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Employment Stability Among Workers

A Case Study From Nine Nonmetro Kentucky Counties, 1979

Donald K. Larson

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Employment Stability Among Workers: A Case Study From Nine Nonmetro Kentucky Counties, 1979. By Donald K. Larson. Agriculture and Rural Economy Division, Economic Research Service, U.S. Department of Agriculture. Staff Report AGES 89-31.

Abstract

Employment was disrupted for some workers in a nine-county nonmetro area in south-central Kentucky during a period of rapid employment growth. Married women's employment stability was less than that of married men. Household responsibilities caused disruptions in married women's employment to a greater extent than in married men's. Married workers experienced more employment stability than did single workers. Workers changing jobs had less stable employment than those holding only one job from January 1, 1974, to December 31, 1979. Disruptions in employment stability seem to be a natural process within any dynamic economy.

Keywords: Rural employment growth, employment stability, inmigrants, job changers, regression model

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Glossary

All-trades. Private sector establishments engaged in wholesale and retail trade.

Employed. Adults who were working for wages and salaries or who were self-employed in their own businesses or professions or on their own farms sometime within either just 1979 or January 1, 1974-December 31, 1979.

Employment stability ratio. The ratio of the actual number of weeks worked divided by potential number of weeks a person could have worked either just in 1979 or from January 1, 1974-December 31, 1979.

Establishment. An economic unit, generally at a single building site where business is conducted or where services or industrial operations are performed. Some establishments, such as contractors, may have work crews at varying locations. A firm may consist of one or more such units.

Experienced workers. Persons employed in 1974 and 1979 and those employed in 1974 who left the labor force before 1979.

Full-time. Wage and salary workers who worked 30 or more hours per week. Self-employed workers were given full-time status in this analysis.

Government. Civilian Federal, State, county, city, or town governmental units. A unit of government or a nonprofit organization funded primarily with Federal, State, or local government funds, which has sufficient management over its own affairs or taxing authority to distinguish it from the administrative structure of other governmental units. Military units were excluded from the survey.

Household. A single person or group of people, not necessarily related by blood or marriage, who resided in a house, mobile home, apartment, group of rooms, or a room occupied as separate living quarters.

Household income. Money income received by all household members from all sources except income received from sale of land, buildings, stock, or other capital assets during the year.

Job changers. Persons who reportedly held more than one job either in 1979 or over the 6-year period January 1, 1974-December 31, 1979.

Labor Force. Includes only the adult population that is employed or unemployed.

Longer term residents. Residents who lived in the nine-county study area continuously between January 1, 1974, and January 1, 1980.

Not working. A period that a worker spent not working for pay or being self-employed, often as workers changed jobs.

Part-time. Wage and salary workers who worked less than 30 hours per week.

Private services. Hotel, personal, business, amusement, health, legal, education and social services.

Recent entrant workers. Persons not in the labor force in 1974 and who were employed 1 or more weeks at anytime after January 1, 1975.

Recent inmigrants. Residents who had moved to the nine-county area between January 1, 1975, and January 1, 1980.

Self-employed. Persons working for profit or fees in their own businesses or professions or on their own farms.

TCPU-FIRE. TCPU refers to transportation, communications, and public utilities, while FIRE pertains to finance, insurance, and real estate establishments.

Unemployed. Adults who were looking for work or on layoff waiting to be called back to a job.

Contents

Summary

Employment for about a third of the workers in a nine-county area in south-central Kentucky was disrupted sometime during 1979, a period of rapid employment growth. The remaining two-thirds of the workers had a continuous work history throughout 1979. Between January 1, 1974, and December 31, 1979, 42 percent of those who worked sometime during this 6-year period changed jobs, of which about 70 percent had a disruption in employment.

Married workers experienced more employment stability than did single workers. Twenty-six percent of married men were unemployed sometime in 1979, compared with 36 percent of married women. Married women's employment stability ratio coefficient was significantly below that of married men. Among single workers working sometime in 1979, however, 47 percent of men and 43 percent of women experienced a disruption in employment.

Household responsibilities caused disruptions in married women's employment to a greater extent than in married men's. As household size increased, so did interruptions in women's employment during 1979. Personal health conditions affected married men's employment stability but did not affect married women's. Married men's employment stability was affected by the area's industrial structure, particularly in mining and construction, but industrial structure did not affect married women's employment stability. Age explained variations in married men's employment stability, but age did not explain married women's stability. Job changing during 1979 affected employment stability for both married men and married women.

Age, education, training, residence in parents' household, part-time employment, and industrial structure (manufacturing) affected employment stability among single workers. As age and education increased, so did single workers' employment stability. Workers with formal job training had more stability than those lacking such training. Employment stability was less among single workers residing in parents' households than among single workers living on their own. In addition, employment stability was lower among part-time single workers than among full-time single workers.

Workers changing jobs had less stable employment than those holding only one job from January 1, 1974, to December 31, 1979. The employment stability coefficient for women who changed jobs, however, was significantly less than that of men who changed jobs. Inmigrants, mainly men, changed jobs, and, consequently, their employment stability coefficient fell significantly below that of longer term residents who also changed jobs. The distance inmigrants moved affected how long they were out of work. Employment stability did not differ between women inmigrants who changed jobs and other women.

Expanding job opportunities will not eliminate employment instability since it provides an opportunity for people to change jobs. Job growth can dampen the longrun income effects of job instability, however, by making more jobs available to workers who become displaced. Moreover, theory and experience suggest that disruptions in employment may be a natural process within any dynamic economy.

Employment Stability Among Workers

A Case Study From Nine Nonmetro Kentucky Counties, 1979

Donald K. Larson

Introduction

Much has been written about the social and economic effects of industrial development in nonmetropolitan (nonmetro) areas (9, 18, 19).[1] Not much is known, however, about the effect of employment growth on employment stability in such areas. This report describes a study that was part of a cooperative research project by the U.S. Department of Agriculture's Economic Research Service and the University of Kentucky to identify and examine the effects of the 1980's recession on employment stability in south-central Kentucky. The report examines the nature of employment stability in the study area just prior to the recession.

The extent and nature of employment disruptions over a 1-year period (1979) and over a 6-year period (January 1, 1974-December 31, 1979) will be examined in nine nonmetro Kentucky counties. The data were collected by a rural development survey completed in January 1980. These counties experienced rapid employment growth in the 1970's. These data are the most recent available on employment stability amid employment growth in nonmetro Kentucky.

Background

The study of employment stability has its roots within both theories and empirical findings dealing with such topics as unemployment, underemployment, poverty, labor markets, industrial development, and industrial location (3, 5, 6, 8, 14, 20). A full historical treatise lies beyond this report's scope, but a brief initial setting is provided on the issues of employment stability.

Employment stability issues grew out of the heightened public and government concern over the urban crisis and the economic and social problems of the 1960's.[2] Concern about employment problems soon began to broaden, especially when unemployment rates remained relatively high amid prosperity. Thus, concepts of employment changed and job instability was recognized as one of

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[1] Underscored numbers in parentheses refer to sources in the References.

[2] Forces prompting such a concern date back to the 1950's and include the ghetto riots, poverty, civil rights, environmental quality, urban congestion, and rural-urban migration of people with low education (6, 9).

several specific labor market problems.[3] Further probing into labor market problems raised questions about the simplifying assumptions often applied to labor markets. One such question dealt with the functions and importance of job stability. Some people seemed to have difficulty holding a job, drifting from one job to another (8). This observance ran counter with the assumptions that the unemployed remain unemployed and do not exit the labor force and that once employed, people rarely lost their motivation to work.

Concepts such as seasonal, cyclical, technological, and frictional unemployment have emerged as explanations for employment instability. Seasonal variations in the volume of production of certain industries cause seasonal unemployment. The construction, clothing, and coal mining industries, for example, maintain full production only during certain seasons of the year. Many workers in these industries do not work the entire year.

Cyclical unemployment can result from the deflationary phase of a business cycle. As product demands fall, employers make corresponding cutbacks in the labor input. That is, product demands are inadequate to employ all workers who are willing to supply labor at existing wage rates (2, 5, 20).

Technological unemployment, often called structural unemployment, results when capital replaces labor. Employment instability occurs in this case because the knowledge or skills of workers have been made obsolete by machines or other technology (3, 5, 20). Reemployment may occur when new skills acquired by the displaced workers meet the new labor market conditions.

Frictional unemployment is caused by imperfections in the technical functioning of the labor market. Lack of information regarding the location of jobs, inability of workers to get to available jobs, or time consumed in changing jobs are causes of employment instability. Thus, this form of employment instability is partly associated with labor mobility as workers change jobs or change residence in search of other job opportunities.

Government policy has sought to increase job stability. Various manpower development and training programs attempted to enhance job stability by changing workers' skills, attitudes, and motivations toward work (6). Federal and State rural development efforts represent other approaches to deal with rural unemployment (instability) and other economic issues (4, 9, 18). Theories on industrial location suggest that plants will locate where they can achieve efficiency according to production and transportation costs (9). The locations of new industries in rural areas were often hypothesized to be due to availability of low-wage unemployed labor and other amenities.[4] Thus, job stability should be enhanced if jobs are provided in rural areas.

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[3] Some other labor market problems were: low wages, menial work, low skills, poor worker motivation, discrimination, poor job information, and inadequate job access (6, 9).

[4] Other amenities are low levels of unionization, improved interstate highway systems, growing rural markets, energy supplies, and community amenities such as industrial parks, suitable housing, and rural living.

While the concerns and questions about employment stability are not new, their nature over both the short run and long run have not been fully understood (6, 9, 16). Past studies of industrialization and resulting employment growth have recognized employment stability as an issue, but little research has been done.

Objectives

This report examines employment stability of workers in nine nonmetro counties in Kentucky when jobs rapidly expanded. To that end, the report:

- Assesses the extent that workers in the area experienced a disruption in their 1979 employment history;
- Determines factors that explain why workers experienced a disruption in their 1979 employment history; and
- Determines factors that best explain why workers changing jobs between January 1, 1974, and December 31, 1979, had a disruption in employment.

The first objective is important because the extent to which employment stability exists amid employment growth is unknown. Unemployment is only one aspect of the employment instability issue since a worker can also leave the labor force entirely or leave and reenter later. The second objective adds information about factors, or worker characteristics, that best explain disruptions in employment amid employment growth. This information will help determine whether employment stability differs between worker subgroups, for example, married versus single workers and help identify factors that contributed to employment stability in 1979. Further information on employment stability is added by the third objective since some workers will change jobs when employment is growing (19). Little is known, however, about the extent to which job changing takes place and the factors that explain disruptions in employment as workers change jobs.

Overall, the information from all of these objectives is important to establish a base situation upon which future comparisons can be referenced. The comparison could involve a different area with a similar economic growth pattern, a different area with a different economic base (industrial structure), or on the same area but subject to a different type of economic situation, for example, a recessionary period rather than one of economic expansion. This report provides insight on whether employment disruptions are seasonal, cyclical, technological, or frictional in nature and suggests the need for intervention toward meeting longrun goals aimed at increasing employment stability.

Study Area and Data

In the 1970's, employment opportunities grew rapidly in a nine-county area in south-central Kentucky: Russell, Clinton, Pulaski, Wayne, Laurel, McCreary,

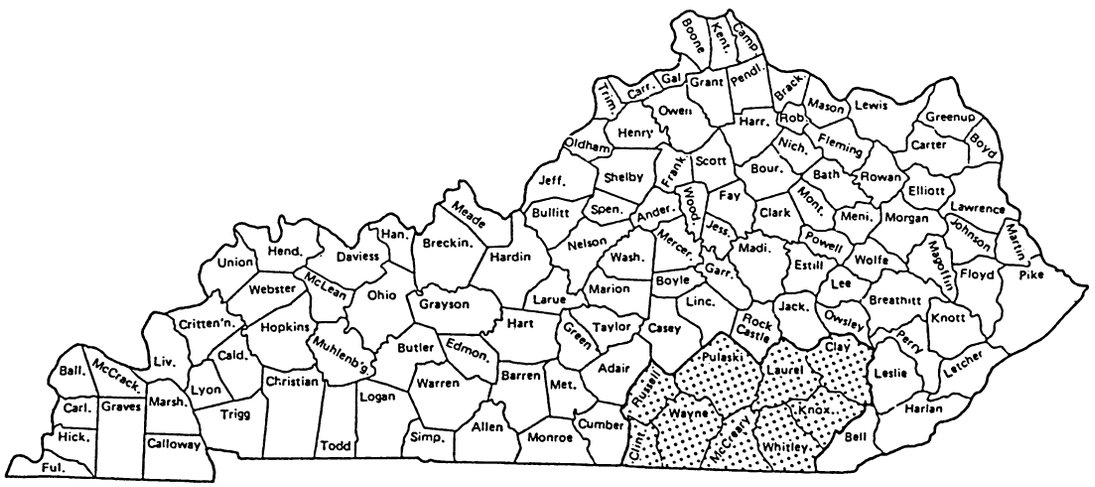
Clay, Knox, and Whitley Counties (map). The objective of the original survey was to examine the distribution of jobs and income among the area's rural residents. The survey data collected from establishments in December 1979 and households in January 1980 also contained information on employment stability.

The area had 76,400 households and 226,800 people in January 1980 (4). Area population grew nearly 30 percent between 1970 and 1980, more than 2.5 times the national growth rate for the decade, while employment increased by about 44 percent. The greatest employment growth was in manufacturing, trades, mining, and services.

The household survey obtained information from people 16 years or older about their employment history, age, gender, education, residency status, industry in which they were working, and health condition. Information is limited to workers who resided within the study area at the time of the survey. Information on reasons for leaving the workforce were obtained only from those people who left the workforce in 1979 (4).

In December 1979, the area had about 4,500 establishments, which employed 48,510 wage and salary workers (4). Only 40 percent of the area's establishments created new jobs between 1974 and 1979. About half of these establishments were new; that is, they started production after 1974. New and expanding ongoing establishments created 12,890 jobs. About 8 percent of the establishments had employment losses totaling 2,040 jobs. Most new establishments employed fewer than 20 workers, were in the private service sector, paid relatively low wages, and relied heavily on part-time employment. Ongoing establishments that had job increases were generally larger employers that hired full-time workers and produced goods instead of services.

Nine-County Kentucky Study Site



Employment Stability, 1979

Employment stability is measured as a ratio of actual weeks worked divided by number of weeks one could have worked in 1979. The equation has the general form:

$$\text{Employment stability} = \frac{\text{weeks worked in 1979}}{\text{potential weeks of work in 1979.}}$$

The ratio's denominator was dependent on the characteristics of certain groups of workers. Measuring a disruption in employment requires that one first hold a job. Any person employed continuously during 1979 was classed as an experienced worker and given the maximum 52 weeks as a denominator value. Not all workers in the sample, however, had an employment history spanning the entire 52-week period. Some workers entered the area's workforce during 1979, that is, those classed as recent entrants. The ratio's denominator was based on the month they first became employed in 1979. These new entrants most often were 16-24 years of age or were women, groups often identified as having less stable employment (4, 19).

Others were reportedly working in 1979 but had left the workforce prior to December 31, 1979. Age entered the calculation of the denominator for these workers.[5] It was assumed that once a person turned 62 years old and exited the workforce, that person would not again seek employment. It was also assumed that workers who quit work before their 62nd birthday would be unemployed temporarily. If a worker's estimated age was 62 years or older at the date when he or she quit work, the denominator was based on the month when the worker quit. That is, the denominator equals the time from January 1, 1979, to the last month employed only if the worker was 62 years of age at that time. The denominator's value was set equal to 52 weeks for workers less than 62 years old who left the workforce.

Characteristics of Employment Stability, 1979

An estimated 68,810 people were employed in the area sometime in 1979 (table 1). Nearly two-thirds of these people were employed continuously, and their employment stability coefficient was 1.0. This coefficient was less than 0.75 for about a fifth of the workers, which means they had a somewhat lengthy disruption in employment.

Past research on labor market problems suggests that marital status and gender are important variables that explain differences in employment stability. It is asserted that married people, particularly married men, have greater financial and family responsibilities than single people and, thus, employment stability is expected to be higher for married workers (15). Single workers are young and labor market problems of young people center around high levels

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[5] Respondents' age was determined at time of survey and was used to identify their age at the time they left the workforce.

Table 1--Workers' employment stability by gender and marital status, 1979

Item	All workers	Marital status: Married workers Men	Married workers Women	Single workers Men	Single workers Women
			Number		
Total working 1/	68,810	33,640	19,030	8,260	7,880
			Percent		
Employment stability class: 2/					
No disruption	65.4	73.8	63.3	53.1	46.8
Small disruption	13.2	16.3	7.8	11.4	16.1
Larger disruption	21.4	9.9	28.9	35.5	37.1
			Ratio value		
Mean employment stability ratio	0.869	0.921	0.882 3/	0.750	0.755 4/

1/ Persons employed sometime during 1979.
2/ Employment stability classes based on ratio value of weeks worked to potential weeks could have worked are no disruption, ratio value = 1.0; small disruption, ratio value = 0.99 to 0.75; and larger disruption, ratio value = less than 0.75.
3/ Mean ratio value was significantly different between married men and married women at the 0.05-confidence level.
4/ Mean ratio value was not significantly different between single men and single women at the 0.05-confidence level.

of unemployment and low-paying, unstable employment (11). Gender affects employment stability in that women traditionally care for children in the home and women's employment is more sensitive to cyclical changes than men's employment (12, 15). Marital status and gender play an important role in explaining employment stability in the area studied.

Married women more often experienced a disruption in employment than married men (table 1). The proportion of married women with no work disruption differed significantly from married men. In addition, the average employment stability coefficient for married women workers was significantly less than for married men.

Women's responsibility for care of children or elderly parents in households (10, 17) should, thus, have a negative effect on women's employment stability. Employment stability was significantly less among married women than married men, suggesting that women may indeed have this caretaker role (table 1). Employment stability among single workers, however, did not differ significantly by gender.

Reasons For Leaving Employment, 1979

About 15 percent, or 10,190 of the estimated 68,810 people working sometime during 1979 were not working at year's end (table 2). Employment reductions were significantly larger among women than men and also among single workers than married workers.

Table 2--Workers' employment status and reasons stopped working by gender and marital status, 1979

Item	All workers	Gender		Marital status	
		Men	Women	Married	Single
			Number		
People employed	68,810	41,900	26,910	52,670	16,140
People employed January 1980	58,620	36,920	21,700	46,610	12,010
People stopped working	10,190	4,980	5,210	6,060	4,130
			Percent		
Reasons stopped working: 1/					
Labor market related	65.8	77.9	54.0	53.4	86.2
Job terminated 2/	27.3	38.1	16.7	32.3	19.6
Seasonal job completed	17.7	21.0	14.4	4.7 4/	36.7
Temporary nonseasonal job completed	14.0	12.2	15.8	9.9	19.8
Unsatisfactory working conditions	6.8 4/	6.6 4/	7.1 4/	6.5 4/	10.1
Worker related	34.2	22.1	46.0	46.6	13.8
Personal or family 3/	23.2	12.9	33.3	31.8	8.4 4/
Health	8.8	7.1 4/	10.4	11.0	5.4 4/
Retirement 4/	2.2	2.1	2.3	3.8	0

1/ Reasons for stopping work were determined only for people working for wages and salaries in 1979 and, thus, excluded about 100 men workers who were self-employed.

2/ Jobs terminated because of shutdown in production or delivery of services such as business closed, factory moved, plant burned, bankruptcy, business sold, or employer died.

3/ Represents reasons such as, child care, pregancy, schooling, moving, trip or vacation, marriage, illness in family, or pension retirement.

4/ Estimate based on fewer than 10 unweighted observations.

Labor market reasons were dominant in explaining why some workers were not working at year's end. Nearly two-thirds who stopped working cited reasons related to the area's labor market. The balance cited personal reasons (table 2). The reasons cited for not working at year's end differed by gender and marital status.[6] Labor market reasons were cited more often by men than women and more often by single workers than married workers. Job termination was the major reason reported by men. For single workers, completion of a seasonal job was the major reason they stopped working while women cited personal or family reasons. Women's caretaking role (10, 17) likely was a factor here, but its direct influence on employment stability cannot be fully evaluated. Family responsibilities may have resulted in some married women's choosing seasonal or temporary employment. "Job completed" (seasonal and temporary employment) was the reason cited by 30 percent of women and 14 percent of the married workers who had stopped working by year's end.

A disruption in employment often leads to unemployment. About 72 percent of the 10,190 people who stopped working were unemployed in January 1980 (table 2). Unemployment rates did not differ significantly by gender or marital status. Nearly 75 percent of the unemployed were found among those who cited job termination, seasonal job completed, and unsatisfactory working conditions as a reason for having stopped working by year's end. A small number of those not working in 1979 had retired.

Factors Affecting Employment Stability, 1979

Factors affecting employment stability are in four general categories: demographic characteristics, employment-related characteristics, health status, and household characteristics. These categories were selected because of their theoretical, or expected, relationship with employment stability. For example, age was expected to have a quadratic relationship with employment stability. In earlier years less stability is expected and then increases until the person approaches retirement age. Poor health was expected to lower one's stability in the workforce since the amount of time spent at work would be reduced. See the appendix on regression analysis for all factors used and their theoretical, or expected, relationships to employment stability.

Because of observed differences in employment stability ratios (table 1) and in the reasons cited for stopping work in 1979 (table 2), one may wonder if the factors that undergird those differences by gender and marital status are similar. To examine this question, I separated workers into subgroups of married men, married women, and single workers. Single workers were not separated by gender because employment stability did not differ significantly

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[6] It was not feasible to distribute the reasons cited for not working by subdividing the two gender groups by the two marital status groups. Subdividing gender by marital status would require 28 cells, 4 columns by 7 rows with 1 row per reason (table 2). In this case, 64 percent of the cell estimates would be based on fewer than 10 sampled observations. Such estimates have exceedingly large standard errors.

by gender for single workers and an insufficient number of observations were available for the multiple regression method of analysis used in this report.

Multiple Regression Analysis

An ordinary least squares multiple regression serves as this report's method of analysis. One cannot tell for certain from tables 1 and 2, however, which are the most important factors associated with workers' employment stability since these tables are incomplete regarding the factors linked with employment stability. Regression, while a somewhat more complicated approach, will generate the results required to examine the question raised earlier. The regression model's general form for married workers by gender is:

$$ESR = f(DEM, EMP, HST, HLD)$$

where:
ESR = Employment stability ratio,
DEM = Selected demographic characteristics of workers,
EMP = Employment-related characteristics of workers,
HST = Worker's health condition in 1979, and
HLD = Selected household characteristics of workers.

Married Men. Variation in employment stability was significantly associated with age (table 3). The nonlinear functional relationships ($X + X^2$) on age showed employment stability was lowest among the 16-24 year old workers, then increased until age 50, then declined as a worker's age went beyond 50 years. Young people suffered more than their proportional share of employment instability because they had higher job turnover and limited experience, and because jobs available to them often are the ones most vulnerable to unemployment (4).

When married men change jobs, their employment stability ratio was lowered significantly (table 3). During a period of job growth, the incidence of voluntary job change might be expected to increase, thus, decreasing employment stability. Employment growth created more jobs and provided a favorable labor market climate where people could move from one job to another. At the same time, job growth would be expected to reduce the effect of involuntary job change on employment stability. Employment growth provided employment opportunities for displaced workers who lost a job because their employer either reduced labor requirements or closed down production altogether. The data do not allow a determination of the extent to which job changing was a voluntary or involuntary decision by workers.

About 14 percent of married men changed jobs one or more times in 1979, most changing jobs only once. However, 52 percent of these job changers had a break in their employment history. A change in residence explained part of the variation in employment stability since 21 percent of the married men who changed jobs were recent inmigrants having moved to the area during 1979. Recent inmigrants' decisions to change jobs were presumably voluntary.

Married men employed in mining and construction experienced less employment stability than workers in other private industrial sectors or workers in the public sectors (table 3). Many jobs in construction were seasonal, with more

jobs available during spring, summer, and fall months and fewer in winter months. Seasonal demand for coal and labor disputes influenced coal output. Some mine workers reported unsatisfactory working conditions as the reason they were unemployed at the time of the survey.

Personal health conditions in 1979 influenced job duration for married men too. Employment stability was lowered when health problems limited the amount or kind of work performed in 1979 (table 3).

Table 3--Regression results: Employment stablility of married workers by gender, Kentucky study area, 1979 1/

Independent variable or worker characteristic	Regression coefficients			
	Men		Women	
	Unstandardized 2/	Standardized 3/	Unstandardized 2/	Standardized 3/
Demographic characteristics:				
Age--				
Actual years 1979	0.0097 4/	0.6968	0.0107	0.4823
Years squared	-.0001 4/	-.7568	-.0001	-.3733
Education, years completed	.0017	.0343	-.0033	-.0363
Training, where 1=had job training, 0=no job training	-.0031	-.0062	-.0142	-.0171
Employment-related variables:				
Employment experience, where 1=recent entrant, 0=experienced worker	-.0283	-.0477	-.0971 4/	-.1757
Employment type, where 1=self-employed, 0=wage worker	.0044	.0047	-.0493	-.0380
Employment history, where 1= changed jobs, 0=no change in jobs	-.1285 4/	-.2545	-.2376 4/	-.3002
Employment schedule, where 1=part-time, 0=full-time	-.0545	-.0787	-.0689	-.0991
Industry type--5/				
Mining and construction	-.0944 4/	-.1668	-.1304	-.0379
Manufacturing	.0009	.0023	-.0468	-.0765
Private services 6/ 7/	-.0004	-.0010	.0183	.0288
All trades 7/	.0398	.0736	-.0027	-.0037
Health status 1979:				
1=health problem limited the amount of work done in 1979; 0=health problem did not limit work	-.0896 4/	-.1506	-.0686	-.0793

See footnotes at end of table. Continued--

Married Women. Not all factors affecting married men's employment stability applied to married women. Changing jobs was the only statistically significant factor both groups had in common. Some factors affecting married women's employment stability were unimportant for married men (table 3).

Limited work experience lowered the employment stability ratio for married women. Married women who were recent entrants in the area's workforce had less employment stability than married women with more job experience (table 3). Most women recent entrants were under 30 years of age in 1979 and many

Table 3--Regression results: Employment stability of married workers by gender, Kentucky study area, 1979 1/--Continued

Independent variable or worker charteristic	Regression coefficients			
	Men		Women	
	Unstandardized 2/	Standardized 3/	Unstandaraized 2/	Standaraized 3/
Household characteristics:				
Spouse's annual earnings in 1979 8/	-0	9/ -0.0121	-0 9/	-0.1002
Household size (actual size)	-0.0112	-.0820	-.0364 4/	-.1641
Constant		.7689		.7236
Adjusted R-squared		.2216		.2465
F		9.2537 4/		6.6932 4/
N number of original unweighted observations		436		262

1/ Represents married workers employed sometime in 1979.
2/ Regression coefficient expressed in terms of the dependent variable, which is the ratio of weeks actually worked in 1979 divided by the weeks one could have worked.
3/ Shows the relative importance of the regression coefficient: the higher the value, regardless of sign, the more likely it helps explain employment stability.
4/ The variable was significant at the 0.05 confidence level.
5/ Type of industry was identified using dummy variables notation: where 1=the major industry group in question and 0=all other industry groups. Government units made up the omitted class.
6/ Includes TCPU and FIRE establishments.
7/ See Glossary.
8/ Represents the wife's annual earnings for married male workers, and pertains to husband's annual earnings for married female workers.
9/ The value is five places or more to the right of the decimal place.

had stopped working because of either personal and family responsibilities or because their job was terminated. Limited work experience was not a factor explaining employment stability among married men.

A husband's annual earnings were expected to have a negative influence on a married woman's employment stability. That expectation is based on the idea that when one household member brings home a sizeable paycheck, the household has a less urgent need for supplemental income, thus lessening the need for others in the household to work full-time or full-year. That was not the case, however (table 3). One explanation for the nonsignificant relationship between working wives' employment stability and their husbands' annual earnings may stem from the area's economic growth. That is, some households could have raised their economic goals amid a favorable economic climate. Therefore, meeting such goals would require stable employment by the working wife.

Household size significantly influenced employment stability of married women, but not for married men (table 3). As household size increased, women's employment stability coefficient decreased. Household responsibilities of women increase with household size as the larger households often contained either young children not of school age or an elderly parent. Caring for those members of the household usually falls to the woman (10, 17).

Single Workers. The regression model for married workers was modified for single workers. See the appendix section for an explanation of changes made.

Employment stability increased with age since the regression model results indicated this variable was positive and significant (table 4). A nonlinear functional relationship for age was tried in the model with no improvement in the results. The level of educational attainment of single workers had a significant, positive effect on employment stability.

Formal job training had a positive effect on single workers' employment stability, but it had no significant effect on employment stability among married workers. Single workers who received job training had more employment stability than single workers without training (table 4).

The variable that describes the relationship to household head was significant in explaining employment stability (table 4). Single workers living with their parents had less employment stability than single workers who lived by themselves. About 44 percent of all single workers lived by themselves. Thus, single workers heading a household have greater financial responsibilities than those who live with their parents. Single workers living with their parents averaged 23 years old, significantly below the 39-year average for single workers living alone.

Single workers employed part-time experienced less employment stability than those working full-time (table 4). Part-time workers often were younger (under 20 years of age), lived with their parents and held jobs mainly in the services sector, such as in restaurants and department stores, which often have a high personnel turnover and require part-time seasonal help.

Table 4--Regression results: Employment stablility of all single workers in the Kentucky study area, 1979 1/

Independent variable or worker characteristic	Single workers' regression coefficients	
	Unstandardized 2/	Standardized 3/
Demographic characteristics:		
Age (actual years 1979)	0.0060 4/	0.2872
Education (years complete)	.0248 4/	.2516
Training, where 1=had job training, 0=no job training	.1496 4/	.1651
Relationship to head: where 1= living in parent's household, 0=head of household	-.1014 4/	-.1627
Worker's gender, where 1=female worker, 0=male worker	-.0191	-.0309
Employment-related variables:		
Employment experience, where 1=recent entrant, 0=experienced worker	-.0444	-.0711
Employment history, where 1= changed jobs, 0=no change in jobs	-.0555	-.0766
Employment schedule, where 1=part-time, 0=full-time	-.1350 4/	-.1964
Industry type--5/		
Mining and construction	.1335	.1177
Manufacturing	.1596 4/	.1854
Private services 6/ 7/	.0245	.0359
All trades 7/	.1000	.1438
Health status 1979:		
1=health problem limited the amount of work done 1979; 0=health did not limit work	-.0935	-.1026
Constant	0.3589	
Adjusted R-squared	.3345	
F	8.6925 4/	
N number of original unweighted observations	200	

1/ Represents single workers employed sometime in 1979. 2/ Regression coefficient expressed in terms of the dependent variable, which is the ratio of weeks actually worked in 1979 divided by the weeks one could have worked. 3/ Shows the relative importance of the regression coefficient: the higher the value, regardless of sign, the more likely it helps explain employment stability. 4/ The variable was significant at the 0.05 confidence level. 5/ Type of industry was identified using dummy variables notation: where 1=the major industry group in question and 0=all other industry groups. Government units made up the omitted class. 6/ Includes TCPU and FIRE establishments. 7/ See Glossary.

Single workers employed in manufacturing establishments had greater employment stability than those working in the area's public sectors. The regression coefficient for manufacturing was positive and significant compared with the omitted public sector variable (table 4). Interaction between several variables might account for this result. For example, 9 percent of single workers in manufacturing worked part-time compared with 21 percent in the public sector.

Employment Stability of Job Changers, 1974-79

Workers' employment stability was lowered significantly when they changed jobs in 1979. The survey data also traced a worker's employment history over the 6-year period, January 1, 1974, through December 31, 1979.

An estimated 79,540 people either worked for wages and salaries or were self-employed at some time between January 1, 1974, and December 31, 1979 (table 5). About 33,580 of these workers (42 percent) changed their primary job one or more times over this 6-year period. Job changing occurred more frequently among men than among women. Most people who changed jobs, however, were not employed continuously over the 6-year period. Their employment history showed a disruption and their employment stability coefficient was less than 1.0. Women who changed jobs had a somewhat more lengthy disruption in their employment than men. The mean stability coefficient for women (0.694) was significantly less than the stability coefficient for male job changers (0.869).

Employment Stability Coefficient

Employment stability was measured as the ratio of actual weeks worked divided by number of weeks one could have worked over the 6-year period. The ratio's numerator was calculated based on their employment history between January 1, 1974, and December 31, 1979. Any break in one's employment history was detectable, provided the beginning month of the new job differed from the ending month of the old job by more than 1 month.[7] Maximum time one could work in this analysis was 312 weeks: 52 weeks per year for 6 years.

The ratio's denominator was adjusted if the worker was a recent entrant, based on month and year the person first became employed. Other workers in

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[7] The month and year when a person stopped one job and started the next was collected as part of their employment history. A problem arose when the stop and start dates reported were a month apart, for example, stop at June 1978 and start at July 1978. Whether the person quit at the beginning or ending of the 6th month was unknown. Therefore, when this situation occurred, the person was considered as not having a disruption in employment.

Table 5--Workers' employment stability and job changing status by gender, 1974-1979

Item	Men	Women
	Number	
Job changing status 1/	45,950	33,590
	Percent	
No change(held one job)	55.0	61.6
Changed jobs(held two or more jobs)	45.0	38.4
Employment stability of job changers	Number	
	20,680	12,900
Stability class--2/	Percent	
No disruption	30.8	15.7
Small disruption	48.6	35.9
Larger disruption	20.6	48.4
	Ratio value	
Mean stability coefficient	0.869	0.694

1/ Based on worker's employment history over the 6-year period, with regard to different primary jobs held.

2/ Employment stability classes, based on ratio of weeks actually worked to the potential number of weeks one could have worked over the entire 6-year period, are no disruption, ratio value = 1.00; small disruption, ratio value = 0.99 to 0.75; and larger disruption, ratio value less than 0.75.

1974 left the workforce before December 31, 1979. Their age entered the calculation for the denominator's value.[8] If their estimated age was 62 years or older when they last left the job, the denominator was based on the month and year when they left. The denominator's value for workers under 62 years of age when they left the workforce either covered the entire 6-year period if they were employed at January 1, 1974, or the period when they first entered the workforce through December 31, 1979, unless they reached their 62nd birthday before then.

[8] Respondent's age was determined at time of survey. Thus, it became necessary to estimate their age at the time they left the workforce. For example, if a worker who left the workforce was 65 in 1979 but left in 1976, then estimated age was 62: 65 minus (79 minus 76).

Characteristics of Job Changers' Employment Stability

Multiple regression was used to explore and identify the characteristics of job changers that best explain employment stability. The regression model used differs somewhat from the two described earlier in this report primarily in some of the variables used. Men and women job changers were analyzed separately because of significant gender differences in employment stability coefficients.

Male Job Changers

Age, in a linear form, was significant in explaining variations in employment stability over the 6-year period (table 6). Thus, employment stability increased as age increased. The nonlinear coefficient, age squared, was not significant among men job changers. Thus, younger job changers had less employment stability than the older ones. In addition, the frequency of changing jobs was higher among younger workers.

Recent inmigrants who had moved to the area sometime after January 1, 1974, had less employment stability than longer term residents (table 6). The consequence of their decision to move produced a break in their employment history. The size of their employment stability coefficient was related to the distance moved. That is, those moving from in-State locations had a higher stability ratio than those moving from areas outside the State. Data were not available on time spent in job searching after reaching this area or time spent in the move to the area.

Recent entrants in the workforce who changed jobs had less employment stability than experienced workers who changed jobs (table 6). Many men who were recent entrants were 16-24 years of age in 1979 (4). The employment stability ratio of the recent entrants was related to labor market problems often faced by young people, such as low wages, unstable employment opportunities, and high levels of unemployment.

The duration of a job for job changers was influenced by personal health. Employment stability declined when a job changer's health condition worsened over the 6-year period (table 6). The opposite effect, an improved health status, was not significant in this analysis.

Women Job Changers

The linear relationship of age for women job changers, as for men, explained variations in employment stability (table 6). Employment stability was lowest among the youngest and increased with age.

Women job changers, unlike the men, had no other variables in the model that explained significant variations in their employment stability (table 5). This does not diminish the result's importance, however. For example, these results lend additional support to the notion that factors influencing employment stability differ by gender, particularly among workers who changed jobs. The factors that may differentiate among female job changers in terms of their job durations lie outside the available data's realm.

Table 6--Regression results: Employment stablility of job changers by gender, Kentucky study area, 1979 1/

Characteristic of job changer	Regression coefficients			
	Men		Women	
	Unstandardized 2/	Standardized 3/	Unstandardized 2/	Standardized 3/
Demographic characteristics:				
Age--				
Actual years 1979	0.0033 4/	0.2515	0.0046 4/	0.2294
Years squared	0 5/	-.1957	0 5/	-.0634
Education years completed	.0033	.0561	-.0001	-.0013
Marital status, where 1= not married, 0=married	-.0038	-.0074	.0506	.0842
Residency status, where 1= recent inmigrant, 0=longer term resident	-.1162 4/	-.2687	-.0200	-.0324
Training, where 1=had job training, 0=no job training	.0103	.0199	.0866	.1126
Employment-related variables:				
Employment experience, where 1=recent entrant, 0=experienced worker	-.0695 4/	-.1342	-.0159	-.0285
Employment type, where 1=self-employed, 0=wage worker	.0188	.0336	-.0839	-.0502
Employment schedule, where 1=part-time,0=full-time	.0437	.0658	.0089	.0130
Industry type--6/				
Mining and construction	.0025	.0055	.1687	.0675
Manufacturing	.0539	.1254	-.0354	-.0586
Private services 7/	.0169	.0347	.0603	.1006
TCPU-FIRE 7/	.0835 4/	.1137	.0517	.0412
Trades 7/	.0143	.0321	-.0276	-.0469

See footnotes at end of table.

Continued--

Implications

This study offers insights on employment stability. Readers must interpret these findings within the context that the analysis time frame was short and was during a period of rapid employment growth and that results pertain to the nine-county Kentucky area studied. Research for other rural areas will determine the extent to which the implications presented here apply elsewhere.

Table 6--Regression results: Employment stablility of job changers by gender, Kentucky study area, 1979 1/--Continued

Characteristic of job changer	Regression coefficients			
	Men		Women	
	Unstandardized 2/	Standardized 3/	Unstandardized 2/	Standardized 3/
Health status change (0,1 variables):				
Reported poor health in 1974, but good health in 1979	0.1010	0.0889	0.0764	0.0457
Reported poor health in 1979, but good health in 1974	-.1239 4/	-.1821	-.0165	-.0172
Constant	.8298		.7869	
Adjusted R-squared	.1595		.0970	
F	3.4378 4/		1.9027 4/	
N number of original unweighted observations	258		169	

1/ Represents all workers employed sometime between 1974-79 regardless of marital status.

2/ Regression coefficient expressed in terms of the dependent variable, which is the ratio of weeks actually worked in 1979 divided by the weeks one could have worked.

3/ Shows the relative importance of the regression coefficient: the higher the value, regardless of sign, the more likely it helps explain employment stability.

4/ The variable was significant at the 0.05 confidence level.

5/ Coefficient was very small with the value at five places to the right of the decimal point.

6/ Type of industry was identified using dummy variables notation: where 1=the major industry group in question and 0=all other industry groups. Government units made up the omitted class.

7/ See Glossary.

Several generalizations are advanced despite these limitations. Theory and empirical evidence suggest that in any dynamic economic system a certain amount of employment instability is caused by workers' changing jobs, by their vacationing between jobs, by seasonal changes in production of certain industries, and by other circumstances. The nine-county Kentucky area studied did experience a dynamic economic change, namely rapid employment growth. Disruptions in employment did occur despite the area's employment growth. The analysis suggests that employment stability differs significantly by gender

among married workers but not among single workers. Other worker subgroups least likely to have a stable employment history include young people living with their parents, recent workforce entrants, recent inmigrants, and job changers. Health conditions that limit the amount or kind of work performed can also reduce one's employment stability.

Some disruptions in employment resulted from employers' decisions concerning output and labor requirements. Over the 1974-79 period, 8 percent of the estimated 4,500 establishments accounted for a decline of 2,040 jobs (4). In addition, several establishments in business in 1974 had gone out of business before the survey, supporting the life cycle theory that some businesses shut down amid employment growth. However, 40 percent of the surveyed establishments increased employment, accounting for 12,890 new jobs. Overall, employment growth does not mean that some jobs won't be lost, but it can soften the losses by providing new jobs for displaced workers.

Employment instability can exist amid job growth because workers change jobs or their residence locations and, thus, at any given time, some workers are not working. Much of the observed disruptions in employment were associated with seasonal and frictional causes. These findings suggest that causes for instability amid employment growth do not seem out of the ordinary from both theoretical and empirical perspectives.

Additional studies are needed to track the dynamic nature of factors affecting employment stability. Longer term economic considerations also need to be taken into account (9, 16). In this regard, a cooperative research project between the University of Kentucky and the Economic Research Service, initiated in the fall of 1985, set out to identify and examine the effects of the 1980's recession on employment stability in a 19-county rural area in south-central Kentucky. Nine of these 19 counties were originally surveyed by ERS for its rural development study, which was the data source for this report. This cooperative research project examined the recession's effects on employment stability among both employers and workers. Preliminary results indicate that these 19 counties studied experienced growth in job opportunities during the recessionary period in the early 1980's. Thus, an expected increase in employment instability resulting from the economic slowdown did not materialize (16).

Appendix: The Regression Analysis

Three regression models were used in this study. The first and second models examined employment stability among married workers and single workers for 1979. The third model examined employment stability among people who changed jobs over the 6-year period.

Regression Model 1

An ordinary least squares regression procedure was used to analyze employment-related characteristics of married workers by gender in 1979.[1] The dependent variable is the ratio value, or employment stability coefficient, defined in the section, "Factors Affecting Employment Stability, 1979."

Independent Variables

The general model has four groups of variables (see the equation in text). Each variable within the four groups is specified and expected effects of each independent variable on employment stability are presented below.

Demographic Characteristics. Age, education, and job training were entered into the model to determine which one might be associated with an unstable employment history. Age, specified in a quadratic form ($X + X^2$), was used since employment stability was hypothesized to have a nonlinear relationship with a worker's age. That is, younger and older workers were hypothesized to be less stable in the workforce than workers in their prime (25-49 years old) working years. Age was specified as the actual years reported during the survey.

Education was specified as the total number of completed years of schooling as of January 1980. We expected employment to become more stable as education increased. That is, workers with higher levels of education would be likely to have jobs that were less vulnerable to unemployment and other factors influencing employment stability.

Participation in a job training program was expected to enhance employment stability by providing the skills necessary to hold a full-time job. The job training variable was specified as a discrete variable where workers with job training were denoted by a 1 and those without such training were assigned a 0. Workers were asked if they had received any job training since 1969 or since their 16th birthday. Only about 2 percent, or 1,380, of the workers employed sometime in 1979 indicated they had received any formal job training.

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[1] Sample estimates, instead of expanded estimates, were used so as not to generate greatly reduced standard errors on the regression coefficients and, thus, provide a more accurate test of the hypotheses. The Statistical Package for Social Sciences (SPSS-X) regression computer program obtained weighted least square estimates of the parameters. Thus, the relative importance of each observation was taken into account rather than treating each observation (worker) as having an equal weight.

Employment-Related Characteristics. Variables were included in the model to examine employment stability among worker subgroups: recent workforce entrants, the self-employed, workers who changed jobs, part-time workers, and the types of industry in which workers were employed. Recent workforce entrants were people taking area jobs during 1979. I expected their employment stability coefficient to be lower than the coefficient of the area's more experienced workers. To measure this effect, the variable was entered into the model and set equal to 1 if the worker was identified as a recent entrant and set equal to 0 for experienced workers.

Self-employment was specified as a discrete variable, where a 1 denoted self-employed workers and a 0 value was given to wage workers, based on the longest job held in 1979. I hypothesized that self-employed workers are more stable workers than wage and salary earners. A positive coefficient would indicate self-employed workers were more stable workers than wage earners. The opposite would be true if the regression coefficient was negative.

Workers frequently change jobs in localities where job opportunities are expanding. Changing jobs was expected to lower one's employment stability coefficient since at any given time a worker could be either unemployed or out of the workforce. The job change variable was identified by discrete notation. A 1 was assigned to those changing jobs in 1979 and a 0 applied to those holding one job in this year.

Workers can work either full-time or hold a part-time position. The part-time variable was specified as being discrete (0,1) and based on the job held in 1979. A 1 denoted part-time workers, while full-time workers were assigned a 0 value. Workers holding part-time jobs were expected to have a less stable employment history than full-time workers. That is, part-time employment would be less attractive than full-time work, particularly among men.

Four variables were included in the model to examine employment stability among different types of industries. These variables, all discrete and based on the job held in 1979, were mining and construction; manufacturing; private services that included transportation, communications, public utilities and finance, insurance, and real estate establishments; and wholesale and retail establishments. The government sector was the reference group against which employment stability within the other five industrial groups were tested. A negative regression coefficient indicates that employment was less stable among workers in a particular industrial group than that of workers in the reference group.

Health Status. Health conditions can alter the amount of time spent at work and, thus, affect employment stability. Workers' health status in 1979 was specified as a discrete variable. That is, a 1 was assigned to workers where a health condition limited the amount of work done in 1979. Workers with no health conditions that reduced work were the reference class, assigned a 0 value.

Household Characteristics. The two variables used to identify workers' household characteristics were the spouse's annual earnings in 1979 and household size. I expected employment stability of either married women or

married men to be inversely related to spouse's annual earnings for 1979. That is, the worker's employment stability would become less at higher levels of earnings because additional earnings would be in lesser need to meet the household's demands for goods and services.

Household size represented the actual number of people in the household during 1979. I expected employment stability of married women to decline as household size increased. Furthermore, I did not expect employment stability of married men to be affected by household size. Employment stability was expected to be affected by household size for married women. They, more than married men, must generally care for children and older parents living in the household (10, 17).

Regression Model 2

A regression procedure was applied to single workers to examine which characteristics best explain employment stability in 1979. The dependent variable was the same as earlier described under the first regression model. Some modifications, however, were required in the independent variables, and only these modifications are described in this appendix.

First, single workers' relationship to head of household was entered into the model as a discrete variable, where a 1 denoted workers living in parent's household and a 0 denoted single workers that head a household. It was hypothesized that single workers who lived with their parents would be less stable in the workforce than those who were head of a household. The theory is that single workers heading a household have greater financial responsibilities than those who live with their parents. Thus, the former are more likely to have more employment stability.

Second, gender was entered into the model to verify the tabular analysis that gender among single workers does not explain employment stability. Gender was specified as a discrete variable, where a 1 was assigned to women single workers, and a 0 assigned to single men.

Third, self-employment was excluded as a variable in this model since less than 1 percent of all single workers were self-employed during 1979. The self-employed workers were included, however. Self-employment was an attribute primarily among married workers.

Fourth, no household characteristics could be specified from the available data since all single workers were analyzed together to assure a sufficient number of observations for measuring potential variability. Household size was tested but its contribution was not significant. Further, spouse's annual earnings was not an appropriate variable for single workers. A significant difference in employment stability does exist between single workers living with parents and those that head a household. The limited number of observations, however, prevented doing a separate regression analysis on employment stability for these two subgroups of single workers.

Regression Model 3

A regression procedure was applied to workers who changed jobs between January 1, 1974, and December 31, 1979. The basic design of this model was similar to that of model 1 but with some modifications in the independent variables, mainly because the time frame was over the 6-year period.[2]

Demographic Characteristics

Worker variables for age, education, and job training were unchanged from that presented in model 1. While worker age was specified in a nonlinear form, it was adjusted as follows. Recent entrants were assigned an age based on their month and year of first entry into the area's workforce. Workers who left the workforce were assigned an age estimated at date of exit. For all other workers, age was set at what it would have been in 1974, that is, current age minus 5 years. A linear relationship was expected between age and employment instability. That is, younger job changers were expected to have a less stable employment record than older and more experienced workers who changed jobs.

Recent inmigrants were included in this model and specified as a discrete variable, with a 1 assigned to recent inmigrants and a 0 assigned to all other residents. I expected employment stability to be less among recent inmigrants than longer term residents because they changed their residence location. Moving to another area, often some distance away, often reduces one's employment stability.

Employment-Related Characteristics

These variables have same basic form as described in model 1, and, of course, the variable for job changers was not included in this analysis. Significant shifts between the major industrial groups did not occur as expected. Therefore, these variables on type of industry were included in the form as described in model 1 but were identified based on the worker's longest job held within the 6-year period.

Health Status

Worker's health status was measured with two variables. One variable denotes an improved health condition in which a 1 was assigned to people who changed jobs when a health condition limited the amount or kind of work they could do in 1974 but not in 1979. The second variable denotes a worsening health condition in which a 1 was assigned when a health condition limited the amount or kind of work a worker could do in 1979 but not in 1974. Workers whose health condition remained unchanged were assigned a 0 value.

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[2] Multicollinearity high correlation between independent variables did not exist in this model.

Household Characteristics

Information about households was not available at the specific time periods when job changing actually occurred. Data were collected on household characteristics as they existed in 1979 and supplemented with recall of their circumstances 5 years earlier. A high proportion of the job changing, nearly 92 percent, took place at different time periods within the survey's January 1, 1974, through December 31, 1979, time frame. Thus, no household characteristics were specified for this regression model.

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UNITED STATES DEPARTMENT OF AGRICULTURE
ECONOMIC RESEARCH SERVICE
1301 NEW YORK AVENUE, NW.
WASHINGTON, DC 20005-4788