses in the Complete Transition group are female, we would expect their contribution to less than 50 percent. Therefore, that females contributed almost half of household income in 1990 implies that wives' off-farm employment is an important variable to complete transitions out of agriculture.

B. The High-Transition Group

The dominant employment pattern for this group was for both respondents and spouses to work off-farm. The pattern of respondents alone working off-farm was not nearly as common for this group as it was for those who have made a complete transition. Similarly, the most common gender-based employment pattern for high-transition farmers was for both husbands and wives to be employed off-farm simultaneously. However, for over one-fifth of this group wives alone were employed off of the farm.

From the data, we can conclude that this group commonly used combinations of not only farm and off-farm income, but also combinations of husband and wife employment. Remembering that on average spouses in high-transition households contribute over half of total household income, it appears that this group relied more heavily on spouse income than those who completely transitioned out of agriculture.

C. The Low Transition Group

While the two groups discussed above were somewhat similar in terms of employment patterns, those in the low-transition group differed markedly. While combinations of respondent and spouse off-farm employment were most common for the first two groups, they were used by a minority of agriculture-dependent respondents. The most common employment pattern for this group was for respondents alone to work off-farm. The most common allocation for husband and wife

employment was for wives only to work off-farm, as almost one-third of low-transition farmers used this pattern.

It should be remembered that female respondents were a majority for this group only. A pattern emerges for this group of female household members seeking job training or search assistance and working off-farm. Further, low-transition farmers were least likely to work full-time. Therefore, for farming-dependent households in which some family member worked off-farm, a pattern of part-time, farm-wife employment. This, in combination with the lower wages typically received by female workers, may help explain the lower incomes of full-time farmers.

4.12. JOB-SKILL DEVELOPMENT AND TRANSITION

A majority of respondents in all three groups had some type of job training through JTPA's Displaced Farmer Program since 1985. Job training was received by about the same proportion of those who have completely transitioned out and those who have largely transitioned out. A slightly lower percentage of the low-transition farmers received job training through the DFP. This section will discuss relationships between the type of job training used and transition out of farming.

A. The Complete Transition Group

About half of those who have made a complete transition received classroom training and slightly over half received job-search assistance through the DFP. Additionally, 84

percent received job-search assistance through MESC's Job Service and were most likely among the three groups to have rated these services as helpful.

Those who quit farming received job training in about equal proportions to part-time farmers. It appears that the relationship between job training and transition out of agriculture is not different for these groups. Rather, the difference seems to be found in the use of job search assistance and the way in which skills were applied to the job. Complete Transition respondents were highly over-represented as having applied skills in operating and repairing equipment to their current employment and that one-half of these respondents were employed in manufacturing occupations, where these skills would likely be applied. It could be concluded from this that transition was achieved for many of these subjects by effective use of job search assistance and application of skills already gained on the farm.

B. The High Transition Group

A similar pattern emerges for high-transition farmers. Job search assistance and classroom training were received through the JTPA program about half of these farmers. They were slightly under-represented as having received on-the-job training and Job Club, however.

Relationships again emerge when one looks at the farm skills this group applied to their present employment. This

group was the most likely to have responded that they applied managerial skills, computer skills, financial skills, and problem-solving skills gained on the farm to their present off-farm employment. A third of these farmers are employed in either professional, business and managerial, or clerical occupations.

Also, over two-thirds indicated that they employed skills in operation or repair of machinery. The data shows that just almost half of these farmers are employed in manufacturing or agricultural occupations, where these skills would most likely be applied. Again, it appears that the way in which this group applied the skills they possessed was a strong determinant in gaining off-farm employment.

C. The Low Transition Group

Low-transition farmers were the most likely to have received Job Club services from JTPA. However, they were the least likely to have had JTPA classroom training and job search assistance. They were highly under-represented in the use of MESC' Job Service. This group used fewer farm skills on their off-farm jobs than the other two groups. Low-transition farmers were the least likely to have used managerial, financial and problem-solving skills on the farm. Finally, this group was the least likely of the three to have had any job training at all, as only 69 percent received job training through JTPA, as opposed to 78 percent for complete-transition farmers and 76 percent for high-transition farmers.

It appears from these findings that low-transition farmers did not utilize job training and job search services as intensively as the Complete and High Transition groups. One possible explanation for this is that off-farm employment was seen by these farmers as a means to keep the farm in operation, rather than as an end in itself. Another possible explanation is that they simply do not have the same ability for tapping job development resources as the other two groups. However, it is beyond the scope of this paper to draw any conclusions about the true reasons for the lower job training and search utilization rates among these farmers.

4.13. FARM CHARACTERISTICS AND TRANSITION

Relationships between the farm size and characteristics in 1985 and transition out of agriculture are not supported by the data. As we saw earlier, all three groups were very similar in terms of acreage owned and operated, gross farm sales and enterprise at the beginning of the transition period. However, farm characteristics diverged since 1985 for those groups still farming. This section discusses the patterns of farm changes found for these two groups.

Relationships were consistently found between farm size and transition out of agriculture for the two groups that are still farming. Farm size, as measured by acres farmed, was three times larger in 1990 for full-time farmers than for

part-time farmers. Similarly, farm size as measured by gross farm sales was three times larger for full-time farmers.

This finding is supported by the literature on part-time farming. As was discussed in Chapter 2, farm households that rely primarily on off-farm income commonly operate smaller farms. Data analysis also revealed that gross farm sales decreased by an average of \$64,711 for the high-transition farmers since 1985, which was about eight times the decrease full-time farmers experienced. Although both groups now operate smaller farms than in 1985, the findings point to a much larger down-sizing by high-transition farmers.

Another interesting relationship emerges between net farm income and transition. In 1990, full-time farmers earned an average net farm income of over \$35,000, while part-time farmers averaged a loss of about \$2,000. This is inconsistent with the premise that combinations of farm and off-farm income have facilitated transition out of farming for high-transition farmers. One possible explanation for this is that the farm has been retained for life-style, rather than economic reasons. This explanation receives support from Barlett, who found that it is not uncommon for part-time farms to experience losses. (Barlett 1986).

Another possible explanation is that these farms have been retained for economic reasons, but that they have not fully recovered from the devastation of the farm crisis. If this is the case, it is unclear why part-time farms have not

recovered, while the full-time farms in this study have.

Changes in enterprise were not significantly associated with transition. However, the data show that over one-fourth of the high-transition farmers in this study who had dairy or livestock operations in 1985 no longer had them in 1990. This is consistent with the literature on off-farm employment and enterprise mix, which reveals that off-farm income and dairy farming are negatively related. The data also showed that while both groups of farmers operated fewer enterprises in 1990 than in 1985, the high-transition group had dropped more than twice as many enterprises as full-time farmers had.

Reviewing the reduction adjustments given in Table 4.6d, it can be seen that more low-transition farmers made reductions than high-transition farmers for all but one adjustment. For low-transition farmers, these findings indicate a pattern of down-sizing the farming operation, but not to the point where the farm dependence on off-farm income would become necessary.

In light of the previous discussion on the smaller rate of job training for low transition farmers, and the fact that this group is most likely to work only part-time off of the farm, the question arises if the goal of these farmers was to remain in agriculture, rather than to transition out of it. The fact that farm wives for this group worked off-farm proportionately more than farm wives alone in other transition groups supports this assertion, as farm operators would remain

free to work on the farm. Further support for this comes from the greater number of expansion adjustments made in the farming operation since 1985.

4.14. PERSONAL AND HOUSEHOLD ADJUSTMENTS

A. Financial Adjustments

Adjustments in household spending since 1985 were observed for all three groups and were found to be independent of transition group. It appears that these three groups adjusted household spending in response to economic hardship in roughly the same ways.

It is interesting to note, however, that a higher percentage of high-transition respondents indicated that a family member had taken off-farm income in response to economic difficulty than those who have quit farming. One possible explanation for this would be that those who quit farming were already working off-farm before the transition process began. However, without information about their pre-1985 employment status, this remains conjecture.

B. Adjustments in Use of Time

As discussed in the findings, no association was found between the number or type of time-use adjustments and transition. Although we might expect part-time farmers to have made more adjustments in time-use, this did not prove to be true. This group adjusted in roughly the same way as the

others, despite the increased time demands from simultaneous off-farm and farm employment.

C. Use of Community Resources

It appears as though respondents used community resources in roughly the same way throughout the transition period, with the exception of unemployment compensation and MESC job services. Therefore, any relationship between intensive use of community resources and ability to transition out of agriculture is not supported by this study. This finding is also consistent with the literature on farm family financial stress.

The data do not indicate any strong patterns between personal or household adjustments and transition out of agriculture. Rather, employment decisions, job training, and changes in the farm seem to be the deciding factors in a household's ability to transition.

G. INCOME AND TRANSITION

This discussion on farmer transition would not be complete without a comparison of financial well-being between the three transition groups. It should be remembered that High Transition farmers enjoyed the highest hourly wage and household income in 1990 of the three groups by a considerable margin. They earned about \$4,500 more on average than complete-transition respondents and about \$11,000 more than full-time farmers. (See page 50 for average 1990 income.)

High transition farmers also realized fairly large increases in household income since 1985. Their average increase of \$9,697 closely followed that of the Complete Transition group. Why this group, with its higher resource availability in 1985 (measured by household income) and higher educational levels, was not able to increase household income more than the other two groups is unclear.

Those who made a complete exit from agriculture did not fare as well as those who turned to part-time farming in terms of total household income. However, this group realized the highest average increase in household income, with an average increase of \$9,868. This amount is higher than that found in Saupe's study of \$7000, and indicates that this group has been fairly successful in restoring income since beginning of the transition period.

Full-time farmers fared far worse than the other two groups in terms of household income. As has been shown, this group earned almost \$11,000 less than part-time farmers and \$6,400 less than those who quit farming. They also enjoyed much smaller increases in household income since 1985, and almost half had no change in household income at all. Based on these findings, we can conclude that a complete exit from farming in response to economic distress is preferable to full-time farming in response to economic distress. This is contrary to Saupe's finding that those who quit farming earned less than those who remained full-time in farming.

CHAPTER V--SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY OF PRECEDING CHAPTERS

This paper introduced the concept of farmer transitions as a process in which farm families move from dependence on agriculture to dependence on off-farm income. Chapter I discussed the unique problems of displaced farmers and pointed to a strong need for more information on this topic. The overall objective of revealing patterns and relationships between different groups of transition farmers was presented.

In the second chapter, a summary of literature on off-farm employment was presented to highlight some of the changes we might expect transitioning farmers to make. Many inconsistencies and gaps in the literature about farm family transitions were revealed.

The third chapter outlined the procedures for the study and presented methods for measuring the stage of transition farm families were in. It also outlined how many of the variables used in the analysis were generated.

Chapter IV presented findings and discussed several variables found to be significantly related to transition. In particular, patterns related to allocation of family labor were found to be strongly related to the transition level that respondents had achieved. The discussion presented in Chapter IV summarized employment, farm, and job training patterns used by survey participants.

5.2 CONCLUSIONS

We have seen in this paper that of 139 farmers who sought assistance in transitioning out of agriculture in the mid-1980's, only 46 percent were able to make a total transition. However, it was demonstrated that a total transition is not necessarily the best option for displaced farmers. Observing the differences in income restoration between the three groups, it appears that High Transition farmers have done almost as well as those completely out of agriculture. When considering total household income, they have done better.

We saw that the full-time farmers in this study by far earned the least household income and had the smallest increases in household income. The findings disagreed with previous studies, which found full-time farmers fared as well or better than those who quit farming.

From this analysis, it can be concluded that a complete break from agriculture is not necessarily the optimal choice for displaced farmers. As was demonstrated, combining farm and off-farm income was a successful strategy for many subjects of this study. This is an important finding for farmers and researchers, alike. For farmers, it provides an additional alternative when facing displacement from agriculture. Rather than an "either/or" decision to farm or not, the farmer may need to decide "how much" to farm.

It is also important to understand that part-time farming is the most complex alternative available to farm families and likely the most demanding of time resources. Management of both the farm operation and household time resources must change under this arrangement. That the most profitable alternative available to displaced farmers is also the most difficult to manage may prohibit some families from considering this option. Farm families may need assistance with in using this alternative, and more information is needed to fully understand the changes that occur when families transition to part-time farming.

That combinations of farm and off-farm income is a viable alternative to complete farm exits is important for researchers, too. As was shown in Chapter 2, the literature on displaced farmers generally compares those "farming" and those "not farming". This structure is clearly not sufficient to a complete understanding of farmer transitions. Differences in income, farm characteristics, and employment emerge when those who farm part-time are included in the comparison.

The importance of studying transition in degrees is underscored by the fact that part-time farmers resemble ex-farmers *more closely* than they do those currently farming full-time. Comparisons in which full- and part-time farmers are grouped together as one entity are therefore inadequate for understanding the complexities of farm family transitions.

Given the three levels of transition discussed above, what is the optimal choice for displaced farmers: full, partial, or no transition? The answer depends on the particular situation of farming households. Part-time farmers enjoy the security and income stability associated with off-farm employment. They also have an additional source of income and assets from the farm. Further, they are still able to work on their farms, which is an important personal consideration for many farmers.

Despite these benefits to retaining the farms, time considerations must be taken into account. When family labor is allocated to both on- and off-farm employment, time resources are likely to be strained. As Barlett discussed, it is a personal decision whether or not potential income from farming and life-style considerations warrant these extra time demands. (Barlett 1986) It should also be remembered that some part-time farms realized net losses, meaning that retention of the farm can drain household income. Each farm household should assess their own willingness to risk these losses.

There is also a trade-off to remaining in full-time farming. The lower income of full-time farmers has already been discussed. In addition to income trade-offs, these farmers are still vulnerable to the price instabilities and other uncertainties inherent in farming. While some may have recovered from the farm crisis of the 1980's, recovery from

such shocks in the future many not be possible. The high debt-to-asset ratios of this group indicates that many are still struggling and have not recovered at all. Given that structural changes tend to force exits of primarily mid-sized family farms, these farmers will remain at risk.

The complete transition group falls between the other two in terms of total 1990 household income. However, they have seen increases in income since 1985, and have been able to restore income to a larger degree than part-time farmers have.

While they do not have the potential additional income from farm earnings, many still have two income sources, as both respondents and spouses commonly work off-farm. Further, they are no longer vulnerable to downswings in the agricultural economy and the income variability typical in farming. Overall, this option appears best suited for those who cannot or do not wish to retain the farm, but who are willing to allocate family resources to off-farm employment.

In the above discussion we saw that transition strategies involve not only economic, but lifestyle considerations. Once a decision has been made about the optimal level of transition, the question still remains of how to achieve that level. The following discussion draws conclusions about the transition methods used by the subjects of this study.

The high transition group relied heavily on job search services through both JTPA and MESC Job Service to find off-farm employment. Many also used classroom and on-the-job

training. Many applied management-related skills learned on the farm in their off-farm jobs. Spouse income was sometimes used by this group to augment income. In summary, the dominant pattern for this group seemed to be application of existing skills to off-farm employment by heavily utilizing job search assistance.

High-transition farmers relied heavily on classroom training and job search assistance to find off-farm employment. Many took full-time, off-farm employment and supplemented that income with that of their spouse. High-transition farmers had two family members working off-farm more commonly than any other group.

In terms of the farm, this group greatly reduced size in terms of both acreage and gross sales. Part-time farmers often abandoned their most labor-intensive enterprises and decreased the total number of enterprises they operated. These changes were likely necessary to make the farm manageable while working off-farm.

While full-time farmers have not made a transition out of agriculture, they still made adjustments which allowed some to at least partially recover from the farm crisis. This group often reduced farm size in terms of gross sales and made many reduction adjustments in the farm. Farmers in this groups were the most likely to have added acreage to their farms in response to economic distress.

For one-third of full-time farmers, wives sought job

training assistance and, alone, worked off-farm. Presumably, this left the operator free to manage the farm business. Low-transition farmers also worked part-time much more than the other two groups. This, in combination with the fact that women typically earn lower wages than men may help to explain their lower household incomes.

Full-time farmers also utilized public job training and search services much less than the other two groups. In summary, it might be concluded that this group primarily invested household resources into maintaining the farm operation rather than into obtaining viable off-farm employment.

5.3 POLICY RECOMMENDATIONS

While off-farm employment opportunities largely depend on conditions in the rural economy, there is much policy-makers can do to facilitate transition out of farming. Rural development efforts which create job opportunities in agricultural areas is one obvious role that policy makers could play in farm family transitions.

Job training and search services should be designed to meet the special needs of displaced farmers. As we saw in this study, farmers generally do not seek assistance from community programs in times of need. Offering services through familiar avenues, such as through the Cooperative Extension Service, could be a very effective way to provide job search and training services to dislocated farmers.

Further, programs that upgrade or expand skills used on the farm could be very effective in facilitating transition. As we saw throughout this paper, farmers tend to find jobs in which they can use the skills which they already know and would likely be receptive to this type of training.

Finally, federal, state and local programs need to recognize the problems of displaced farmers. While the United States has comprehensive programs to promote productivity in agriculture, there are no comprehensive policies that address the problems of dislocated farmers. Farmer transitions need to be recognized as a legitimate concern of agricultural policy and appropriate programs need to be designed to ease these transitions.

5.4 RECOMMENDATIONS FOR FURTHER STUDY

Farmer transitions will continue to pervade agriculture throughout the foreseeable future. More information is needed to understand why those who sought transition assistance, but are still farming, have not transitioned out of agriculture. Was training ~~in~~ an effort to transition out of farming or was it used as a way to keep the farm in operation? If these farmers had actually intended to quit farming, why did they fail? More information is needed to understand the motives of these farmers.

One further recommendation would be to refine our understanding of farmer transition by searching for further patterns *within* each of these three groups. For example, for

about one-fifth of high-transition families, the wife alone took off-farm employment. This raises the question of whether these families used job training and other resources differently from high-transition families in which both spouses worked off-farm. While this type of refinement is beyond the scope of the present paper, it could deepen our understanding of the options available to transitioning farm families.

5.5 CONCLUSION

It is hoped that the experiences of the farmers in this study may be used to assist other families facing tough decisions in hard times. While it has not provided "all of the answers" for transitioning farm families, it has revealed several important patterns. Even though local economic conditions, skills and education will vary from place to place, the findings should generalize fairly well to most farm families. Allocation of family labor is a fairly universal concept, as is the application of farm skills and changes in farm size. It also demonstrated that examining transition in stages, as opposed to simply whether or not families are still farming or not, open a wealth of new issues and answers.

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FARM FAMILY ADJUSTMENT PROJECT

JTPA PROGRAM

PARTICIPANT SURVEY

As you answer the questions, keep in mind the following definitions:

1. OFF-FARM EMPLOYMENT is work done off your own farm or work for pay or profit done at home that is separate from your farming.

Examples of off-farm employment are:

- operating a trucking business from your home
- working on a neighbor's farm
- working at a retail store or factory

2. HOUSEHOLD is a group of people who reside in the same dwelling and share resources.

We thank you for your help.

Please return in enclosed envelope by _____.

Michigan Agricultural Experiment Station
Project Number 3801
Winter 1991

Family and Child Ecology
and Agricultural Economics
Michigan State University
East Lansing, MI 48824

A. Background and Employment

Some background information about you and your household members will help us in our study.

1. Your Sex *(Check one).*

1. Male _____ 2. Female _____

2. Age at last birthday

a. You _____ b. Spouse _____

3. What is your present marital status? *(Check only one.)*

- ___ 1. First marriage
- ___ 2. Separated
- ___ 3. Widowed
- ___ 4. Divorced
- ___ 5. Remarried
- ___ 6. Never married

4. Number of years in present marital status _____ years

5a. Do you have

No Yes

Some high school education?

High school degree?

1 year college?

2 years college?

3 years college?

4 year college degree?

Post graduate courses?

Advanced college degree?

6. How many children in the following age categories live in your household? *(Write in the number).*

		Children	
		<u>Male</u>	<u>Female</u>
a.	Less than 1 year	_____	_____
b.	1 - 5 years	_____	_____
c.	6 - 10 years	_____	_____
d.	11 - 15 years	_____	_____
e.	16 - 17 years	_____	_____
f.	18 & over	_____	_____

7. Total number of people living in your household _____

8. What is the approximate population of the nearest community where you might be able to find off-farm employment? *(Check one).*

	<u>a. In 1990</u>	<u>b. In 1985</u>
Under 1,000	___ 1	___ 1
1,000 - 2,499	___ 2	___ 2
2,500 - 9,999	___ 3	___ 3
10,000 - 49,999	___ 4	___ 4
50,000 & over	___ 5	___ 5

INCOME INFORMATION

9. In 1990, what were your sources of household income? (Check all that apply).

- a. Your off-farm wages and salaries
- b. Your spouse's off-farm wages and salaries
- c. Other household members' off-farm wages and salaries
- d. Money from farm income used for household (farm "draw")
- e. Off farm self-employment - yours
- f. Off farm self-employment - your spouse's
- g. Off farm self-employment - other household members
- h. Interest from savings
- i. Rental income
- j. Other investment income
- k. Unemployment Compensation
- l. Workers' Compensation
- m. Social Security
- n. Welfare (AFDC, SSI, GA, Food Stamps)
- o. Pensions
- p. Loans
- q. Selling of assets
- r. Gifts from family
- s. Other (please specify) _____

10. In 1990, what was your household's total gross income from all of the sources listed in Question 13? Include only your "draw" from the farm, not total farm sales. (Check only one).

- | | | |
|--|--|--|
| <input type="checkbox"/> \$0-\$4,999 | <input type="checkbox"/> \$30,000-34,999 | <input type="checkbox"/> \$60,000-\$64,999 |
| <input type="checkbox"/> \$5,000-\$9,999 | <input type="checkbox"/> \$35,000-39,999 | <input type="checkbox"/> \$65,000-\$69,999 |
| <input type="checkbox"/> \$10,000-14,999 | <input type="checkbox"/> \$40,000-44,999 | <input type="checkbox"/> \$70,000-\$74,999 |
| <input type="checkbox"/> \$15,000-19,999 | <input type="checkbox"/> \$45,000-49,999 | <input type="checkbox"/> \$75,000-\$79,999 |
| <input type="checkbox"/> \$20,000-24,999 | <input type="checkbox"/> \$50,000-54,999 | <input type="checkbox"/> \$80,000 or above |
| <input type="checkbox"/> \$25,000-29,999 | <input type="checkbox"/> \$55,000-59,999 | |

11. **In 1985**, what was your household's total gross income from all of the sources listed in Question 13? Include only your "draw" from the farm, not total farm sales. (Check only one).

<input type="checkbox"/> \$0-\$4,999	<input type="checkbox"/> \$30,000-34,999	<input type="checkbox"/> \$60,000-\$64,999
<input type="checkbox"/> \$5,000-\$9,999	<input type="checkbox"/> \$35,000-39,999	<input type="checkbox"/> \$65,000-\$69,999
<input type="checkbox"/> \$10,000-14,999	<input type="checkbox"/> \$40,000-44,999	<input type="checkbox"/> \$70,000-\$74,999
<input type="checkbox"/> \$15,000-19,999	<input type="checkbox"/> \$45,000-49,999	<input type="checkbox"/> \$75,000-\$79,999
<input type="checkbox"/> \$20,000-24,999	<input type="checkbox"/> \$50,000-54,999	<input type="checkbox"/> \$80,000 or above
<input type="checkbox"/> \$25,000-29,999	<input type="checkbox"/> \$55,000-59,999	

12. What was your spouse's off-farm income **in 1990**? (Check only one).

<input type="checkbox"/> \$0-\$4,999	<input type="checkbox"/> \$30,000-34,999	<input type="checkbox"/> \$60,000-\$64,999
<input type="checkbox"/> \$5,000-\$9,999	<input type="checkbox"/> \$35,000-39,999	<input type="checkbox"/> \$65,000-\$69,999
<input type="checkbox"/> \$10,000-14,999	<input type="checkbox"/> \$40,000-44,999	<input type="checkbox"/> \$70,000-\$74,999
<input type="checkbox"/> \$15,000-19,999	<input type="checkbox"/> \$45,000-49,999	<input type="checkbox"/> \$75,000-\$79,999
<input type="checkbox"/> \$20,000-24,999	<input type="checkbox"/> \$50,000-54,999	<input type="checkbox"/> \$80,000 or above
<input type="checkbox"/> \$25,000-29,999	<input type="checkbox"/> \$55,000-59,999	

13. What was your spouse's off-farm income **in 1985**? (Check only one).

<input type="checkbox"/> \$0-\$4,999	<input type="checkbox"/> \$30,000-34,999	<input type="checkbox"/> \$60,000-\$64,999
<input type="checkbox"/> \$5,000-\$9,999	<input type="checkbox"/> \$35,000-39,999	<input type="checkbox"/> \$65,000-\$69,999
<input type="checkbox"/> \$10,000-14,999	<input type="checkbox"/> \$40,000-44,999	<input type="checkbox"/> \$70,000-\$74,999
<input type="checkbox"/> \$15,000-19,999	<input type="checkbox"/> \$45,000-49,999	<input type="checkbox"/> \$75,000-\$79,999
<input type="checkbox"/> \$20,000-24,999	<input type="checkbox"/> \$50,000-54,999	<input type="checkbox"/> \$80,000 or above
<input type="checkbox"/> \$25,000-29,999	<input type="checkbox"/> \$55,000-59,999	

14. If any members of your household other than yourself have had an increase of \$10,000 or more in their annual off-farm income since 1985, please indicate who. (Check all that apply).

- | | |
|--------------------------------------|---|
| <input type="checkbox"/> a. No one | <input type="checkbox"/> e. Brother or Sister |
| <input type="checkbox"/> b. Spouse | <input type="checkbox"/> f. Parent |
| <input type="checkbox"/> c. Son | <input type="checkbox"/> g. Other |
| <input type="checkbox"/> d. Daughter | |

15. Which of the following skills used on the farm are a help to you in any of your current off-farm jobs? (Check all that apply).

- a. No off-farm job
- b. Operating machinery and/or equipment
- c. Construction skills
- d. Mechanical/repair skills
- e. Managerial skills (including personnel management)
- f. Computer skills
- g. Financial skills
- h. Bookkeeping skills
- i. Problem-solving/decision-making skills
- j. Animal husbandry skills
- k. Food preservation
- l. Raising crops
- m. Raising fruits
- n. Gardening
- o. Other _____

16. If you do not work at an off-farm job, what are the most important reasons? (Check all that apply).

- a. No time for off-farm job
- b. No need for off-farm income
- c. Retired
- d. My health
- e. Health of other household members
- f. Lack of adequate child care
- g. My children are too young
- h. My children don't want me to work
- i. I don't want to work at the present time
- j. I need more job training or skills
- k. I don't have transportation
- l. It's too far from the farm to other job possibilities
- m. There are no job opportunities for me
- n. I am looking for work

17. Consider the resources available in your community. Which of the programs have you or your household members used from 1985 to the present? (Circle the appropriate response.)

		<i>YES, I used this program & found it to be:</i>			<i>NO, I did not use this program because:</i>			
		<u>No Help</u>	<u>Some Help</u>	<u>Lots of Help</u>	<u>Not Needed</u>	<u>Did not Qualify</u>	<u>Not Available</u>	<u>Did Not Know About</u>
a.	MSU Cooperative Extension Service	1	2	3	4	5	6	7
b.	Day care/preschoolers	1	2	3	4	5	6	7
c.	After school day care	1	2	3	4	5	6	7

d.	Michigan Employment Security Commission (Job Service)	1	2	3	4	5	6	7
e.	Help with job search, resume, interviewing other than JTPA or MESC	1	2	3	4	5	6	7
f.	Career counseling other than JTPA or MESC	1	2	3	4	5	6	7

g.	Public Health Programs	1	2	3	4	5	6	7
h.	Mental Health Programs	1	2	3	4	5	6	7
i.	Other family/personal counseling	1	2	3	4	5	6	7
j.	Financial counseling	1	2	3	4	5	6	7
k.	Public school adult courses	1	2	3	4	5	6	7
l.	Community college courses	1	2	3	4	5	6	7

m.	Unemployment Compensation	1	2	3	4	5	6	7
n.	Heating assistance	1	2	3	4	5	6	7
o.	Food banks	1	2	3	4	5	6	7
p.	Food Stamps	1	2	3	4	5	6	7

22. EMPLOYMENT HISTORY

Instructions for Employment History

We would like a step by step record of your job history. Please start with your current job(s) and work backward in time to January 1985. If you were working more than one job at the same time, please list them all on separate lines. If you were working full-time on your own farm, list that also. The two lists provide the code numbers to use for the "industry" column and the "reason for leaving/changing" column on page 9.

Industry Code

- | | |
|-------------------|---|
| 1. Manufacturing | 7. Communication and other public utilities |
| 2. Retail trade | 8. Wholesale trade |
| 3. Mining | 9. Finance, insurance, real estate |
| 4. Agriculture | 10. Service (excluding government) |
| 5. Construction | 11. Government |
| 6. Transportation | |

City in which your job is located	Start Date (Mo/Yr)	End Date (Mo/Yr)	Employer's Name	Job Title
Ex.:				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				

Note:

If you work one or more hours per week for pay or profit, you are considered to be employed. If you worked 15 or more hours per week for room and board in your family's business (farm, restaurant, etc.) you are considered employed.

Reasons for Leaving/Changing Position

- | | | | |
|----|------------|-----|-----------------------------|
| 1. | Promotion | 7. | Wanted Additional Work |
| 2. | Reassigned | 8. | To seek further education |
| 3. | Relocated | 9. | Family responsibilities |
| 4. | Laid-off | 10. | Farm responsibilities |
| 5. | Discharged | 11. | Farm financial difficulties |
| 6. | Quit | 12. | Retired |

Description of main duties	industry code	hourly wage or yearly salary	weeks worked per year	Hours per week	Reason for leaving	hours worked on own farm
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						

B. AGRICULTURAL AND RESOURCE SITUATION

a. In 1990

b. In 1985

1. How many crop acres did you farm? _____ acres _____ acres
2. How many crop acres did you own? _____ acres _____ acres
3. What were your gross farm sales? \$ _____ \$ _____
4. What enterprise generated over 50% of the sales in 1985 and in 1990? (Check one).

a. In 1990

b. In 1985

- | | | |
|------------------|----------|----------|
| None..... | 1. _____ | 1. _____ |
| Field crops..... | 2. _____ | 2. _____ |
| Dairy..... | 3. _____ | 3. _____ |
| Livestock..... | 4. _____ | 4. _____ |
| Fruit..... | 5. _____ | 5. _____ |
| Vegetables..... | 6. _____ | 6. _____ |
| Poultry..... | 7. _____ | 7. _____ |
| Other | 8. _____ | 8. _____ |

5. What was net farm income in 1990? \$ _____ In 1985?
\$ _____ In 1990?

6. What reduction adjustments did you make in the 1985-1990 period to the changing financial conditions in agriculture? (Check all that apply).

- a. Postponed machinery or equipment purchases
- b. Reduced fertilizer or chemical applications
- c. Reduced the level of inputs to livestock
- d. Renegotiated loans to reduce interest rates
- e. Renegotiated loans to extend repayment period
- f. Renegotiated loans to reduce the amount owed
- g. Sold land
- h. Rented land to someone else
- i. Reduced household living draw from the farm
- j. Changed enterprises that were operated
- k. Renegotiated rental agreements to reduce rent
- l. Switched from cash to share land rental
- m. Purchased crop insurance
- n. Reduced amount of hired labor

7. What expansion adjustments were made in the 1985-1990 period to the changing financial conditions in agriculture? (Check all that apply).

- a. Purchased machinery or equipment
- b. Increased fertilizer or chemical applications
- c. Increased the level of inputs to livestock
- d. Obtained additional loans
- e. Bought land
- f. Rented additional land
- g. Added new enterprises to operation
- h. Increased amount of hired labor
- i. Other (list) _____

8. What was the debt/asset ratio for the farm business in 1985 and in 1990? (Check one for each year).

	a. <u>In 1990</u>	b. <u>In 1985</u>
0 - 10%	1. _____	1. _____
11 - 40%	2. _____	2. _____
41 - 70%	3. _____	3. _____
Over 71%	4. _____	4. _____

PAST AGRICULTURAL ACTIVITIES

If you or members of your household are no longer farming, please answer the following questions. If you are currently farming, please go to Question 12.

9. In what year did you leave farming? _____
10. How many years was farming your primary source of household income? _____

EVALUATION OF THE JTPA PROGRAM

11. The JTPA Program had several components to help people find employment. Using the following scale, rate the usefulness of these activities to you by circling the appropriate response. (DNA = Does not apply.)

<u>Available</u>	<u>DNA</u>	<u>Very Useful</u>	<u>Somewhat Useful</u>	<u>Not Useful</u>	<u>Not Useful</u>	<u>Not Useful</u>	<u>Sure</u>
a. Classroom training .	1	2	3	4	5	8	
b. On-the job training .	1	2	3	4	5	8	
c. Job club	1	2	3	4	5	8	
d. Emotional counseling	1	2	3	4	5	8	
e. Relocation assistance	1	2	3	4	5	8	
f. Job search services .	1	2	3	4	5	8	
g. Transp. reimburse. .	1	2	3	4	5	8	
h. Tools/supplies	1	2	3	4	5	8	

12. If you received on-the-job or classroom training, have you been employed in the field for which you trained? (Check one).

1. No ___ 2. Yes ___ 3. Not sure ___

13. If you received on-the-job training and are not currently employed in the field for which you trained, which of the following factors were involved? (Check all that apply).

- ___ a. Obtained a superior position
- ___ b. Don't want or need to work
- ___ c. Lack of jobs available in my field
- ___ d. Lack of tools/supplies
- ___ e. Inadequate wage rate/salary
- ___ f. Inadequate training for available jobs
- ___ g. Inadequate job search skills
- ___ h. No longer interested in that type of work
- ___ i. Day care not available or cost too high
- ___ j. Transportation not available or cost too high

14. Have you sought any job training or education other than JTPA training?
 (Check one.)

1. No ___ 2. Yes ___

15. Below is a list of insurance types and fringe benefits. Please indicate whether or not you have the item and if it is employer provided or self-provided. (Circle the response that applies for each benefit).

		Yes Employer No <u>Provided</u>	Yes Self-
<u>Provided</u>			
a. Health insurance or HMO	1	2	3
b. Dental insurance	1	2	3
c. Disability insurance	1	2	3
d. Life insurance	1	2	3
e. Pension plan	1	2	3
f. Automobile insurance	1	2	3
g. House insurance	1	2	3
h. Flood/disaster insurance	1	2	3
i. Liability insurance	1	2	3
j. Sick leave	1	2	3
k. Bonuses	1	2	3

16. Has your household made any of the following adjustments because of financial need in the past five years? (If yes, please circle the number showing how disturbing this was).

	Did your family do this?	
	No	Yes
a. Used savings to meet living expenses	No	Yes
b. Sold possessions	No	Yes
c. Cashed in life insurance	No	Yes
d. Postponed major household purchase(s)	No	Yes
<hr/>		
e. Let life insurance lapse	No	Yes
f. Cut back on charitable contributions	No	Yes
g. Changed food shopping or eating habits to save money	No	Yes
<hr/>		
h. Changed transportation patterns to save money	No	Yes
i. Cut back on social activities and entertainment expenses	No	Yes
j. Reduced household utility use	No	Yes
<hr/>		
k. Postponed medical or dental care to save money	No	Yes
l. Cancelled or reduced medical insurance coverage	No	Yes
m. Purchased more items on credit	No	Yes
<hr/>		
n. Borrowed money	No	Yes
o. Fell behind in paying bills	No	Yes
p. Decreased money saved for children's education	No	Yes
<hr/>		
q. Postponed children's education	No	Yes
r. Family member(s) took off-farm employment	No	Yes
s. Unable to pay property taxes	No	Yes

17. What adjustments in living arrangements, if any, were made in the 1985-1990 period due to the adverse financial conditions in agriculture. (Please check all that apply).

- a. A family member moved in with you to help pay the bills.
- b. A family member didn't move out as planned.
- c. You moved in with someone in order to save money.
- d. You took in a boarder or rented a room for additional income.
- e. Some family member moved out to reduce household expenses.

18. Frequently when families have many activities, there is not enough time to do everything. Below are statements describing ways of coping with "not enough time." Please indicate by circling the appropriate number, how often these statements describe you, using the scale of 1 = Never to 7 = Always.

a. Following a strict schedule	1	2	3	4	5	6	7
b. Buying prepared foods	1	2	3	4	5	6	7
c. Eating out	1	2	3	4	5	6	7
d. Leaving some things undone around the house	1	2	3	4	5	6	7
<hr/>							
e. Using modern equipment (e.g., microwave) to help out at home	1	2	3	4	5	6	7
f. Getting by on less sleep than I'd like to have	1	2	3	4	5	6	7
g. Cutting down on outside activities	1	2	3	4	5	6	7
<hr/>							
h. Hiring outside help	1	2	3	4	5	6	7
i. Changing my standards for 'how well' household tasks must be done	1	2	3	4	5	6	7
j. Other (please specify)	1	2	3	4	5	6	7

APPENDIX B

REGIONAL BREAK-DOWN OF MICHIGAN'S
LOWER PENNINSULA BY COUNTY

NORTH REGION

Alcona
Alpena
Antrim
Benzie
Charlevoix
Cheboygan
Crawford
Emmet
Grand Traverse
Iosco
Kalakaka
Leelanau
Mainstee
Missaukee
Montmorency
Ogemaw
Oscoda
Otsego
Presque Isle
Roscommon
Wexford

EAST CENTRAL

Arenac
Bay
Clinton
Genesee
Gladwin
Gratiot
Huron
Lapeer
Midland
Saginaw
Sanilac
Shiawassee
Tuscola

WEST CENTRAL

Mason
Lake
Oseola
Clare
Oceana
Newaygo
Mecosta
Isabella
Muskegon
Ottawa
Kent
Montcalm
Ionia

SOUTH

Allegan
Barry
Berrien
Branch
Calhoon
Cass
Eaton
Hillsdale
Ingham
Jackson
Kalamazoo
Lenawee
Livingston
Macomb
Monroe
Oakland
St. Joseph
St. Clair
Van Buren
Washtenaw
Wayne

APPENDIX C

LIST OF OCCUPATIONS FOR CURRENT
OR MOST RECENT EMPLOYMENT

<u>*Occupation</u>	<u>Frequency</u>
Professional Occupations	
Chemical Engineering	1
Home Economists and Farm Advisors	2
Occupations in Mathematics	1
Secondary School Education	1
Business and Managerial Occupations	
Accountants and Auditors	2
Agents and Appraisers	3
Agriculture and Forestry Industry Managers	2
Miscellaneous Professional Technical Managers	3
Miscellaneous Managers and Officials	1
Sales and Distribution Management Occupations	1
Clerical/Administrative Occupations	
Bookkeepers	2
Cashiers and Tellers	3
Computing and Account Recording Occupations	1
Miscellaneous Clerical/General Office Help	2
Receptionists	1
Secretaries and Office Managers	4
Sales Occupations	
Miscellaneous Sales Occupations	1
Real Estate and Insurance Sales Occupations	3
Sales Clerks	2
Transportation Equipment Parts and Supplies Sales	1

*Based on DOT codes.