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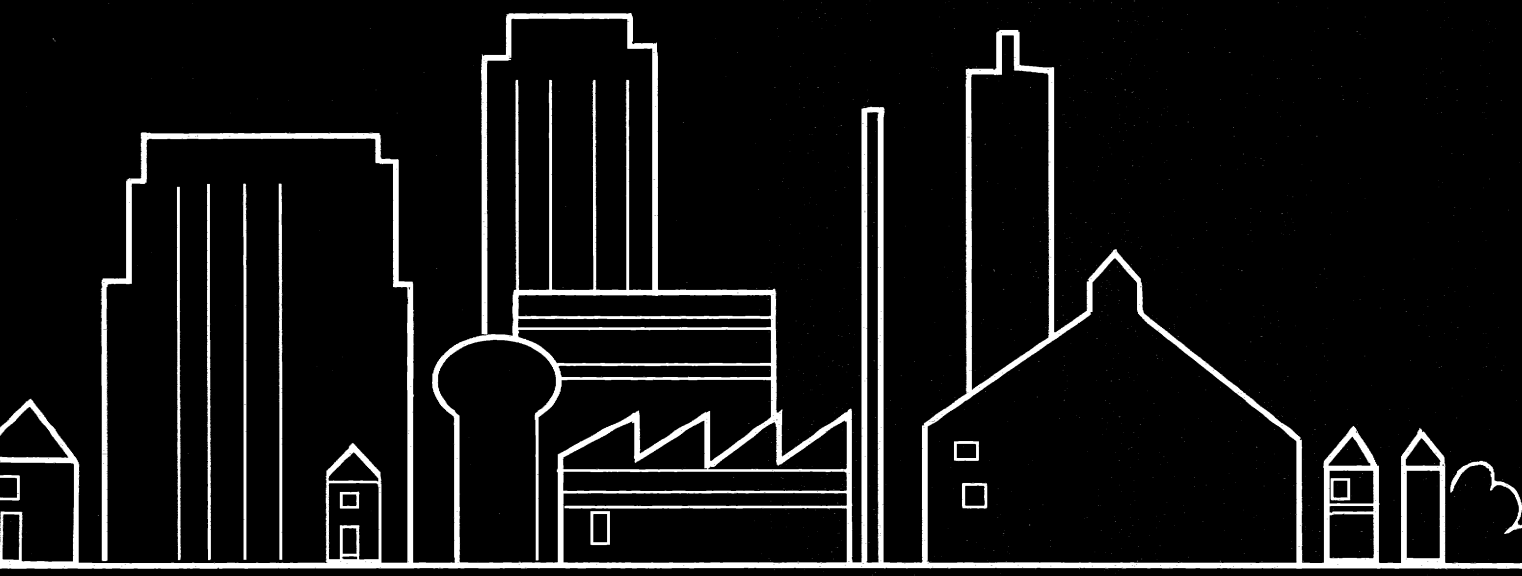
Work and Poverty in Metro and Nonmetro Areas

Elizabeth S. Morrissey



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Abstract

In 1987, worker poverty rates were 10 percent in nonmetro areas compared with 5.7 percent in metro areas. Limited employment opportunities, in terms of the number and kinds of jobs available to nonmetro workers, account for much of the higher nonmetro worker poverty rate, while individual, family, and employment attributes largely determine which workers will be poor.

Keywords: Worker, poverty, nonmetro, individual attributes, employment opportunities

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Summary

In 1987, there were 49 million family heads in the United States who worked 1 or more weeks, about 7 percent of whom were poor. However, the likelihood of poverty differed between metro and nonmetro areas. About 6 percent of metro workers were poor, compared with about 10 percent for nonmetro workers. This report examines the question: Why are nonmetro workers more likely than metro workers to be poor? The report focuses on the role of job opportunities and worker characteristics in explaining metro/nonmetro differences in working poverty.

Limited job opportunities played an important role in the higher chances of poverty for nonmetro workers. Nonmetro workers had fewer jobs from which to choose than metro workers, and the available jobs were less desirable than metro jobs in terms of wage levels, the likelihood of full-time, full-year employment, and occupation.

Certain worker characteristics, such as being poorly educated, a minority, or a single female family head, were associated with higher chances of worker poverty in both residence areas. But, with the exception of lower levels of education, these characteristics were not more prevalent among nonmetro than metro workers. However, the chances of poverty associated with each characteristic were higher for nonmetro than metro workers.

Multivariate analysis was used to clarify the role of differences in job opportunities and workers' individual characteristics in explaining the higher poverty chances of nonmetro workers. The results suggest that both factors influence workers' chances of poverty but that limited job opportunities in nonmetro areas make a strong contribution to the higher poverty risk of nonmetro workers. For example, in nonmetro areas, where job opportunities were more limited, workers had significantly greater chances of poverty than workers in metro areas. This was true even after differences in human capital (age and education), race, family situations (marital status of head and number and age of children), and employment characteristics--such as the number of family workers, level of labor force participation (whether worker worked full-time, full-year), and occupation--were taken into account.

In both residence areas, workers' characteristics significantly influenced their poverty chances. Workers with low levels of human capital and work-inhibiting demographic and family characteristics were at higher risk of poverty than other workers, probably because they tended to be employed in part-time, part-year jobs or lived in one-earner families.

Macroeconomic policies that stimulate the national economy and thus improve job opportunities in nonmetro areas may help alleviate poverty among nonmetro workers. Removing individual barriers to employment, by raising educational levels (particularly important in nonmetro areas) and providing child care, will help many poor workers in both residence areas escape poverty.

Work and Poverty in Metro and Nonmetro Areas

Elizabeth S. Morrissey*

Introduction

> A basic premise of American social policy has been and continues to be that people should work to live...that voluntary employment in a full-time job ought to be the primary way that people...meet their needs (10).[1]

Work is a fundamental value that permeates the history of American society. The notion that work is the primary route out of poverty has been a dominant theme in public policy for several decades. During the 1960's, a major thrust of the War on Poverty was on job-training programs (13). Nearly 25 years later, new anti-poverty legislation, the Family Security Act of 1988, continues to affirm the importance of work and job training as avenues by which to escape poverty.

In reality, though, many families remain poor even when the breadwinner works. In 1987, over 3 million Americans who were family heads--7 percent of all heads--worked at least to some extent, but remained poor. Of these poor workers, 1 million held full-time, year-round jobs (19).[2]

Nonmetro workers are more likely than metro workers to be poor. In 1987, over 10 percent (1.1 million) of rural family heads who worked at least to some extent were poor compared with 5.7 percent of their metro counterparts. These working poor represented over half of all poor family heads in nonmetro areas and two-fifths of those in metro areas. Furthermore, the nonmetro poor work more than the metro poor. Nearly 20 percent of nonmetro poor family heads, compared with 13 percent of metro poor family heads, worked full-time, full-year. This report examines poverty and conditions associated with poverty among working family heads in nonmetro and metro areas. Understanding the working poor and why they are poor can help officials formulate policies and design programs to reduce poverty among such workers. Furthermore, the increased chances of poverty among workers in nonmetro areas suggest that they may have needs that require special policies.

To explain the causes of working poverty, social scientists have derived explanations from general theories of poverty. First, some social scientists attribute the causes of worker poverty to economic and social forces that limit job opportunities (the number and kinds of jobs available) or impede equal access to education, jobs, and livable-wage incomes (5, 8, 9, 15). For example, economic forces in local, national, or international labor markets may increase unemployment and displacement of industrial workers, or fiscal and monetary forces may depress incomes or cause high inflation that results in higher levels of worker poverty. Furthermore, discrimination can block educational or employment opportunities for some demographic and social class groups. This is particularly true of minorities and women (1, 2, 4).

Second, other social scientists trace the primary roots of working poverty to an individual's personal characteristics or inadequacies (5, 15, 16). This thesis argues that workers remain poor because they lack the human capital--education, job skills, or work experience--or such personal attributes as initiative, dependability, or motivation that are necessary to find and maintain a regular job that pays a livable wage.

For example, educational attainment, a primary indicator of human capital, is closely related to levels of earnings. Thus, a worker with low education is more likely to be poor than one who is better educated. Similarly, an older worker's human capital,

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[1]Underscored numbers in parentheses refer to items cited in the References section at the end of this report.

[2]Throughout this report, the term worker refers to family heads who worked 1 or more weeks in 1987. (See Data, Definitions, and Methods.)

because of higher earnings, more work experience, and seniority, is higher than that of a younger worker (5).

Furthermore, workers living in certain types of families may be more prone to worker poverty than others. For example, workers with large families need more income than workers with smaller families. Also, workers who are single female family heads tend to be more prone to poverty than other family heads. This is attributable partly to the presence of children in these families, increasing the need for income, to the parent's relative unavailability for work because of child care responsibilities, and to the limited ability of other family members to contribute additional income (11, 12, 15).

Third, some social scientists believe that both the job opportunities locally open to workers and the characteristics of the particular worker play important, but different, roles in determining worker poverty status (15, 17). In this view, the quantity and quality of job opportunities are more important in determining the general local level of worker poverty, but individual characteristics are more important in determining a given worker's chances of being poor. Adapting this to a human capital perspective, economist Lester Thurow argues that workers enter a queue for the available jobs in a labor market, with the best jobs going to workers at the head of the queue (17). Workers' positions in the queue are determined by their level of human capital, gender, and race. Thus, workers' individual characteristics determine their position in the job queue, but the length of the job queue and the jobs available are determined by prevailing economic conditions.

It is this third thesis that provides the framework for examining metro/ nonmetro differences in workers' chances of poverty. The central question to this study is: why are nonmetro workers more likely than metro workers to be poor? Is it because the job opportunities open to nonmetro workers are scarcer and lower paying than those open to metro workers? Or is it that nonmetro workers tend to lack the job skills and other personal attributes needed for success in the workplace? Or is it perhaps both? A secondary concern explores which personal attributes play decisive roles in the chances of worker poverty. But, based on previous research about the economic and industrial structure of nonmetro areas and their poor, the expectation is that job opportunities are an important factor. These studies suggest that metro/nonmetro differences in the levels of worker poverty are largely predicted by metro/nonmetro differences in the levels and quality of job opportunities, with nonmetro areas having fewer and less desirable jobs. Even so, it still remains true that for any given worker, the chances of being poor will be largely determined by individual characteristics that place him or her at a disadvantage in the workplace.

Data, Definitions, and Methods

Identification of the data sources used in this paper will be followed by definitions of key variables. The methods of the study will then be presented.

Data

This analysis uses data from the 1988 March Supplement of the Current Population Survey (CPS) (19). The CPS is a stratified random sample that collects basic demographic, income, migration, and labor force data for persons, families, and households. The March CPS includes a supplement that obtains data on employment and income for the previous year, while demographic data are for March 1988.[3] [4] To be comparable with CPS published data, this study uses family heads who worked 1 or more weeks in 1987 as the unit of analysis. It is acknowledged that using this definition excludes other family workers as well as primary workers in families where the head is not employed. Those working family heads whose family income was below the poverty level in 1987 are referred to as poor workers (or the working poor), while family heads with family income above the poverty level are referred to as nonpoor workers. In all, there were 38,137,000 working family heads in metro areas, of which 2,166,000, or 5.7 percent, were poor in 1987. Nonmetro areas contained 11,488,000 working family heads with 1,145,000 (10 percent) reporting family income below the poverty level. Family heads whose metro/nonmetro residence is unidentified for confidentiality reasons have been included in the nonmetro population.[5]

[3]For example, a person who was a family head in 1988, had 1987 income below the poverty level, and worked 1 or more weeks in 1987 was considered a poor worker for the purposes of this study.

[4]The descriptive data in this report were weighted by the March Supplemental Weight provided by CPS in order to provide estimates that reflect the characteristics of the national population.

[5]Economic Research Service (ERS) estimates show that about 70 percent of all unidentified individuals resided in nonmetro areas in 1988.

Definitions

Definitions of many of the variables are self-explanatory. Definitions of key variables are as follows:

Family: Persons living together who are related by birth, marriage, or adoption.

Family head: The person in whose name the home is owned or rented. If the home is jointly owned or rented by a married couple, either the husband or the wife may be designated as the family head.

Full-time employment: Employment of 35 or more hours per week in 1987.

Full-year employment: Employment of more than 49 weeks in 1987.

Low-wage jobs: Occupations in the three-digit Standard Occupational Code were ranked according to the 1980 average earnings for full-time, full-year workers. Occupations in the bottom quintile (125 occupations) were considered low-wage.

Metropolitan resident: Person residing in a metropolitan statistical area (MSA). MSA's, as defined by the U.S. Office of Management and Budget, are areas that (1) include a city of at least 50,000 persons or (2) include a Census Bureau-defined urbanized area of at least 50,000 with a total metropolitan population of at least 100,000 (75,000 in New England). Counties form the major MSA units.

Nonmetropolitan resident: All residents not residing in metro areas.

Poverty threshold: Family income cutoff used to determine poverty status. The income cutoffs vary by family size, number of children, and age of family head. The poverty thresholds used in this study are those set by the Bureau of the Census. For example, the poverty threshold for a family of four in 1987 was an annual cash income of $11,611.

Poor workers: Workers living in families whose 1987 income was less than the poverty threshold specified for their family size, age of householder, and number of children under 18 years old.

Methods

The analysis was carried out in four phases. First, metro/nonmetro trends in levels of working poverty were examined in relation to trends in unemployment. Second, several 1987 indicators of job quality in six occupational categories were analyzed to address the question of metro/nonmetro differences in job opportunities. Third, the question of metro/nonmetro differences in worker characteristics was addressed by examining (1) metro/nonmetro variations in the chances of being poor for workers with different demographic and employment characteristics and (2) the extent to which these poverty-prone characteristics were represented among workers in both residence areas. Finally, multivariate analysis was used to assess the effects of metro/nonmetro residence on worker poverty status in relation to workers' individual and job characteristics.

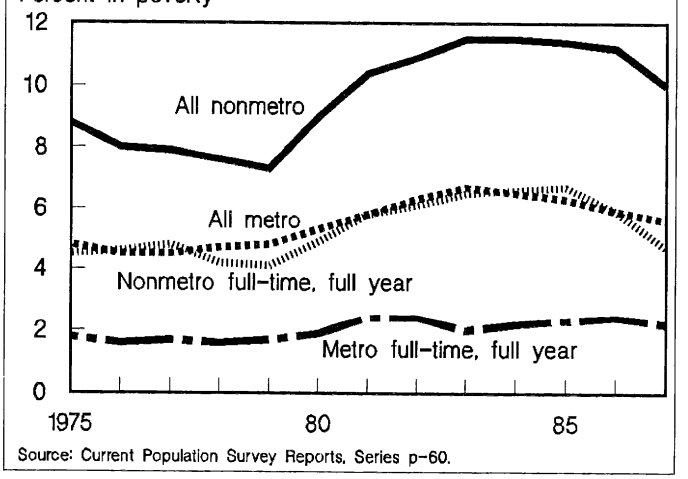
Exploration of the Problem

This section documents trends in metro and nonmetro worker poverty from 1975 to 1987 and explores some of the causes of the higher rate of worker poverty among nonmetro workers.

Worker Poverty Consistently Higher in Nonmetro Areas

The extent of worker poverty in nonmetro and metro areas is demonstrated by examining worker poverty trends for 1975-87 (fig. 1). Over the period, the poverty rate for all workers and for those who worked full-time, full-year remained higher for nonmetro family heads than for metro heads. However, the gap between metro and nonmetro poverty rates fluctuated over the period, largely in response to national or cyclical shifts in the economy. For example, the

Figure 1
Poverty rates for working family heads by residence, 1975-87



Source: Current Population Survey Reports, Series p-60.

metro/nonmetro gap in poverty rates for all workers narrowed from 4 to 2.5 percentage points during the 1975-79 economic recovery. In 1980, the year in which the farm crisis began and the manufacturing and oil industries started to decline, the metro/nonmetro worker poverty gap began widening. It reached 5.3 percentage points by 1986 before declining to 4.3 percentage points in 1987.

The gap in the poverty rate for full-time, full-year workers also narrowed from 1975 to 1979. It then reached its widest point of 4.5 percentage points in 1983. Unlike the trend for all workers, the gap narrowed after 1983 because of a slight increase in poverty among metro full-time, full-year workers and a corresponding decline in poverty among nonmetro full-time, full-year workers.[6]

Because the unemployment rate is a common indicator of economic performance, worker poverty was expected to fluctuate with the unemployment rates in both metro and nonmetro areas (fig. 2).[7] The data show that, as expected, worker poverty rates did fluctuate with unemployment rates.

Metro/nonmetro differences in unemployment rates indicate that nonmetro areas had less advantageous employment opportunities in terms of the number of available jobs. Unemployment rates in nonmetro areas were consistently higher than metro unemployment rates from 1979 to 1987. In addition, the nonmetro worker poverty rate was much slower than the metro worker poverty rate to respond to the 1984-87 drop in the unemployment rate. While some of the lag may have been due to the 1984 changes in metro/nonmetro designations, much of it was due to slower economic growth in nonmetro areas, and this may have been a contributing factor to the more limited job opportunities for nonmetro workers.

In sum, trends in metro/nonmetro worker poverty reflected metro/nonmetro unemployment trends. The nonmetro worker poverty rate remained consistently higher than the metro poverty rate, and, although fluctuating, nonmetro unemployment rates have also been higher than metro unemployment rates since 1979. The close correspondence between fluctuations in the unemployment and worker poverty rates suggests that worker poverty rates are related to job opportunities; thus, the higher nonmetro poverty rates reflect more limited jobs opportunities in nonmetro than in metro areas.

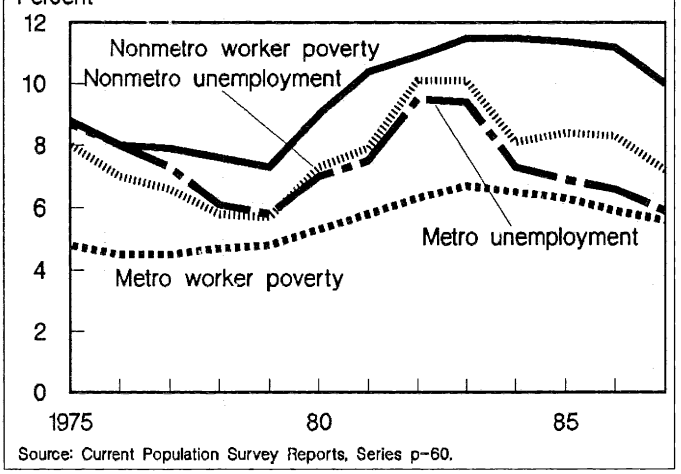
Nonmetro Jobs Pay Less

As stated above, differences in job opportunities in metro and nonmetro areas may partially explain why nonmetro workers were more likely than metro workers to be poor. Several studies (3, 6, 9) have shown that employment in nonmetro areas, compared with metro areas, tends to be dominated by part-time, low-wage jobs in agriculture, service, and manufacturing, with many of the better paying jobs located in sectors with highly unstable employment, such as mining.

The quality of jobs was lower in nonmetro than metro areas (table 1). Nonmetro jobs yielded lower earnings. Overall, nonmetro workers earned only about 75 percent of the earnings of their metro counterparts. In each of six occupational categories, mean earnings were lower in nonmetro than metro areas. The largest earnings differences were found in the administrative and professional; technical, sales, and administrative support; and service occupations. Nonmetro workers employed in these categories earned, on average, 76 percent, 79 percent, and 79 percent of metro earnings.

Poverty rates were higher for nonmetro than metro workers in all the occupational categories. The

Figure 2
Unemployment rates and poverty rates for working family heads, 1975-87



Source: Current Population Survey Reports, Series p-60.

[6]A change in CPS metro/nonmetro designation in June 1984 may have had some effect on the poverty gap from 1984 to 1987. This change reclassified places that grew to 50,000 or more persons or became suburbs of metro areas, which decreased the nonmetro population by 20.5 million people. The data show no dramatic change in poverty rates, suggesting that reclassification had little effect on the poverty rate among nonmetro workers (6).

[7]Unemployment data are from the Bureau of Labor Statistics, U.S. Department of Labor. Unemployment rates are percentages of those in civilian labor force who were not working but who were available to work during the survey week. Unemployment rates were not adjusted to take into consideration discouraged workers.

Table 1--Employment opportunity, by residence, 1987

Occupational category	Metro					Nonmetro					Earnings gap
	Workers 1/ 2/	Mean earnings of head	Share of total workers who were poor	Total workers employed part-time, part-year	Occupational distribution	Workers 1/ 3/	Mean earnings of heads	Share of total workers who were poor	Total workers employed part-time, part-year	Occupational distribution	
	Thousands	Dollars	Percent			Thousands	Dollars	Percent			
Total	38,084	27,362	5.7	23.2	100.0	11,475	20,406	10.0	26.9	100.0	74.6
Administrative and professional	11,538	38,514	1.7	14.8	30.3	2,235	29,426	3.4	16.0	19.5	76.4
Technical, sales, and administrative support	9,284	25,890	4.7	22.4	24.4	1,968	20,472	7.7	24.3	17.1	79.1
Service	3,842	14,394	18.2	39.6	10.1	1,065	11,399	26.3	43.7	9.3	79.2
Agriculture, forestry, and fisheries	702	14,574	16.7	37.6	1.8	1,118	13,223	18.9	32.7	9.7	90.7
Skilled crafts	6,648	25,286	3.7	22.8	17.5	2,420	21,159	7.0	25.9	21.1	83.7
Operators, fabricators, and laborers	6,070	20,430	7.8	29.2	15.9	2,669	18,760	9.3	29.5	23.3	91.8
Low-wage occupation 4/	38,084	13,157	16.5	--	19.0	11,475	10,393	23.7	--	19.5	79.0

-- = Not available.

1/ Includes all heads of family who worked 1 or more weeks in civilian jobs in 1987.

2/ Total contains 0.05 percent with 0 earnings, and 0.47 percent with negative earnings.

3/ Total contains 0.05 percent with 0 earnings, and 1.2 percent with negative earnings.

4/ Occupations in the three-digit Standard Occupational Code were ranked according to the 1980 average earnings for full-time, full-year workers. Occupations in the bottom quintile (125 occupations) were considered low-wage. Percent part-time, part-year was not computed.

highest poverty rates were in the service and agricultural, forestry, and fisheries occupations in both residence areas. Furthermore, a greater share of nonmetro workers than metro workers was employed in these low-earnings occupations. Conversely, a smaller share of nonmetro workers (20 percent) than metro workers (30 percent) was employed in administrative and professional occupations, the category with the lowest poverty rate.

Nonmetro Jobs More Likely to be Part-Time, Part-Year

Differences in the share of jobs that provide less than full-time, full-year employment also can help explain the lower mean earnings for nonmetro workers. Overall, about 27 percent of nonmetro workers worked part-time, part-year compared with 23 percent of metro workers. Within the occupational categories, service occupations had the largest share of part-time, part-year workers in both areas, followed by the agricultural and kindred jobs and the operators and kindred jobs categories in nonmetro areas. In all but two categories (the agricultural, forestry, and fisheries and the operators, fabricators, and laborers categories), the proportion of part-time, part-year workers was higher in nonmetro than metro areas.

While the share of jobs classified as low-wage (see section on definitions) was almost identical in metro and nonmetro areas, nonmetro workers in low-wage jobs earned, on average, only about 79 percent of metro workers' earnings. However, the most striking difference between residence areas was the substantially higher poverty rate for nonmetro workers in low-wage jobs. Only 17 percent of metro workers in low-wage jobs were poor, compared with almost 24 percent of nonmetro workers.

In summary, the employment opportunities open to nonmetro workers were more limited than for metro workers. Compared with metro areas, nonmetro areas had lower status jobs that were less likely to be full-time, full-year and which resulted in lower earnings.

Who Are the Metro and Nonmetro Working Poor?

Are workers with certain characteristics more likely than other workers to be poor? If so, are these characteristics more prevalent among nonmetro than metro workers? This section examines poverty chances among different demographic and employment groups for metro and nonmetro workers to determine if workers' characteristics make a difference in their poverty status. Individual (age, education, race) and family (type of head, presence and age of children) attributes are examined first, followed by levels of family and individual work effort (earners per family, weeks worked, and full-time versus part-time work).

Workers with certain demographic characteristics were more poverty-prone than were other workers (table 2). For example, young or poorly educated workers had a considerably higher likelihood of poverty than their older or better educated counterparts in both residence areas. Also, minorities were much more likely than whites to be poor. For example, 17 percent of blacks and 16 percent of Hispanics were poor, compared with only 5 percent of whites. Single female family heads had much higher chances of being poor (21 percent) than other family heads (5 percent). Working family heads with children were more likely to be poor than working family heads without children, and workers with young children (less than 6 years old) and with both young and older children (less than 6 years old and 6-17 years old) were more likely to be poor than workers with children who were all in the 6-17-years-old category.

Similarly, workers' employment characteristics affected their chances of being poor, with higher likelihoods of poverty among workers with the least family and individual work effort. For example, workers heading families with fewer than two earners were much more likely to be poor than workers heading families with two or more earners--a 16-percent versus 3-percent chance. Workers who worked less than 26 weeks were particularly prone to poverty. Thirty-three percent of these workers were poor compared with only 3 percent of full-year workers. Finally, workers who worked part-time were more likely than full-time workers to be poor. Over 22 percent of part-time workers were poor compared with 5 percent of full-time workers.

Moreover, the chances of poverty in each of the demographic groups were consistently higher--and in some instances substantially higher--among nonmetro than metro workers. For example, the chances of being poor for young nonmetro workers (29 percent) were almost twice that of young metro workers (17 percent). Also, the chances of poverty for minority workers were much higher in nonmetro areas. Almost 28 percent of nonmetro black workers were poor compared with 15 percent of metro black workers. In addition, nonmetro single female family heads were much more likely than their metro counterparts to be poor--31 percent compared with 19 percent. To the extent that working female heads of family are eligible for welfare, some of the greater chances of poverty for nonmetro female family heads may be explained by the lesser availability and generally lower benefit levels of Aid to Families with Dependent Children (AFDC) in

Table 2--Worker poverty rates, by selected demographic and employment characteristics, by residence, 1987

Characteristics	Metro	Nonmetro	All
		Percent	
All workers	5.7	10.0	6.7
Age:			
Less than 25 years	16.5	28.9	19.6
25-45 years old	6.7	11.0	7.7
More than 45 years old	2.7	6.0	3.4
Education: 1/			
Less than high school	14.0	15.0	14.3
High school only	5.5	9.5	6.6
More than high school	2.0	3.9	2.4
Race:			
White, non-Hispanic 2/	3.5	8.2	4.6
Black, non-Hispanic	15.4	27.6	17.4
Hispanic	15.0	30.7	16.2
Family type:			
Single female family head	18.8	31.3	21.2
Other family head	3.5	7.3	4.5
Age and presence of children:			
No children	2.1	4.9	2.7
Children less than 6 years old	8.6	17.3	10.5
Children less than 6 and 6-17 years old	12.2	17.4	13.5
Children 6-17 years old	7.1	10.8	8.0
Earners per family:			
Less than two	13.9	20.4	15.5
More than two	2.5	5.6	3.2
Weeks worked:			
Less than 26 weeks	31.0	36.3	32.5
26-49 weeks	12.1	20.0	14.1
50-52 weeks	2.7	5.5	3.4
Employment:			
Full-time	4.2	7.8	5.0
Part-time	20.5	28.6	22.6
Occupation:			
Farming, forestry, and fisheries	16.7	18.9	18.1
Service	18.2	26.3	19.9
Other	4.0	7.0	4.6

1/ Includes workers 25 years old and older.
2/ Includes other races category.

A recent Bureau of Labor Statistics (BLS) study (7) defined the working poor as all workers with below-poverty-level income who worked or who looked for work 27 or more weeks in 1987. Defining the working poor in this way, rather than as family heads who worked any weeks in 1987, resulted in lower poverty chances for the most vulnerable workers (young or poorly educated workers, nonwhites, and female family heads). Otherwise, the results were similar.

nonmetro areas. Finally, nonmetro poverty rates for workers in families with fewer than two earners, for those working 26-49 weeks, for part-time workers, and for service workers were considerably higher than metro worker poverty rates.

The preceding analysis showed that the chances of poverty varied for different groups of workers, but across all worker groups, nonmetro workers experienced greater chances of poverty than metro workers. Next, the distribution of at-risk characteristics among metro and nonmetro workers was examined to see if an overrepresentation of these characteristics explained the higher chances of poverty for nonmetro workers.

Profile of Metro and Nonmetro Workers

In some respects, levels of human capital were similar for metro and nonmetro workers (table 3). Metro and nonmetro workers were much alike in terms of age. About two-fifths of workers in each residence area were in the older, less poverty-prone category, and about 5 percent were in the under-25-years-old, more poverty-prone category. However, nonmetro workers had less education than metro workers. About 23 percent of nonmetro workers, compared with 16 percent of metro workers, lacked a high school education. Also, fewer workers with post-high school education were found in nonmetro than in metro areas.[8] Only 32 percent of nonmetro workers had any post-high school education compared with 48 percent of metro workers.

The racial and ethnic composition of workers differed by residence area, with whites making up a larger share of nonmetro than metro workers. Over 90 percent of nonmetro workers were white compared with about 81 percent of metro workers.

[8]Educational attainment was limited to workers 25 years old and older in order to capture those workers who were most likely to have completed their education.

The family characteristics of nonmetro workers differed somewhat from those of metro workers. For example, female family heads made up a smaller share of nonmetro than metro workers. Only 11 percent of nonmetro workers were female family heads compared with 14 percent of metro workers. The presence and age of children did not differentiate nonmetro and metro workers. About equal shares in both residence areas had children, and among those family heads who had children, there was little difference in childrens' ages, with about 30 percent in both residence areas having older children.

While nonmetro workers worked slightly less than metro workers, their employment patterns were quite similar. Just over 70 percent of workers in both residence areas headed families with two or more earners, and about 80 percent worked full-year.

To conclude, examination of the individual, family, and employment characteristics showed that certain worker attributes increased the chances of being poor. But, the greater chances of poverty for nonmetro than metro workers cannot be attributed to a greater representation of poverty-prone characteristics because such characteristics were not generally more prevalent among nonmetro workers. In only one instance did nonmetro workers include a larger share of workers with a characteristic associated with poverty than did metro workers--nonmetro workers had less education than metro workers. Further, the chances of poverty for nonmetro workers with each of the characteristics associated with higher poverty chances were higher than those for similar metro workers. Therefore, differences in job opportunities in nonmetro and metro areas must explain a considerable portion of the higher chances of poverty for nonmetro workers.

Multivariate Results

Multivariate analysis was used to further determine the extent to which residence versus individual, family, and employment characteristics accounted for differences in the chances of worker poverty. (See the appendix for a full presentation of methods and statistics.) Specifically, the multivariate analysis results show the separate contributions (effects) of each worker characteristic (residence, age, race, education, and the like) to poverty chances by indicating how much each characteristic increases or decreases a worker's chances of being poor after the influence of other characteristics are taken into account, or, in a technical sense, "controlled." The results also indicate the combined effects of the

Table 3--Work force composition, by selected demographic and employment characteristics by residence, 1987

Characteristics	Metro	Nonmetro	All
		Percent	
Age:			
Less than 25 years	4.5	4.9	4.6
25-45 years old	59.5	56.7	58.8
More than 45 years old	36.0	38.4	36.6
Education: 1/			
Less than high school	15.6	23.4	17.5
High school only	36.5	44.4	38.3
More than high school	47.9	32.2	44.2
Race:			
White, non-Hispanic 2/	81.2	91.1	83.5
Black, non-Hispanic	10.4	6.6	9.5
Hispanic	8.4	2.3	7.0
Family type:			
Single female family head	14.3	11.1	13.6
Other family head	85.7	88.9	86.4
Age and presence of children:			
No children	43.8	41.8	43.3
Children less than 6 years old	14.7	13.6	14.5
Children less than 6 and 6-17 years old	11.0	11.7	11.1
Children 6-17 years old	30.5	32.9	31.1
Earners per family:			
Less than two	27.6	29.5	28.1
More than two	72.4	70.5	71.9
Weeks worked:			
Less than 26 weeks	5.9	7.7	6.4
26-49 weeks	13.4	14.6	13.6
50-52 weeks	80.7	77.7	80.0
Employment:			
Full-time	91.1	89.6	90.8
Part-time	8.9	10.4	9.2
Occupation:			
Farming, forestry, and fisheries	1.8	9.7	3.4
Service	10.2	9.3	9.9
Other	88.0	81.0	86.7

1/ Includes workers 25 years old and older.
2/ Includes other races category.

characteristics: how well these characteristics, taken as whole, explain worker poverty chances.

Nonmetro Residence Increases Workers' Chances of Poverty

Table 4 presents the increased or decreased differences in poverty chances associated with each characteristic. This table shows the increased likelihood of poverty, first with only residence (metro or nonmetro) considered, then with family and individual characteristics considered, and, lastly, with employment characteristics taken into account. Residence had an important effect on worker poverty, all else being equal. Before individual, family, and employment characteristics were taken into account (see first column), living in a nonmetro area increased a worker's chances of poverty by 5 percentage points over those for a metro worker. After the individual and family characteristics were considered (second column), the chances of poverty for nonmetro workers were almost 8 percentage points higher than those for metro workers. When employment characteristics were considered as well (third column), their poverty chances were still 8 percentage points higher than those for metro workers. This means that even if nonmetro workers were the same age, had the same level of education, were the same race, lived in the same types of families, and worked the same number of weeks per year in the same occupations, they would still face an 8-percentage-point greater chance of poverty than their metro counterparts.

The individual and family characteristics significantly influenced worker's chances of poverty. For example, having children increased a workers' poverty chances considerably, with workers who had both young and older children (less than 6 years old and also 6-17 years old) at particularly high risk of poverty. Their chances of poverty were about 24 percentage points higher than for similar workers with no children. Having young children (less than 6 years old) also increased workers' chances of poverty, with the likelihood of poverty for workers with children in this age category 15 percentage points higher than that for similar workers with no children.

Employment characteristics sometimes reduced the poverty chances of those disadvantaged by individual and family characteristics. The risk of poverty for two particular groups of workers, single female family heads and poorly educated workers, was considerably reduced by the addition of the employment characteristics. Single female family heads experienced poverty chances that were over 20 percentage points higher than those of other family heads with similar human capital, racial, and family characteristics. But, their likelihood of poverty was only 7 percentage points higher than for other family heads when such employment characteristics as work effort, number of family earners, and occupation were also taken into consideration. This suggests that one of the ways in which being a single female family head contributes to poverty is by reducing the likelihood of full-time, full-year employment in an above-poverty-level-wage job. In a like manner, workers lacking a high school education faced a considerably greater likelihood of poverty than workers with post-high school education. The poverty chances for these workers were 23 percentage points higher than those for workers with post-high school education. However, after their employment characteristics were taken into account, their chances of poverty were only 16 percentage points higher than those of workers with post-high school education. Thus, being poorly educated, like being a female family head, increased the likelihood of poverty by reducing the chances of successful employment.

After taking residence and the other individual and family characteristics into account, the poverty chances for young workers (under 25 years old) were 9 percentage points higher than those for prime age workers (25-45 years old). The addition of the employment characteristics had little effect on their poverty chances.

Minority workers were more likely to be poor than similar white workers. The poverty chances for black and Hispanic workers were about 8 percentage points greater than those for whites. The effect of race was not substantially changed by accounting for their employment characteristics.

The employment characteristics were critical predictors of workers' poverty chances. Working relatively few weeks annually (less than 26 weeks) had a strong effect on a worker's poverty chances. Workers who worked only a few weeks per year experienced poverty chances that were 33 percentage points higher than those for full-year workers with the same residence, human capital, racial, family, and employment characteristics. Employment in agricultural, forestry, and fisheries occupations also affected workers' poverty chances, with the likelihood of poverty for these workers 17 percentage points over those for workers in other occupations after the effect of the individual and employment characteristics were considered. Being employed in a service occupation did not affect the likelihood of poverty nearly so much as working in an agricultural occupation; the increased

Table 4--Changes in likelihood of worker poverty for residence, family, individual, and employment characteristics 1/

Characteristics	Residence only considered 2/	Residence, individual, and family characteristics considered	Residence, individual, family, and employment characteristics considered
Residence:			
Nonmetro	0.050	0.075	0.079
Metro 3/	--	--	--
Age:			
Less than 25 years	--	.090	.068
24-45 years old	--	--	--
More than 45 years	--	-.013	-.027
Education:			
Less than high school	--	.233	.156
High school only	--	.073	.056
More than high school	--	--	--
Race:			
White, non-Hispanic	--	--	--
Black, non-Hispanic	--	.081	.083
Hispanic	--	.075	.080
Family type:			
Single female family head	--	.202	.072
Other heads	--	--	--
Age and presence of children:			
No children	--	--	--
Children less than 6 years old	--	.152	.145
Children less than 6 and 6-17 years old	--	.239	.251
Children 6-17 years old	--	.096	.134
Earners per family:			
Less than two	--	--	--
More than two	--	--	-.048
Weeks worked:			
Less than 26 weeks	--	--	.327
26-49 weeks	--	--	.114
50-52 weeks	--	--	--
Employed:			
Full-time	--	--	-.042
Part-time	--	--	--
Occupation:			
Farming, forestry, and fisheries	--	--	.170
Service	--	--	.073
Other workers	--	--	--
Combined effects	.010	.214	.359

-- = Not applicable

1/ All variables significant at the 0.05 level.

2/ Statistics represent how much each characteristic increases or decreases chances of worker poverty over those of the reference category.

3/ Bolded characteristics are reference groups.

Source: See appendix table 1.

chances of poverty for service workers were only 7 percentage points greater than those for other workers.

Even though they were statistically significant, the other employment characteristics had less influence on poverty chances than working a limited number of weeks or being employed in an agricultural or kindred occupation. Living in a multiple-earner family, compared with living in a single-earner family, decreased a worker's likelihood of poverty about 5 percentage points. Working full-time versus part-time also decreased the likelihood of poverty about 4 percentage points.

Finally, the combined effect of the characteristics in explaining worker poverty status shows that, by itself, residence explains about 1 percent of the difference in metro and nonmetro workers' poverty chances. The inclusion of the human capital, race, and family characteristics increases the amount of explained variation in poverty chances to about 21 percent. Adding the employment characteristics increases the combined effect of the characteristics considerably, explaining about 36 percent of variation in poverty chances among workers.

Workers' Characteristics Influence Metro/Nonmetro Poverty Chances Similarly

The preceding analysis answers the question of how the various characteristics influenced poverty chances for all workers. But, it raises the question of whether the characteristics might affect workers' poverty chances differently in metro and nonmetro areas. Some characteristics may be important predictors of poverty in one residential area but not in the other. If the characteristics affect workers' chances of poverty differently in metro and nonmetro areas, then different policies for different areas might be required to alleviate worker poverty. To address this issue, the effect of the various individual, family, and employment characteristics on poverty chances were evaluated separately by metro/nonmetro residence.

In general, individual, family, and employment characteristics increased or decreased workers' chances of poverty similarly in metro and nonmetro areas, and with the exception of being an older worker in nonmetro areas, all the characteristics were statistically significant predictors of poverty (table 5). However, the differences in poverty chances associated with each of the characteristics (except working less than 26 weeks per year) were larger in nonmetro than metro areas.[9] Additionally, the combined, or overall, effect of the characteristics in explaining worker poverty chances was somewhat weaker in nonmetro than metro areas, further supporting the view that restricted job opportunities make an important contribution to the higher chances of worker poverty in nometro areas.

There were some other slight differences in the characteristics' effect on poverty chances. Working in a farming, forestry, or fisheries occupation had a much stronger effect on the likelihood of worker poverty in nonmetro than metro areas. The chances of poverty for nonmetro workers in these occupations were 22 percentage points higher than those for other workers, while metro workers in the farming and kindred occupations had poverty chances that were only 14 percentage points greater than other workers.

Race affected poverty chances differently by residence. For example, the chances of poverty for nonmetro black workers were 9 percentage points higher than the chances for white workers, compared with 7 percentage points higher for metro black workers. While both metro and nonmetro female family heads faced a higher risk of poverty than other family heads, the increases in their chances of poverty were substantially higher in nonmetro areas (25 percentage points) than metro areas (18 percentage points) before the employment characteristics were taken into account. Finally, being a young worker had a somewhat stronger influence on poverty chances for workers in nonmetro areas.

To summarize, both multivariate analyses confirmed that residence directly influences worker poverty. In the first analysis, workers living in nonmetro areas had a significantly higher likelihood of poverty than metro workers even after differences in individual, family, and employment characteristics were taken into consideration. Furthermore, the results of the second multivariate analysis showed that nonmetro workers had higher likelihoods of poverty associated with each of the individual, family, or employment characteristics.

But, nonmetro workers' increased chances of poverty were not entirely explained by the quality of job opportunities where they live. In both analyses, all but one of the human capital characteristics, as well as the race, family, and employment characteristics, were

[9]The difference in probabilities for metro and nonmetro workers working less than 26 weeks may not be statistically significant but may be due to chance.

Table 5--Changes in likelihood of worker poverty for family, individual, and employment characteristics by residence

Characteristics	Metro		Nonmetro	
	Individual and family characteristics considered 1/	Individual, family, and employment characteristics considered	Individual and family characteristics considered	Individual, family, and employment characteristics considered
Age:				
Less than 25 years	0.075	0.057	0.127	0.101
25-45 years 2/	--	--	--	--
More than 46 years	-.015	-.023	-.007**	-.035
Education:				
Less than high school	.227	.158	.246	.159
High school only	.061	.046	.099	.078
More than high school	--	--	--	--
Race:				
White, non-hispanic	--	--	--	--
Black, non-hispanic	.075	.072	.089	.115
Hispanic	.063	.072	.095	.078
Family type:				
Single female family head	.181	.059	.245	.105
Other heads	--	--	--	--
Age and presence of children:				
No children	--	--	--	--
Children less than 6 years old	.142	.130	.179	.182
Children less than 6 and 6-17 years old	.234	.234	.257	.286
Children 6-17 years old	.096	.125	.101	.154
Earners per family:				
Less than two	--	--	--	--
More than two	--	-.042	--	-.061
Weeks worked:				
Less than 26 weeks	--	.341	--	.322
26-49 weeks	--	.101	--	.149
50-52 weeks	--	--	--	--
Employment:				
Full-time	--	-.036	--	-.060
Part-time	--	--	--	--
Occupation:				
Farming, forestry, fisheries	--	.136	--	.224
Service	--	.065	--	.088
Other workers	--	--	--	--
Combined effect	.231	.382	.162	.300

-- = Not applicable.

** = Not significant at 0.05 level.

1/ Statistics represent how much each characteristic increases or decreases chances of worker poverty over those of the reference category.

2/ Bolded characteristics are reference groups.

Source: See appendix table 2.

significant predictors of worker poverty. Also, in both analyses, the combined effect of workers' family, individual, and employment characteristics explained more than 30 percent of variation in poverty chances.

Finally, the influence of workers' attributes on their poverty chances operated much the same way in both metro and nonmetro areas. In other words, poorly educated workers or part-time workers have a greater risk of poverty than well-educated workers or full-time workers, regardless of where they live.

Conclusions

Despite fluctuations in the poverty gap between residence areas, worker poverty rates remained higher in nonmetro areas than metro areas from 1975 through 1987.

Differences in job opportunities played an important role in the higher worker poverty rates in nonmetro areas. Comparison of the kinds of jobs that were available in both areas showed that job opportunities were more limited in nonmetro areas than metro areas. Higher unemployment rates indicated that there were fewer jobs for nonmetro workers to choose from, and examination of job characteristics showed that nonmetro jobs were not as desirable as metro jobs in terms of earnings levels, full-time, full-year employment, or occupation. However, the multivariate analysis showed that nonmetro workers' poverty chances were not determined solely by job opportunities. Residence was a significant predictor of poverty even after differences in worker characteristics were considered, but it did not explain all or even most of the variation in poverty chances.

Worker characteristics played an important role in explaining the chances of poverty for all workers, but they did not explain the higher chances of poverty for nonmetro workers. While certain worker characteristics, such as low educational attainment or being a single female family head, are associated with higher chances of worker poverty, these characteristics were not generally more prevalent among nonmetro than metro workers. For example, although less educated workers were more prevalent among nonmetro workers than metro workers, the nonmetro workforce included smaller shares of workers who were single female family heads or minority workers than the metro workforce. Finally, even though worker characteristics worked much the same way in both residence areas, they accounted for slightly less variation in poverty chances in nonmetro than metro areas. This suggests that factors other than worker characteristics, such as job opportunities, play a stronger role in nonmetro than metro areas.

To conclude, worker poverty status was determined by job opportunities and factors rooted in the individual worker. The findings that nonmetro jobs provided lower earnings and that nonmetro workers, regardless of their characteristics, were more likely than metro workers to be poor suggest that limited job opportunities make a strong contribution to the higher level of worker poverty in nonmetro areas, while worker characteristics largely determine which particular workers will be poor.

Implications

The preceding analysis examined metro/nonmetro differences in job opportunities and worker characteristics in order to explain the higher rates of poverty among nonmetro workers. The findings suggest that limited job opportunities in nonmetro areas are an important factor in their higher worker poverty rate but that workers with certain characteristics in both residence areas are prone to poverty. Thus, efforts to reduce working poverty will have to take both of these factors into account.

Strong economic growth will improve job opportunities, which will help many of the working poor. Strong national economic performance improves the number and kinds of jobs available, improving chances for poor workers who are employed full-time, full-year at low earnings or who are involuntarily employed part-time, part-year to escape poverty. Improved employment prospects are particularly important to nonmetro areas where job opportunities are more limited than in metro areas.

Some workers, regardless of residence, may not benefit much from improved job opportunities. The findings suggest that poorly educated workers may have difficulty finding employment that provides above-poverty-level earnings no matter how well the general economy is doing. Educational and employment assistance for those who have not acquired adequate skills could help many of these workers achieve a higher standard of living. Upgrading the educational levels of poor workers would be particularly helpful to those in nonmetro areas where more than 20 percent of workers over 25 years old had not completed high school.

Single female family heads have difficulty working full-time, full-year regardless of the overall

economic situation. Assistance in meeting their parental responsibilities would increase their availability for work, while assurance of child support could reduce their risk of poverty by increasing their income.

Despite significant progress since the 1960's, discrimination still limits the earnings of some minorities and women. In both residence areas, workers who are minorities or women have much higher chances of poverty than whites or males. A reinforced public commitment to reducing discrimination would increase the likelihood that all workers would be treated equally in terms of educational and employment opportunities and thus reduce poverty chances for those workers who are most likely to experience discrimination.

Finally, the Earned Income Tax Credit (EITC), a refundable Federal tax credit targeted to low-income workers and an important source of support for many of the working poor, might be expanded. The EITC is extended to all workers with earnings below a specified level, provided they have at least one dependent child. The size of the tax credit is based solely on the amount earned and does not take family size into account. Adjusting the EITC to reflect the number of children in a family would provide poor workers with income more in line with their family needs and would make working, even at low wages, more competitive with welfare programs that index benefits according to family size. In keeping with its stated purpose of improving incentives to work, the EITC might also be extended to all low-income workers (20).

References

1. Cho, Woong K. "Race Differentials In Perceived Employment Barriers in the Rural South," Dimensions of Poverty in the Rural South. Eds. Jogindar S. Dhillon and Marguerite R. Howe. Center for Community Development and Research, Florida Agricultural and Mechanical University, Tallahassee, FL, 1986.

2. Coverhill, James E. "The Dual Economy and Sex Differences in Earnings," Social Forces 66 (4): 970-993, 1988.

3. Deavers, Kenneth L., Robert A. Hoppe, and Peggy J. Ross. "Public Policy and Rural Poverty: View From the 1980's," Policy Studies Journal 15 (2): 291-310, 1986.

4. Farley, Reynolds. Blacks and Whites, Narrowing the Gap? Cambridge, MA: Harvard University Press, 1989.

5. Gordon, David M. Theories of Poverty and Underemployment. Washington, DC: Heath and Co., 1972.

6. Hoppe, Robert A., and Donald L. Bellamy. "Rural Poverty: A Continuing Problem." Speech presented at meeting of Washington Statistical Society, May 1989.

7. Klein, Bruce, and Philip L. Rones. "A Profile of the Working Poor," Monthly Labor Review 112 (10): Oct. 1989.

8. Levitan, Sar A., and Isaac Shapiro. Working But Poor, America's Contradiction. Baltimore, MD: The Johns Hopkins Press, 1987.

9. Lichter, Daniel, and Janice A. Costanzo. "Underemployment in Nonmetro America, 1970-1982." Unpublished paper, Dec. 1985.

10. Lynn, Lawrence E., Jr. "A Decade of Policy Developments in the Income Maintenance System," A Decade of Federal Antipoverty Programs, Achievements, Failures and Lessons. Ed. Robert Haveman. New York: Academic Press, 1977.

11. McLanahan, Sara, Irvin Garfinkel, and Dorothy Watson. Family Structure, Poverty, and the Underclass. IRP Discussion Paper #823-87. University of Wisconsin, Institute for Research on Poverty, Madison, WI, 1988.

12. McLaughlin, Diane K., and Carolyn Sachs. "Poverty in Female-headed Households: Residential Differences," Rural Sociology 53 (3): pp. 52-54, 1988.

13. Plotnick, Robert D., and Felicity Skidmore. Progress Against Poverty: A Review of the 1964-1974 Decade. New York: Academic Press, 1975.

14. Petersen, Trond. "A Comment on Presenting Results From Logit and Probit Models," American Sociological Review 50 (1): pp. 130-131, 1985.

15. Schiller, Bradley R. The Economics of Poverty and Discrimination. Engleside Cliffs, NJ: Prentice Hall, Inc., 1984.

16. Taggart, Robert. Hardship, The Welfare Consequences of Labor Market Problems. W.E. Upjohn Institute for Employment Research, Kalamazoo, MI, 1982.

17. Thurow, Lester. Generating Equality. New York: Basic Books, 1975.

18. U.S. Department of Commerce, Bureau of the Census. Computer tape. March Supplement of the Current Population Survey, Mar. 1988.

19. _____, Bureau of the Census. Poverty in the United States 1987. Current Population Reports. Series P-60, No. 160, pp. 70-74. 1988.

20 U.S. House of Representatives, Committee on Ways and Means. Background Material and Data on Programs Within the Jurisdiction of the Committee on Ways and Means. WMCP:101-4, pp. 834-835. 1990.

Appendix

Following the descriptive analysis, logistic regression analysis was used to determine (1) the extent to which the residential, individual and family, and employment characteristics account for the differences in workers' chances of poverty, and (2) whether the characteristics differently affect poverty chances in metro and nonmetro areas.

Logit analysis examines the relationships between a dichotomous dependent variable and a set of independent variables by analyzing the chances of a dependent variable as a function of the independent variables. In the following logit application, poverty status (the dependent variable) is predicted by several determinants of poverty (independent variables).

The results of the logit analysis include beta coefficients (B), standard errors (in parentheses), transformed betas (P), and R2's (combined effect).

The beta coefficients reflect the effect of a unit change in the independent variable on the log odds of being poor, while the transformed betas reflect the increased or decreased probability of being poor caused by a unit change in the independent variable (14). The R2's represent the combined effect of the variables or the amount of variation in worker poverty explained by the model.

Multivariate Models of Poverty Among Workers

In all, there were 10 independent variables representing the residential, educational, racial, family, and employment characteristics of metro and nonmetro workers. One variable considered in the descriptive analysis, the low-wage occupational measure, was excluded because of its high correlation with service occupations. The effect of each attribute on the likelihood of poverty is the increase or decrease in the probability of poverty associated with that attribute compared with a reference group that has identical characteristics. For example, the effect of race is the additional likelihood of poverty that black workers experience over the likelihood of poverty for white workers of the same age who reside in the same area and have the same educational levels, family situations, and employment characteristics. Depending on its sign (+ or -), the value indicates how much a given characteristic increases or decreases the chances (probabilities) of poverty, relative to a comparison group. The employment characteristics are added separately in order to determine their effect on (1) the individual and family variables on workers' chances of poverty and (2) the amount of explained variation in worker poverty.

Appendix table 1 presents three hierarchical models of worker poverty that control for a worker's residential, individual and family, and employment traits. The first column predicts poverty solely from the metro/nonmetro residence variable. The second column adds the individual and family characteristics to the residential variable, while the third column includes the characteristics in the preceding models and the employment characteristics. Finally, appendix table 2 presents the family and individual factors, and then the employment factors as these are affected by metro/nonmetro residence.

Appendix table 1--Regression of poverty on residence, individual, family, and employment characteristics 1/

Characteristics	Residence only considered		Residence, individual, and family characteristics considered		Residence, individual, family, and employment characteristics considered	
	B 2/	P 3/	B	P	B	P
Residence:	0.594	0.050	0.812	0.075	0.682	0.079
Nonmetro	(.045)		(.052)		(.059)	
Age:						
Less than 25 years	--	--	.928	.090	.757	.068
			(.090)		(.103)	
More than 45 years	--	--	-.217	-.013	-.513	-.027
			(.071)		(.083)	
Education:						
More than high school	--	--	1.755	.233	1.362	.156
			(.069)		(.077)	
High school only	--	--	.799	.073	.655	.056
			(.064)		(.070)	
Race:						
Black, non-Hispanic	--	--	.862	.081	.879	.083
			(.069)		(.078)	
Hispanic	--	--	.811	.075	.859	.080
			(.067)		(.075)	
Family type:						
Single female family head	--	--	1.605	.202	.790	.072
			(.054)		(.067)	
Age and presence of children:						
Children less than 6 years old	--	--	1.338	.152	1.305	.145
			(.087)		(.100)	
Children less than 6 and 6-17 years old	--	--	1.785	.239	1.842	.251
			(.086)		(.100)	
Children 6-17 years old	--	--	.972	.096	1.227	.134
			(.073)		(.086)	
Earners per family:						
More than two	--	--	--	--	-1.199	-.048
					(.057)	
Weeks worked:						
Less than 26 weeks	--	--	--	--	2.174	.327
					(.074)	
26-49 weeks	--	--	--	--	1.100	.114
					(.064)	
Employment:						
Full-time	--	--	--	--	-.974	-.042
					(.070)	
Occupation:						
Farming, forestry, and fisheries	--	--	--	--	1.440	.170
					(.094)	
Service	--	--	--	--	.800	.073
					(.070)	
Combined effects	.010	--	.214	--	.359	--

-- = Not applicable.

1/ All variables significant at the 0.05 level.

2/ Beta coefficients; standard errors in parentheses.

3/ Probability is the effect of unit change in the independent variable on the likelihood of being poor (14).

Appendix table 2--Logistic regression of poverty on individual, family, and employment characteristics by residence

Characteristics	Metro				Nonmetro			
	Individual and family characteristics considered		Individual, family, and employment characteristics considered		Individual and family characteristics considered		Individual, family, and employment characteristics considered	
	B 1/	P 2/	B	P	B	P	B	P
Age:								
Less than 25 years old	0.911	0.075	0.751	0.057	0.968	0.127	0.810	0.101
	(.114)		(.131)		(.146)		(.168)	
More than 45 years old	-.310	-.015	-.528	-.023	-.078	-.007*	-.459	-.035
	(.092)		(.108)		(.112)		(.131)	
Education:								
More than high school	1.865	.227	1.500	.158	1.556	.246	1.139	.158
	(.087)		(.097)		(.116)		(.127)	
High school only	.783	.061	.635	.046	.801	.099	.662	.078
	(.082)		(.089)		(.105)		(.114)	
Race:								
Black, non-Hispanic	.915	.075	.885	.072	.736	.089	.899	.115
	(.081)		(.093)		(.130)		(.145)	
Hispanic	.802	.063	.888	.072	.779	.095	.665	.078
	(.077)		(.086)		(.146)		(.163)	
Family type:								
Single female family head	1.630	.181	.766	.059	1.553	.245	.834	.105
	(.067)		(.083)		(.092)		(.117)	
Age and presence of children:								
Children less than 6 years old	1.402	.142	1.327	.130	1.244	.179	1.256	.182
	(.112)		(.129)		(.141)		(.160)	
Children less than 6 and 6-17 years old	1.903	.235	1.899	.234	1.604	.257	1.726	.286
	(.111)		(.129)		(.138)		(.158)	
Children 6-17 years old	1.081	.096	1.290	.125	.813	.101	1.114	.154
	(.095)		(.112)		(.116)		(.134)	
Earners per family:								
More than two	--	--	-1.349	-.042	--	--	-.990	-.061
			(.074)				(.089)	
Weeks worked:								
Less than 26 weeks	--	--	2.377	.341	--	--	1.874	.322
			(.095)				(.120)	
26-49 weeks	--	--	1.119	.101	--	--	1.089	.149
			(.082)				(.101)	
Employment:								
Full-time	--	--	-.988	-.036	--	--	-.965	-.060
			(.089)				(.115)	
Occupation:								
Farming, forestry, and fisheries	--	--	1.359	.136	--	--	1.453	.224
			(.159)				(.116)	
Service	--	--	.824	.065	--	--	.728	.088
			(.085)				(.125)	
Combined effects	.231	--	.382	--	.162	--	.300	--

-- = Not applicable.

* = Not significant at 0.05 level.

1/ Beta coefficients; standard errors in parentheses.

2/ Probability is the effect of unit change in independent variable on the likelihood of being poor (14).

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