Education and Rural Minority Job Opportunities

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Rural[1] minorities—Blacks, Hispanics, and Native Americans—are disadvantaged in rural labor markets. Compared with non-Hispanic Whites, they are more likely to be jobless or, if they work, to work part-time or part-year. Rural minority workers earn less than non-Hispanic Whites, and this gap increased during the 1980's. Low levels of education have increasingly limited the economic opportunities of all three minorities, but only partly account for their low earnings. Other disadvantages differ among the minorities and between men and women. Native American men and women have extremely high rates of joblessness and little full-time work. Limited English ability and concentration in agriculture hamper Hispanic men—much more so than Hispanic women. Black men appear to face pay discrimination not found for other groups or for Black women. All of these problems tended to be more pronounced at the end of the 1980's than at the beginning.

The U.S. economy of the 1980's was an urban, high-education economy. Increasing global competition and rapid technological change contributed to declining wages for less-skilled workers, rising earnings for the better educated, and increasing earnings inequality (Falk and Lyson, 1988; Gorham, 1993; McGranahan and Ghelfi, 1991). New high-tech activities tended to locate in urban areas while older, more low-tech activities, which in previous decades would have shifted to rural areas, tended to go abroad instead. The result was rapidly growing urban economies in the 1980's, but rural economic stagnation. Rural unemployment remained high over the decade, inflation-adjusted earnings fell, and rural workers became increasingly disadvantaged relative to urban workers. This chapter investigates

changes in the situation of rural minority workers over rural America's economically troubled 1980's.

There are two basic reasons to expect that rural minorities may have been particularly disadvantaged by the economic transformations of the 1980's. First, job opportunities were especially meager during the decade for rural people with low levels of education (McGranahan and Ghelfi, 1991; Gorham, 1993). The stagnation of rural manufacturing meant that the rural jobs being created were largely confined to the lower-paying consumer and personal services sectors. And, while rural people with limited schooling once enjoyed reasonable opportunities in the cities, especially in low-tech manufacturing (for example, autos, steel), the transformation of urban economies into high-tech and producer services centers severely limited those opportunities during the 1980's. The relatively low education levels of rural minorities suggest that they may have been especially vulnerable in the economic restructuring of the 1980's.

Second, opportunities were quite uneven across the rural landscape. Rural settlements near major urban centers generally grew between 1980 and 1990. Elsewhere, populations were constant or declining, except in regions attractive to vacationers or retirees and areas with significant service centers (see *Rural Conditions and Trends,* 1993). Rural Native Americans, especially, live in areas remote from urban influence. While rural Blacks and Hispanics live in less geographically isolated areas, many live in places of persistent poverty (See Beale's chapter on persistent poverty). These areas are remote by virtue of their poor connections to the broader world and, some argue, cultural isolation (RSS Task Force, 1993). Thus, while high-tech industries in the South have avoided rural areas in general, they are particularly sparse in the rural Black Belt (Falk and Lyson, 1988).

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[1] Rural people are those who live in counties outside the boundaries of metropolitan areas, as defined by the Office of Management and Budget. Thus, rural counties include small cities (under 50,000 pop.), small towns, and open country. See appendix for a complete definition.

Rural minorities may also be disadvantaged due to a number of other factors, including poor English language abilities, health disabilities, high proportions of single-parent families, and job discrimination.

Previous research on rural minorities suggests that Blacks and Hispanics generally fared more poorly in the rural labor market than did Whites during the 1980's. Jensen (1991) found that, in contrast to earlier decades, rural Black and Hispanic family incomes declined both absolutely and relative to those of rural Whites during 1979-86. Both Lyson (1991) and Gorham (1993) found that earnings had declined more for rural Black and Hispanic men than for rural White men, but their results for rural women were mixed. These studies did not, however, examine changes in labor force participation, or the reasons for the relative low earnings of rural minorities.

The first part of our analysis examines four measures of labor market status for the working-age population (those 18-64 years old): (1) the proportion who did not work at all in the year prior to the census (also here referred to as jobless); (2) the proportion who worked full-time/full-year; (3) average wage and salary earnings of workers in the previous year; and (4) education completed.[2] We analyze these measures first for the rural population as a whole, then specifically for rural minorities. The second part of our analysis concentrates on earnings and the sources of differences in earnings between rural minorities and the rural population as a whole. Our basic approach, following Duncan (1968), Cain, (1986), and Reimers (1983), is to develop a statistical model to predict earnings of rural workers on the basis of education, hours and weeks worked, work disability, region, and other characteristics, and to determine how much of the differences in earnings between groups is due to differences in these characteristics. To the extent that any earnings disparity cannot be accounted for by differences in the job-related characteristics for which we have measures, other (unmeasured) factors, including community characteristics and job discrimination, may be involved. One weakness of this approach is that it focuses on individual traits and leaves the (possible) influence of community-specific factors analyzed only indirectly (RSS Task Force, 1993).

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[2] The census collects data on unemployment, but only for the previous week. Since the measure is highly affected by the time of the year the census is taken, we do not include unemployment as an indicator of labor market status. Unemployment statistics may be found in the appendix to this report.

The method is discussed more fully in the appendix of this chapter.

Finally, because education plays a major role in determining job opportunities and earnings, our study concludes with an analysis of changes in minority education levels during the 1980's. We focus on young adults (age 25-34), as it is primarily through the education of people beginning their careers that the skill levels of the work force are improved.

The data for this study come from the Bureau of the Census's Public-Use Microsample B files drawn from the 1980 and 1990 Censuses of Population and Housing. The 1980 file permits the complete identification of metro/nonmetro residence, which we use to measure urban/rural location; the 1990 file leaves residence unidentified for a small percentage of the population (see appendix to report). The territorial delineation of metropolitan changed in 1990 to reflect population changes over the decade, and part of the change we find may reflect this change in delineation. The 1980 delineation was also a new one, however, and reflected population changes that had occurred in the 1970-80 decade. The definitions are thus comparable, in that each represents the residential patterns at the date of the census. In any case, results for the rural population as a whole are quite similar to the findings in McGranahan and Ghelfi (1991) and *Rural Conditions and Trends* (1993), which drew on different data sets, suggesting that the changes in delineation have had little substantive effect on the overall results.

A Review of Rural Labor Market Conditions and Trends in the 1980's

Labor market disparities increased considerably in the 1980's, both between rural and urban areas and across education groups. Two of the three measures of opportunities (joblessness and earnings) suggest that rural men, particularly those with low education, were worse off by the end of the decade. Rural women worked more in 1989 than in 1979, but earnings rose substantially only for those with college educations.

The proportion of rural working-age men who had no work in the previous year increased between 1980 and 1990, especially among those lacking a high school diploma (fig. 1). Nearly one in every four rural men who did not complete high school reported no work for pay in 1989. Although women entered the workforce over the 1980's in both rural and urban

Figure 1
Jobless, age 18-64, by educational attainment, 1980-90
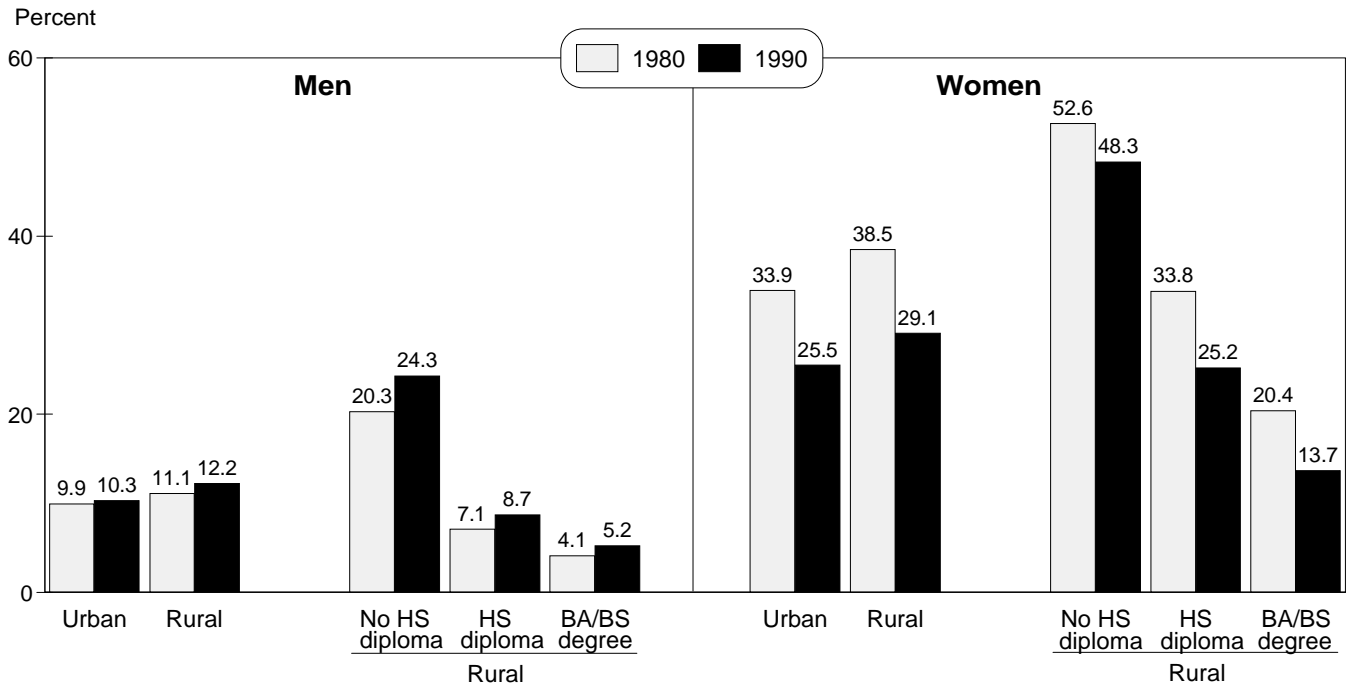
Percent

Jobless = Did not work in the previous year, whether or not work was sought. Urban and rural are equivalent to metropolitan and nonmetropolitan.
Source: Compiled by Economic Research Service from Public Use Microdata Samples, 1980 and 1990 Census.

areas, rural women remained less likely to work than urban women.[3] For rural women, as for rural men, education had a strong bearing on the likelihood of working. Nearly half of working-age women without a high school diploma did no work for pay in 1989. In contrast, only one in eight women with a college degree was not in the workforce.

Among wage and salary workers in 1989, about two-thirds of the rural men and half the rural women were fully employed (fig. 2). There is no indication of greater difficulty in finding full employment in 1989 than in 1979, however—except for working-age men lacking a high school diploma. The increases in rural full employment for men and women are somewhat surprising as many have suggested that the restructuring of the economy has generated a rising proportion of part-time and part-year jobs.[4] Among both rural and urban wage and salary earners, men

without a high school diploma were the only group with declining full employment.

Average annual earnings rose slightly for urban men but declined for rural men between 1979 and 1989 after correcting for inflation (fig. 3). Changes over the 1980's depended a great deal on education level. While rural men with college degrees earned 6 percent more in 1989 than in 1979, those with less education lost ground over the decade. Men without a high school diploma earned 16 percent less in 1989 than 10 years earlier, in part because fewer were fully employed in 1989 than in 1979.

Rural women's earnings rose by 11 percent over the decade, but only because of more time spent at work and gains in education.[5] For women, as for men, changes in earnings depended considerably on education. The earnings of women without a high school degree fell by about 3 percent, while earnings of college-educated women were 18 percent higher in 1989 than in 1979. This gain for more highly educated women resulted both from higher wage and salary rates and more time spent at work.

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[3] Higher rural birthrates seem to be the major reason. Women with children at home are less likely to work than other women. Rural women with children are just as likely to work as urban women with children (see *Rural Conditions and Trends,* 1993).

[4] Because women work part-time more often than men, women's rising participation in the labor market could have meant that full employment was decreasing overall even as it was rising for men and women separately. But, even for the workforce as a whole, full employment increased.

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[5] Our calculations show that, these increases in human resources aside, rural women's average pay actually fell by about 5 percent over the decade.

Figure 2
Wage and salary workers fully employed, age 18-64, by educational attainment, 1980-90
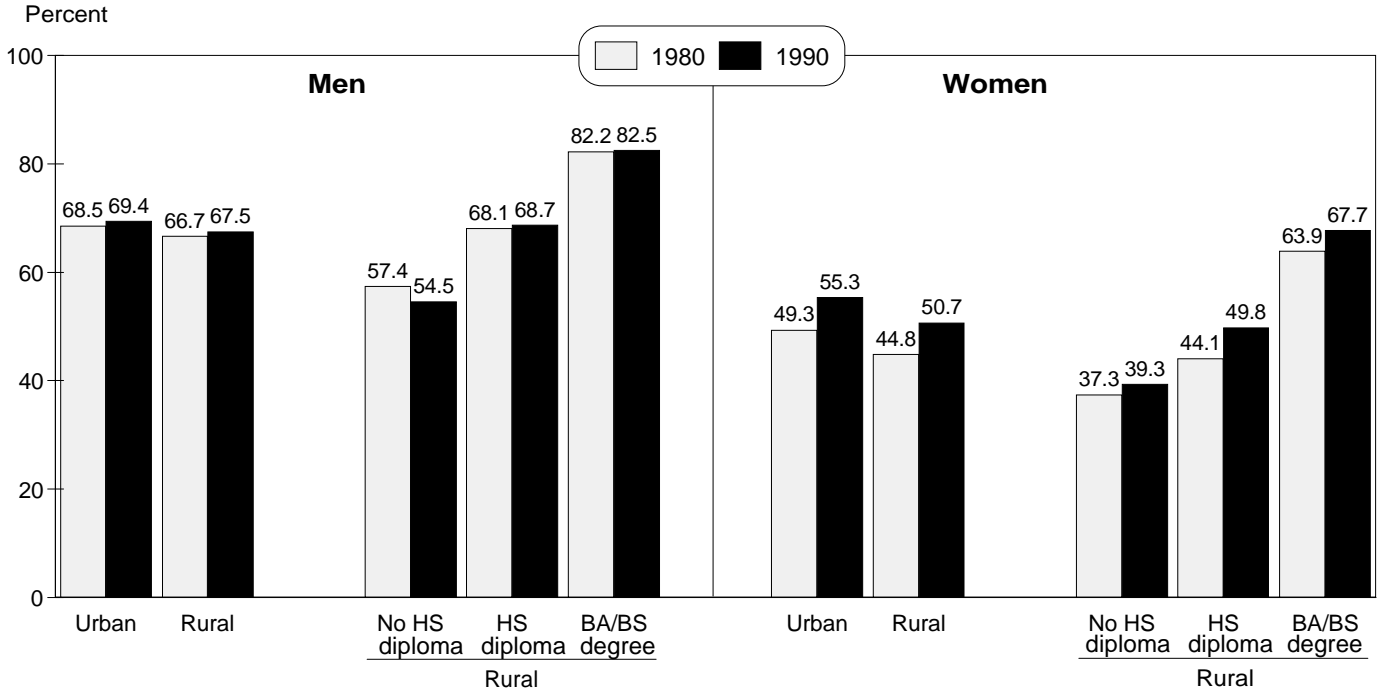
Percent

Fully employed = Worked full-time (35+ hours per week) full-year (50+ weeks) in the previous year.
Urban and rural are equivalent to metropolitan and nonmetropolitan.
Source: Compiled by Economic Research Service from Public Use Microdata Samples, 1980 and 1990 Census.

Figure 3
Average annual earnings of wage and salary workers, age 18-64, by educational attainment, 1980-90
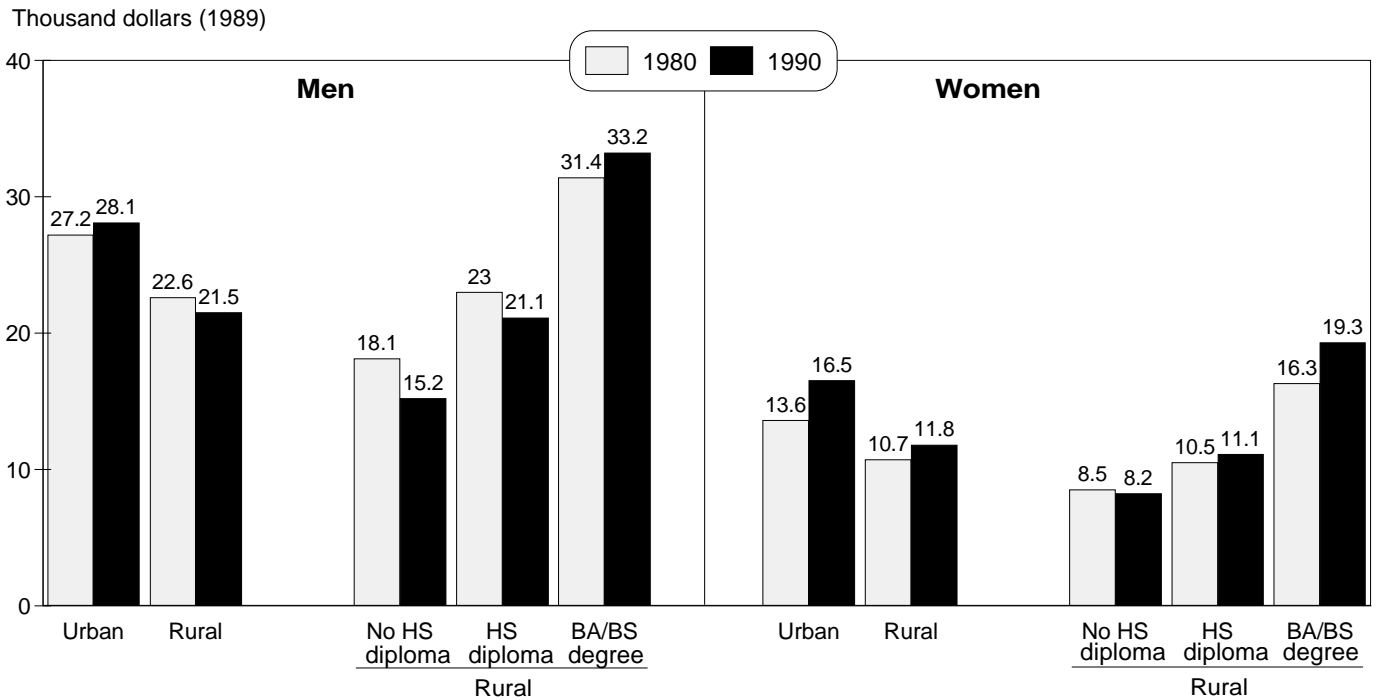
Thousand dollars (1989)

Earnings = Earnings in the previous year; 1979 earnings converted to 1989 dollars using the Personal Cons. Exp. Index.
Source: Compiled by Economic Research Service from Public Use Microdata Samples, 1980 and 1990 Census.

Table 1—Educational attainment by sex, residence[1], and age group, 1980-90

Highest education completed	Men				Women			
	Urban		Rural		Urban		Rural	
	1980	1990	1980	1990	1980	1990	1980	1990
	Percent							
Ages 18-64								
No HS diploma	24.8	19.6	33.1	25.6	24.6	18.5	31.6	23.0
HS diploma	54.2	55.6	54.3	60.4	61.4	61.3	59.2	65.0
BS/BA degree	21.0	24.8	12.6	14.0	14.0	20.2	9.2	12.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ages 25-34								
No HS diploma	14.0	15.7	19.0	20.0	14.8	13.9	19.2	16.8
HS diploma	57.1	58.4	62.1	67.2	63.3	61.2	65.9	69.5
BS/BA degree	28.9	25.9	18.9	12.8	21.9	24.9	14.9	13.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Rural is defined as those areas outside metropolitan boundaries and is equivalent to nonmetropolitan; urban is equivalent to metropolitan.
Source: Compiled by Economic Research Service from Public Use Microdata Samples, 1980 and 1990 Censuses.

The effect of falling real wages for less-schooled workers has been somewhat mitigated by the rising education levels of the working-age population. People entering working age have more schooling than people retiring. Thus, the proportion of rural working-age (18-64 years old) men and women lacking a high school degree fell from about a third to less than a fourth over the 1980-90 decade (table 1). The proportion of rural working-age men and women who are college graduates rose only slightly during the decade, much less than in urban areas.

The situation is much less reassuring, however, when we look specifically at young adults (ages 25-34). The share of young adult men with at least a high school diploma fell in both urban and rural areas during the decade. The proportions completing high school were fairly stable, but the proportions completing college declined, especially in rural areas. In 1980, 19 percent of the rural men in this age group had completed college. By 1990, the proportion had fallen to 13 percent, half the urban rate.[6] In contrast, college completion rates for young adult women have

remained about the same in rural areas while rising in urban areas. Among rural young adults, women now have higher education levels than men.

Part of the explanation for lagging education levels of rural young adults may be the rural-urban wage gap that developed in the 1980's at high education levels. For young adult men, college-graduate earnings declined by 2 percent in rural areas from 1979-89, while they rose by 10 percent in urban areas. In contrast, young adult college-educated rural women earned 14 percent more by the end of the decade, but the urban increase of more than 25 percent was nearly twice as large. These disparities were associated with considerable net outmigration of better educated young adults from rural areas in the 1980's, and a widening of the rural-urban gap in college completion (McGranahan and Ghelfi, 1991).

In sum, the economic transformations of the 1980's resulted in greater joblessness and lower earnings for rural men, particularly for those with less than a college education. By the end of the decade, more rural women worked, more worked full-time, and their earnings rose. But for women, too, the well educated outpaced the rest. Given the declining opportunities for people with less education and the relatively low education levels of minorities, these patterns suggest a possible growing gap between rural minorities and non-Hispanic Whites.

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[6] To some extent these changes may reflect changes in the census measurement of education (see appendix table 1), but similar changes in the Current Population Survey had little effect on educational statistics for the broad categories used here (Siegel and Kominski, 1993). The findings reported here are consistent with an earlier study where this measurement change was not an issue (McGranahan and Ghelfi, 1991).

Figure 4
Rural jobless, age 18-64, by race/ethnicity, 1980-90
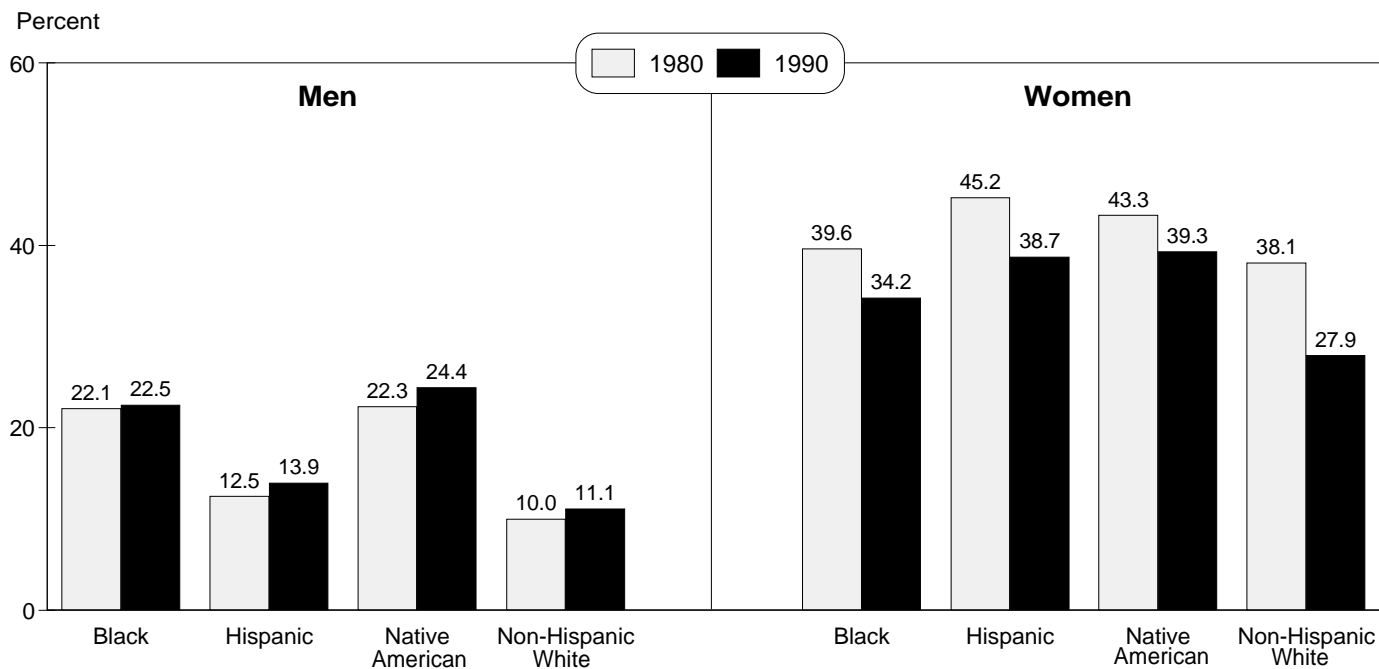
Percent

Jobless = Did not work in the previous year, whether or not work was sought. Urban and rural are equivalent to metropolitan and nonmetropolitan.
Source: Compiled by Economic Research Service from Public Use Microdata Samples, 1980 and 1990 Census.

Minority Joblessness

Blacks and Native Americans have had consistently high rates of joblessness, with nearly one in four working-age men in these groups absent from the workforce for all of 1989. Among Hispanic men, joblessness was only slightly higher than among non-Hispanic Whites (fig. 4).

Joblessness declined among rural women of all racial/ethnic groups, but less so for minorities. While Black and non-Hispanic White women had similar

rates of joblessness in 1979, this was no longer true at the end of the 1980's. About 34 percent of rural Black working-age women did not work in 1989, compared with 28 percent of rural non-Hispanic White women. Hispanic and Native American women, however, had even higher rates of joblessness, at 39 percent.

To some extent, differences in joblessness among racial/ethnic groups reflect differences in education, but substantial variation remains, particularly for men,

Table 2—Rural[1] jobless[2], age 18-64, by educational attainment and race/ethnicity, 1990

| Race/ethnicity	Men			Women		
	No HS diploma	HS diploma	BS/BA degree	No HS diploma	HS diploma	BS/BA degree
Black	31.5	15.5	8.8	50.0	25.2	11.0
Hispanic	17.7	10.1	8.1	52.1	28.3	15.0
Native American	36.9	17.5	9.4	57.7	29.9	18.5
Non-Hispanic Whites	23.4	8.0	4.9	47.3	24.9	13.6

[1] Rural is defined as those areas outside metropolitan boundaries and is equivalent to nonmetropolitan; urban is equivalent to metropolitan.
[2] Did not work in the previous year, whether or not work was sought.
Source: Compiled by Economic Research Service from Public Use Microdata Samples, 1980 and 1990 Census.

Figure 5
Rural wage and salary workers fully employed, age 18-64, by race/ethnicity, 1980-90
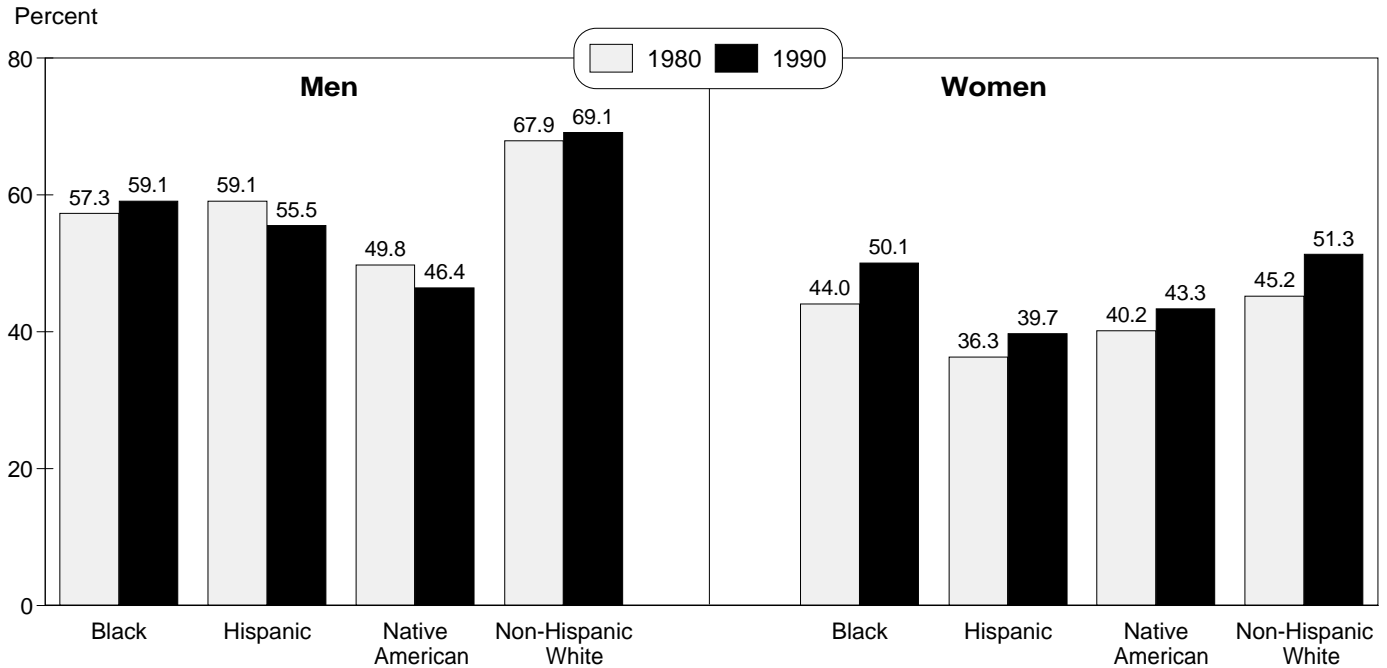
Percent

Fully employed = Worked full-time (35+ hours per week) full-year (50+ weeks) in the previous year. Urban and rural are equivalent to metropolitan and nonmetropolitan.

Source: Compiled by Economic Research Service from Public Use Microdata Samples, 1980 and 1990 Census.

within education groups (table 2). Each minority had its own pattern of joblessness for men and women, most evident among those who did not complete high school. Rural Native American men and women had the highest rates of joblessness at all education levels. Nearly 40 percent of rural Native American men and 60 percent of women lacking a high school diploma did no work for pay in 1989.

Rural Black men had rates of joblessness that approached those of Native American men at all education levels. In contrast, rural Black women with at least a high school diploma were about as likely to have worked in 1989 as were non-Hispanic Whites. Rural Hispanic men without a high school diploma were much more likely to have worked in 1989 than other rural men at this education level, while Hispanic women had relatively high rates of joblessness. Part of this Black-Hispanic difference may be explained by greater Hispanic adherence to traditional male/female roles and continued Hispanic participation in agriculture, which continues to provide (extremely low-paying) opportunities for workers with low education.

Minority Full Employment

In general, rural minority wage and salary earners have been much less likely to have full-time year-round employment (fully employed) than the rural average (fig. 5). Native American men were particularly unlikely to be fully employed. Only 46 percent worked full-time for all of 1989, 10 percentage points below Black or Hispanic men, and more than 20 points lower than non-Hispanic White men. This represents, moreover, a decline in the percentage fully employed from 1979 for Native American men. This, coupled with the rise in joblessness, makes clear that a lack of jobs is a large and increasing problem for Native American men.

While differences across racial/ethnic groups are less pronounced among rural women, Native American and Hispanic women were less likely to be fully employed than non-Hispanic White women. And while all working rural women were more likely to be full-time/full-year by 1989, the increase in the proportion of Native American women with full-time/full-year employment was the smallest. Rural Native American women also have had the highest unemployment rates and the largest gain in unemployment of all the rural racial/ethnic groups

Figure 6
Average annual earnings of rural wage and salary workers, age 18-64, by race/ethnicity, 1980-90
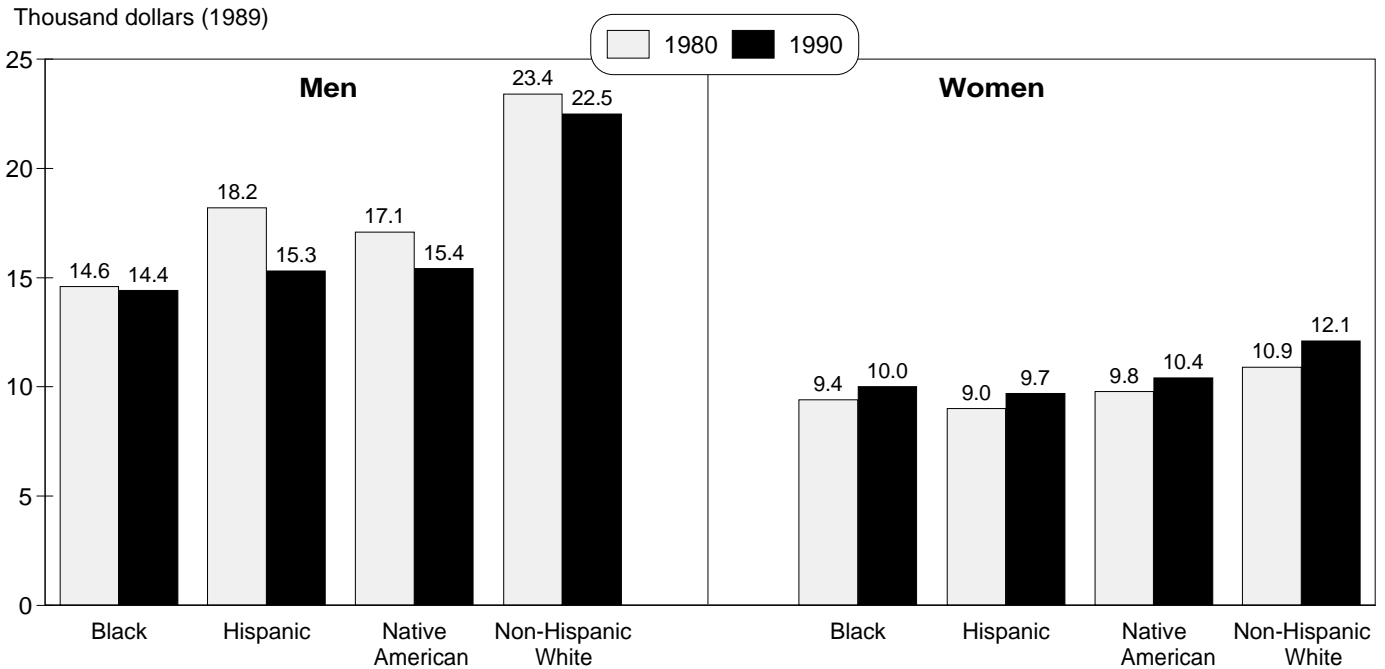
Thousand dollars (1989)

Legend: ☐ 1980 ■ 1990

Men

	Black	Hispanic	Native American	Non-Hispanic White
1980	14.6	18.2	17.1	23.4
1990	14.4	15.3	15.4	22.5

Women

	Black	Hispanic	Native American	Non-Hispanic White
1980	9.4	9.0	9.8	10.9
1990	10.0	9.7	10.4	12.1

Earnings = Earnings in the previous year; 1979 earnings converted to 1989 dollars using the Personal Cons. Exp. Index.
Source: Compiled by Economic Research Service from Public Use Microdata Samples, 1980 and 1990 Census.

(see report appendix). A lack of jobs is a major problem for Native American women as well as men.

Full-time/full-year employment also declined among rural Hispanic men, from 59 percent in 1979 to 56 percent in 1989. An increasing concentration in agriculture (19 percent in 1989, up from 15 percent in 1979) helps account for this decline. Rural Hispanic women have been the least likely of rural women to work full-time/full-year. Concentration in agriculture is not an explanation for them, however, as only about 7 percent were employed in agriculture at the time of the 1990 Census.[7]

Rural Black men and women were the most likely of all minority wage and salary earners to be fully employed in 1989, and both proportions rose more than the rural average. Both Black men and Black women are more likely than others to work in rural manufacturing, which continues to provide more full-time/full-year employment than other rural

sectors. In 1989, 37 percent of Black men and 33 percent of Black women worked in manufacturing, nearly 20 percentage points higher than for Hispanics and Native Americans—and considerably higher than the rural averages of 28 percent for men and 19 percent for women (chapter app. tables 3a, 3b).

Annual Earnings

Inflation-adjusted earnings declined for rural men in all four racial/ethnic groups (fig. 6). While men's earnings in all minority groups were considerably lower than those of non-Hispanic Whites in 1989, evidence of a growing gap in earnings between minority and non-Hispanic White workers is mixed. Declines in earnings were substantial for Hispanics (16 percent) and Native Americans (10 percent), but rural Black men, who had the lowest earnings of all racial/ethnic groups in 1979, also had the smallest decline (1 percent) over the decade.

Rural women's earnings have been much lower than rural men's, but differences across racial/ethnic groups have been relatively small. Earnings rose slightly over the decade for both minority women and non-Hispanic White women, but the gain for the latter was slightly greater, resulting in a small increase in earnings disparity. For all groups, women's earnings

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[7] Since the census industry information refers to work done in the week prior to the census (in April), it probably underestimates dependence on agriculture among farmworkers. Even using yearly average employment from another data source, however, only 10 percent of Hispanic women worked in agriculture in 1989.

Table 3—Difference in earnings from rural[1] total by source, wage and salary workers, age 18-64

Source of earnings difference	Black		Hispanic		Native American		Non-Hispanic White	
	1979	1989	1979	1989	1979	1989	1979	1989
	Percent							
Women								
Total difference	-12.0	-15.3	-16.0	-18.5	-8.1	-11.9	1.6	2.2
Difference due to...[2]								
Time at work	-0.2	1.1	-5.7	-6.7	-4.6	-6.7	0.2	0.3
Education	-4.7	-6.7	-7.1	-7.3	-4.8	-5.2	0.7	1.0
Experience	0.6	-0.5	-0.5	-2.3	-1.7	-0.9	0.0	0.1
Language	0.0	0.0	-0.7	-0.4	-0.4	-0.1	0.0	0.0
Region	-2.7	-2.4	2.6	1.5	2.9	1.7	0.1	0.1
Industry	2.0	1.7	-0.7	-1.0	2.0	1.0	-0.2	-0.1
Family	-1.2	-1.0	-0.7	0.0	-0.8	-1.2	0.1	0.1
Other measured sources*	-0.1	0.0	0.0	0.1	-0.3	-0.2	0.0	0.0
Remainder	-5.7	-7.6	-3.1	-2.4	-0.5	-0.2	0.6	0.8
Men								
Total difference	-35.2	-32.9	-19.4	-28.9	-24.2	-28.4	3.8	4.3
Difference due to...								
Time at work	-5.1	-5.7	-2.8	-5.0	-9.6	-11.4	0.7	0.9
Education	-7.5	-8.9	-7.7	-9.6	-5.1	-6.1	0.9	1.1
Experience	0.1	-0.4	-0.1	-1.9	-0.3	-1.7	0.0	0.2
Language	0.1	0.2	-2.2	-3.8	-1.1	-1.0	0.1	0.2
Region	-3.4	-1.8	3.0	1.6	4.3	2.0	0.1	0.0
Industry	-0.9	0.1	-2.3	-2.8	-3.1	-2.6	0.2	0.2
Other measured sources*	-0.5	-0.0	-0.3	0.1	-0.5	-0.5	0.1	0.0
Remainder	-17.9	-16.4	-7.0	-7.7	-8.8	-7.1	1.7	1.7

[1] Rural is defined as those areas outside metropolitan boundaries and is equivalent to nonmetropolitan; urban is equivalent to metropolitan.
[2] See chapter appendix table 1 for definitions of these factors. *Includes work disability and veteran status.
Source: Compiled by Economic Research Service from Public Use Microdata Samples from 1980 and 1990 Census.

would have fallen except for the increase in full-time/full-year work.

Why Minorities Earn Less

Analyses of earnings differences between rural minorities and the rural workforce as a whole show that education and time at work have been consistently important contributors to these differences (table 3).[8] Moreover, the disadvantage attributable to low education increased over the decade for men and women in all three minority groups. In our model, the relatively low education levels of Black women reduced their earnings by 5 percent compared with the average for all rural women in 1979. By 1989, this gap had risen to 7 percent. Although important, relatively low education and less time at work did not account for all—or, in many cases, even most—of the wage and salary differences between minorities and the rural population as a whole. Much of the difference in earnings could not be explained by the measures included. The overall gap for Black women, to continue the example, was 15 percent in 1989, with nearly half unaccounted for.

[8] For an explanation of the variables used in the regression analyses, see appendix table 1 at the end of this chapter. Appendix table 2 shows the coefficients from the regression results; appendix tables 3a and 3b report the averages of each variable for the different racial/ethnic groups.

Blacks

Relatively low education and Southern residence were major sources of earnings disadvantage for Black women in 1989. They had a greater tendency, however, to work full-time/full-year than other rural women in 1989, which tended to raise their earnings compared with the rural average. A concentration in manufacturing (33 percent in 1990) and government (23 percent)–sectors relatively well-paying for women–also increased their earnings.

About half of the difference in earnings between rural Black women and rural women in general is not accounted for by the characteristics included in the analysis. In 1989, rural Black women earned about 8 percent less (6 percent in 1979) than we would expect on the basis of their educational attainment, region, time at work, work disability, marriage and childbearing, age (experience), and other measures in the study. This gap could be the result of the quality of education, the communities in which many Black women live, racial discrimination, or other factors.

The earnings disadvantage for rural Black men has been much greater than for other minority and gender groups. In both 1979 and 1989, Black men earned about one-third less than the rural average. Low education levels, less than full-time or full-year work, and Southern residence accounted for about half of this gap. But the other half, more than 16 percent in 1989, was unaccounted for by this analysis. This proportion is twice as large as for any other race/gender group.[9]

While recent attention has focused on the urban disadvantages of Blacks, disadvantages for Blacks are actually greater in rural areas (chapter app. table 4). In 1989, urban Black women earned only 4.4 percent less than the urban average and this was almost entirely accounted for by their lower education levels. There was no earnings disadvantage that could be attributed to community, discrimination, or other unmeasured factor. While urban Black men earned 28 percent less than the urban average, this difference was smaller than that found for rural Blacks.

Moreover, while the urban analysis could not account for 12 percent of the earnings disparity, this too was smaller than the corresponding rural statistic.

Hispanics

Rural Hispanic female wage and salary workers earned over 18 percent less than the rural average in 1989, vs. 16 percent less in 1979. Almost all of the wage difference could be accounted for by less time at work, lower education, and (in 1989) the relative lack of experience of Hispanic women. Despite the fact that 24 percent of rural Hispanic women wage and salary earners were born outside the country and more than 11 percent of Hispanic women reported that they did not speak English well in 1990 (see chapter app. table 3b), a lack of English proficiency has not been a major penalty. Our analysis indicates a loss of earnings to Hispanic women of less than half of 1 percent due to language differences.

A decline in the real earnings of Hispanic men by 16 percent between 1979 and 1989 increased their earnings disadvantage vis-a-vis the rural average from 19 percent to 29 percent. Much of this increase appears to be associated with the increase in immigrants in the Hispanic male population, as the proportion of working-age Hispanic men who were foreign-born increased from 25 percent to 37 percent between 1980 and 1990. About 17 percent of the Hispanic men reported not speaking English well in 1990. The proportion working part-time and/or part-year increased over the decade as did the proportion in agriculture. Education levels rose, but much less than for other groups. About half of the Hispanic male workers did not have a high school diploma in 1990, the highest proportion of all minority/gender groups. These and other measured variables accounted for an earnings disadvantage of 21 percent for Hispanic men, with low education alone accounting for 10 percent.

Unlike Blacks, Hispanics were less disadvantaged in the rural context than in the urban. Urban Hispanic women earned 21 percent less than the urban average and urban Hispanic men 34 percent less, both larger gaps than found in rural areas. Urban Hispanics are much more likely to be immigrants. In 1990, over half of urban Hispanic women and men were born outside the United States; 20 percent of women and 25 percent of men spoke English poorly or not at all. Also, while both urban and rural Hispanics have very low education levels, low education is a much greater disadvantage in urban areas.

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[9] The earnings gap between Black men and the rural average, although substantial, is still smaller than the gender gap. Rural women earned about 45 percent less than rural men in 1989. We could account for less than a third of this difference by the greater time that men spent at work. Together, most of the other characteristics did not favor one sex or another. We could not estimate, however, the extent to which the remaining gap was due to men's greater workforce experience. Our measure of experience is simply age less years spent at school. Age may reasonably reflect labor force experience for men, but it does not yet do so for women.

Native Americans

Wage and salary earnings of rural Native American women were 12 percent below the rural average in 1989. The gap had been only 8 percent 10 years earlier. Native American women's time at work rose only marginally over the decade, much less than for other groups. Over half the earnings gap for Native American women in 1989 was due to less time spent working. A decline in the proportions working in government or manufacturing also contributed to an expanding earnings gap.

Native American men have been penalized by similar problems. Their earnings gap also widened, from 24 percent in 1979 to 28 percent in 1989. A lack of time at work contributed more than 11 percentage points, twice the corresponding number for Black and Hispanic men. Native American men, like Native American women, were much more likely to work in the public sector (30 percent in 1989) than the rural average (17 percent for men). But, while working in government boosts salaries for women, it generally means lower salaries for men.

If rural Native American women and men were handicapped by residence in remote areas with weak economies and few jobs, their urban counterparts did no better. Although lack of time at work was less of a problem among urban Native Americans, they were more hindered by low education and unmeasured factors. The earnings gap for Native American women was considerably larger in urban areas (17 percent) than in rural areas (12 percent). For Native American men, the urban earnings gap was about as high (29 percent) as the rural gap (28 percent).

In sum, although it never accounted for even half of the earnings disadvantage for any minority, men or women, low education is generally the single most important drawback identified in our analyses. Aside from education, rural minority men and women tend to face quite distinct problems. For Native Americans, the central problem appears to be, increasingly, little work in their local economies. For rural Hispanics, concentration in agriculture and, especially for men, poor ability to speak English have been growing problems. And for Blacks, particularly men, there is a persistently large earnings gap not accounted for by any of the measures used in this analysis. This gap may represent local socioeconomic structures which continue to segment them into lower paying jobs.[10]

Young adults

What about the economic future for rural Blacks, Hispanics, and Native Americans? Changes in economic fortunes often show up among young adults (ages 25-34), when careers gel and families have young children. Analyses of levels and sources of earnings differences limited to young adults indicate, however, that minority young adults are only marginally less disadvantaged in rural labor markets than the minority working-age population as a whole (table 4). As in the working-age population, minority young adult disadvantages tended to be greater at the end of the 1980's than at the beginning. Since, overall, rural earnings declined by 15 percent for young adult men in 1979-89 and increased by only 5 percent for young adult women (despite increases in time at work), even marginally larger disadvantages at the end of the decade reflect a serious erosion in earnings for rural minority young adult men and a loss for minority young adult women.

The results for the rural minority young adults suggest that the central problems facing the minority groups are not substantially reduced in their young adult populations. Young adult Black men have major disadvantages in the job market for reasons untapped by the current analysis. Poor English is an even greater drawback for rural Hispanic young adults than for the Hispanic working-age population. And the lack of time at work is an even greater drawback for rural Native American young adults than for other rural minorities.[11]

Education

Relatively low education levels continue to seriously limit the economic opportunities of all three rural minorities. For the working-age population, low education was a greater penalty in 1990 than in 1980. While this penalty did not increase over the decade among minority young adults, low education was as much a disadvantage for them in 1990 as for their working-age counterparts. The size of a minority

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[10] This earnings disadvantage does not appear to be confined to Blacks with low education. Among rural working-age adults with wage and salary earnings, Black men with no high school diploma earned 22 percent less than the rural average for dropouts, and Black men with college degrees earned 23 percent less than the corresponding rural average.

[11] Note that any differences between the young adult population and the working-age population in the magnitude of a drawback may have two sources: (1) a greater influence of the characteristic (for example, education) on earnings in one of the populations; and/or (2) a greater disparity between the minority and rural average in the characteristic being considered.

Table 4—Difference in earnings from rural[1] total by source, wage and salary workers, age 25-34

Source of earnings difference	Black 1979	Black 1989	Hispanic 1979	Hispanic 1989	Native American 1979	Native American 1989	Non-Hispanic White 1979	Non-Hispanic White 1989
				Percent				
Women								
Total difference	-4.5	-15.4	-13.8	-16.5	-0.8	-9.7	0.8	2.6
Difference due to... [1]								
Time at work	4.6	1.5	-3.4	-5.7	-1.9	-8.4	-0.4	0.2
Education	-6.0	-6.6	-8.1	-6.5	-7.2	-5.7	1.0	1.0
Experience	0.9	0.9	1.2	o.s	1.2	1.4	-0.1	-0.2
Language	0.1	0.2	-1.7	-3.2	-0.9	-0.8	0.1	0.2
Region	-2.4	-2.5	2.0	0.9	2.4	1.1	0.1	0.2
Industry	2.4	1.7	-1.1	-1.1	1.7	0.5	-0.3	-0.2
Family	-1.4	-2.4	-1.3	-0.9	-1.9	-2.6	0.2	0.3
Other measured sources*	0.0	0.1	0.0	0.0	-0.5	-0.1	0.0	0.0
Remainder	-2.8	-8.3	-1.3	-0.8	6.2	4.8	0.3	0.9
Men								
Total difference	-30.2	-28.4	-15.7	-22.2	-20.5	-27.0	3.5	4.3
Difference due to...								
Time at work	-5.6	-6.2	-3.9	-6.1	-12.0	-15.8	0.8	1.3
Education	-7.9	-6.7	-8.4	-9.3	-6.3	-6.2	1.0	1.0
Experience	2.8	1.8	2.8	3.0	3.4	2.1	-0.4	-0.3
Language	0.2	0.4	-4.0	-6.1	-1.6	-0.8	0.2	0.4
Region	-2.6	-2.2	2.6	2.0	4.1	2.7	0.0	-0.0
Industry	-0.8	0.4	-2.0	-2.9	-3.0	-2.2	0.2	0.2
Other measured sources*	0.1	-0.4	0.1	0.4	-0.3	-0.3	0.0	0.0
Remainder	-16.5	-15.6	-2.8	-3.5	-4.9	-6.5	1.6	1.7

[1] Rural is defined as those areas outside metropolitan boundaries and is equivalent to nonmetropolitan; urban is equivalent to metropolitan.
[2] See chapter appendix table 1 for definitions of these factors.
*Includes work disability and veteran status.
Sources: Compiled by Economic Research Service from Public Use Microdata Samples from 1980 and 1990 Census.

earnings disadvantage associated with education depends both on the minority education gap and the influence of education on earnings. The earnings premium for a high school diploma and, especially, a college degree increased considerably between the 1980 and 1990 Censuses. What about the rural minority education levels?

Minority education levels improved in some ways during 1980-90, but deteriorated in others. The proportions of rural working-age men and women with at least a high school diploma rose between

1980 and 1990, especially among minority women, who now have higher levels of education than minority men (table 5). For rural Black and Native American men and women, the gains were larger than for rural non-Hispanic Whites. The gains were smaller for rural Hispanics, due in part to high rates of immigration. Rural minority gains in high school completion were not matched by gains in college completion, however. College completion, an increasingly important credential for higher earnings, did not rise more than a fraction of a point among rural minorities, except for Hispanic and Native

Table 5—Educational attainment by rural[1] residents age 18-64, by race/ethnicity

Race/ethnicity/ year	Men				Women			
	No HS diploma	HS diploma	BS/BA degree	Total	No HS diploma	HS diploma	BS/BA degree	Total
	Percent							
Total								
1980	33.1	54.3	12.6	100.0	31.6	59.2	9.2	100.0
1990	25.6	60.4	14.0	100.0	23.0	65.0	12.0	100.0
Black								
1980	56.3	39.1	4.6	100.0	51.4	42.7	5.9	100.0
1990	45.5	49.8	4.7	100.0	39.8	54.0	6.2	100.0
Hispanic								
1980	55.6	38.6	5.8	100.0	55.1	41.5	3.4	100.0
1990	51.4	42.8	5.8	100.0	47.2	47.1	5.7	100.0
Native American								
1980	46.7	48.6	4.7	100.0	48.2	47.6	4.2	100.0
1990	37.6	57.2	5.2	100.0	36.0	58.4	5.6	100.0
Non-Hispanic White								
1980	30.4	56.2	13.4	100.0	28.8	61.5	9.7	100.0
1990	22.8	62.1	15.1	100.0	20.1	67.0	12.9	100.0

[1] Rural is defined as those areas outside metropolitan boundaries and is equivalent to nonmetropolitan.
Source: Compiled by Economic Research Service from Public Use Microdata Samples from 1980 and 1990 Census.

American women, and even then the increases were marginal. The proportion of rural working-age men who have finished college is about three times higher for non-Hispanic Whites than for any of the three minorities, and this gap increased over the 1980's. Among working-age women, the gap has been somewhat narrower, largely because non-Hispanic White women have lower college completion rates than men.

The picture is even less promising for rural young adults, especially men, of all three minorities. Although the proportion of young Black men with a high school diploma rose, the proportion with a college degree fell from 8 percent to 5 percent (table 6). For both Hispanic and Native American men, high school completion rates were about the same in 1990 as in 1980, but their college completion rates fell—from 9 percent to less than 5 percent among Hispanics and from 5 percent to 4 percent among Native Americans. College completion also declined among rural Black women in this age group.

These losses were not confined to rural minorities, however. The proportion of rural non-Hispanic Whites with college degrees fell between 1980 and 1990, much more sharply for men (from 20 percent to

14 percent) than for women (16 percent to 15 percent). Without these declines, minority earnings disadvantages relative to the population as a whole would have increased even more over the decade.

Conclusion

Rural Blacks, Hispanics, and Native Americans all fare more poorly in the labor market than the rural population as a whole. These minorities have higher rates of joblessness, less full-time/full-year work, and lower earnings for the time they spend at work. And as rural wage earners in general lost ground in the national economy, rural minority men and women fell even further behind the rural average during the 1980's.

Low education is one reason that Blacks, Hispanics, and Native Americans have been increasingly disadvantaged in the rural economy. Workers without a high school diploma and men with just a high school diploma had significantly lower earnings at the end of the 1980's than at the beginning, while college graduates' earnings rose. The relatively high proportions of minorities with low education and the uneven improvement in attainment over the decade

Table 6–Educational attainment by rural[1] young adults age 25-34, by race/ethnicity

Race/ethnicity/ year	Men				Women			
	No HS diploma	HS diploma	BS/BA degree	Total	No HS diploma	HS diploma	BS/BA degree	Total
	Percent							
Total								
1980	19.0	62.1	18.9	100.0	19.2	65.9	14.9	100.0
1990	20.0	67.2	12.8	100.0	16.8	69.5	13.7	100.0
Black								
1980	39.4	52.9	7.7	100.0	33.4	58.5	8.1	100.0
1990	32.1	63.3	4.6	100.0	27.6	65.5	6.9	100.0
Hispanic								
1980	43.7	47.3	9.0	100.0	44.6	50.0	5.4	100.0
1990	46.3	49.1	4.6	100.0	36.9	55.7	7.4	100.0
Native American								
1980	32.6	62.0	5.4	100.0	35.6	58.4	6.0	100.0
1990	33.2	62.5	4.3	100.0	25.0	69.0	6.0	100.0
Non-Hispanic White								
1980	16.1	63.6	20.3	100.0	16.6	67.5	15.9	100.0
1990	17.4	68.8	13.8	100.0	14.4	70.8	14.8	100.0

[1] Rural is defined as those areas outside metropolitan boundaries and is equivalent to nonmetropolitan; urban is equivalent to metropolitan.

Source: Compiled by Economic Research Service from Public Use Microdata Samples from 1980 and 1990 Census.

have tended to increase the gap between minority wage earners and rural wage earners in general.

For both men and women, differences in education between the three minority groups and the rural population as a whole explained only about a third of the earnings gap. Aside from low education, the major circumstances limiting the opportunities of Blacks, Hispanics, and Native Americans appear to be quite different for each minority. Rural Native American men and women have been more likely to be jobless or have part-time or part-year jobs than other men and women, and this has severely depressed their earnings. Hispanic men are increasingly affected by their lack of English and increasing concentration in agriculture. Almost half of the earnings gaps for both Black women and Black men were not accounted for by measures in the analysis. Black women spent more time working than the rural average, which made up in small part for their lower wage rates.

The economic prospect for rural people is uncertain. Employment in agriculture, mining, and other natural resource-based industries has been declining. Manufacturing employment, subject to increasing international competition, has stagnated, and wages

have fallen. While rural areas attractive to tourists or retirees, or adjacent to expanding metropolitan areas have consistently gained jobs, employment growth in other rural areas has been uneven. Only people with relatively high education levels maintained or increased their earnings. For the three major rural minorities—Blacks, Hispanics, and Native Americans—the situation is particularly uncertain. Rural Black men and women are disproportionately involved in manufacturing, which, despite recent declines, still pays them (and many others) higher wages than they can find elsewhere. If competitive pressures persist, some rural Black gains may be lost.

Increasing immigration shaped changes in Hispanic opportunities in the 1980's. If the Mexican economy grows rapidly and is not overwhelmed by workers leaving agriculture, then the situation for Hispanics may improve in the United States. Even with a slowing of immigration, however, Hispanic men's concentration in agriculture severely limits their opportunities. And, aside from casinos, there is little reason to expect that economic activities will be more attracted to remote Native American areas any more in the 1990's than in the 1980's.

Improving educational opportunities is critical for the success of rural Blacks, Hispanics, and Native Americans and, in view of the declining proportion of young adults who have completed college, this is clearly an unsolved problem. But while educational improvements would help minority workers, there is, for each minority, at least one other aspect of their community situation that limits the ability of education gains to be the pathway out of economic disadvantage.

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Appendix

The Method

Ordinary least squares (OLS) estimation of an earnings equation for a given group of workers provides an algebraic approximation of the wage structure facing that group. Equations were estimated for 1980 and 1990 separately for rural male and female wage and salary workers (the self-employed were excluded) with positive earnings in the previous year. Our model relates an individual's earnings last year (the dependent variable) to his or her levels of the explanatory characteristics, defined in Appendix table 1. The OLS-estimated effects (the coefficients) of the worker characteristics on earnings are presented in appendix table 2.

Using these coefficients we are able to decompose differences in earnings between a reference group and the rural total into percentage effects attributable to differences between the group and the total in each of the measured characteristics. For example, southern residence is estimated to reduce earnings by $1,365 for rural women in 1990, all else being equal (app. table 2). In 1990, 93.5 percent of Black women lived in the South, compared with the rural average of 43.8 percent (app. table 3b). Thus, Southern residence reduced rural women's earnings by $598 or 5 percent, and reduced rural Black women's earnings by $1,276 or 11 percent of the rural average. In effect, disproportionate residence in the South penalizes black women by 6 percent relative to the rural total. Using this procedure, percentage effects of all the independent variables were calculated and summed into the subgroups presented in table 1 in the body of the text.

Caveats

Our model differs from most of those cited in two ways: (1) the dependent variable is not transformed into its natural logarithm; and (2) each gender-specific equation is estimated for rural workers as a whole, and not separately for each racial or ethnic group. The following section discusses the reasons for and consequences of these departures.

The dependent variable (earnings) is usually transformed into its natural logarithm for the analysis because the independent variables (measured characteristics) are expected to affect earnings proportionately rather than absolutely. For instance, if residence in the South is expected to lower earnings, the log model assumes that Southern residence reduces earnings by a percentage rather than a fixed amount from what they would otherwise be, given the worker's other characteristics (experience, education, language ability, and so forth).

We used the log-model for our analyses initially, but shifted to the untransformed earnings measure because the log-model yielded results that were not directly comparable with the measures of earnings already presented. For instance, the average of the log of earnings in 1989 for rural women is 8.946 or $7,677, which differs from the actual $11,846 average earnings used in the tables in the body of the text.

Our conclusions, however, were essentially the same for the two approaches, with the exception that the time-at-work measures were much more important in the log model. Largely because it focuses on percentage differences in income (so that a difference of $2,000 to $4,000 is just as important as a difference of $20,000 to $40,000), the log model accentuates earnings differences at the low end of the earnings distribution relative to differences at the high end. Much of the variation at low levels of earnings is due to the amount of time at work, so this measure became more important in the log-model analysis.

Traditional regression analyses of earnings differences between groups often estimate race-specific wage equations, so that the importance of a given characteristic (such as education) for earnings is allowed to differ from group to group. This technique allows that different groups may participate in different labor markets. With this technique, any earnings disparities are decomposed into differences in the levels of measured variables (means) and in the returns to a characteristic (coefficients).

We, however, estimate only overall rural earnings equations for men and women both because, with four ethnic/racial groups, the analysis becomes too complex to present and because our sample did not have enough Native Americans to reasonably estimate specific equations. Thus, our analysis assumes implicitly that all rural men (women) face the same wage structure regardless of race or ethnicity and that differences from the rural average are due to the characteristics (education, age, and so forth) alone.

Appendix table 1—Measures used in regression analyses

Earnings	Total wage and salary earnings in the previous year
Time at work	Total weeks worked in the previous year (logarithm) Worked full-year--50 weeks or more (0-1) Usual hours worked per week in the previous year (logarithm) Usually worked full-time--35 hours or more per week (0-1)

Education

1980 - school years completed	1990 - schooling completed
Less than 12 (0-1)	No high school diploma (0-1)
12 or more (0-1)	At least a high school diploma (0-1)
13 or more (0-1)	Beyond high school (0-1)
16 or more (0-1)	Bachelor's degree or more (0-1)
18 or more (0-1)	Master's degree or more (0-1)

Experience	Age minus years of school (eight years of school assumed as minimum) Square of above
Region	Midwest (0-1) South (0-1) West (0-1) Northeast (residual)
Family (women only)*	Married (0-1) Any children ever born (0-1) Number of children ever born (logarithm) Any own children at home less than 6 years old (0-1)
Language	Foreign born (0-1) Language other than English spoken at home (0-1) Does not speak English or does not speak it well (0-1)
Industry	Agriculture (0-1) Manufacturing (0-1) Government (0-1) Private services (residual)
Disability	Limited in the kind or amount of work capable of doing (0-1)
Veteran	Armed Forces veteran (0-1)
Race/ethnicity	Black (0-1) Native American (0-1) Hispanic (0-1) Non-Hispanic White, Asian (residual)

*For women, there has clearly been a tradeoff between family and career. For men, the two are more likely to be complementary, and family situation may be an outcome more than a cause of higher earnings.
Compiled by Economic Research Service from Public Use Microdata Sample, 1980 and 1990 Census.

Appendix table 2—Earnings regression equation results: Effects of worker characteristics on wage and salary earnings in previous year[1]

Wage earner attributes	Men		Women	
	1980	1990	1980	1990
	1989 dollars			
Time at work				
Weeks worked (ln)	5,411	4,256	3,159	2,965
Full-year (0-1)	4,340	4,875	3,120	3,274
Usual hours (ln)	4,201	6,520	1,596	3,009
Full-time (0-1)	1,146	1,430	3,518	3,627
Education[2]				
No H.S. diploma				
H.S. diploma	4,051	3,132	1,292	981
Some college	1,695	2,719	1,281	1,945
Bachelor's degree	6,432	7,475	4,255	4,824
Master's or more	3,553	6,638	3,645	5,544
Experience				
Years experience	1,044	967	339	382
Square of years experience	-17	-14	-5	-6
Region				
Midwest (0-1)	798	-1,535	-188	-1,316
South (0-1)	-484	1,548	-515	-1,365
West (0-1)	2,616	130	625	-397
Northeast (residual)				
Family				
Married (0-1)	n.a.	n.a.	-255	29
Any children (0-1)	n.a.	n.a.	-330	-530
Number of children	n.a.	n.a.	-909	-965
Any children under 6 (0-1)	n.a.	n.a.	285	702
Language				
Not born in U.S. (0-1)	-865	-43	-171	-7
Speak poor or no English (0-1)	-2,569	-1,696	-265	-207
Do not speak English at home (0-1)	-449	-798	-118	41
Industry				
Agriculture (0-1)	-4,520	-3,789	-749	-1,114
Manufacturing (0-1)	643	1,591	1,475	1,265
Government (0-1)	-2,975	-2,469	1,480	1,213
Services (residual)				
Work disability (0-1)	-3,424	-3,557	-1,201	-1,051
Veteran (0-1)	908	-11	1,189	1,252
Race/ethnicity				
Black (0-1)	-4,423	-3,905	-675	-990
Hispanic (0-1)	-1,857	-1,979	-376	-371
Native American (0-1)	-2,330	-1,867	-107	-106
Non-Hispanic White, Asian (residual)				
R^2	0.37	0.35	0.41	0.40

[1] For dichotomous (0-1) measures, the statistic is the dollar difference due to being in that category rather than in the residual; for other measures, the statistic is the difference resulting from a percent change in measure.
[2] For each category, the statistic is the average dollar gain over the previous category.
Compiled by Economic Research Service from Public Use Microdata Sample, 1980 and 1990 Census.

Appendix table 3a—Averages[1] of measures used in earnings regression, 1990, men

Wage earner attributes	Total	Black	Hispanic	Native American	Non-Hispanic White
Average earnings ($)	21,537	14,446	15,302	15,416	22,470
Time at work					
Weeks worked (anti-log)	41.3	38.1	38.0	30.9	42.0
Full-year (0-1)	69.1	61.8	57.8	48.5	70.6
Usual hours (anti-log)	41.1	38.2	40.3	40.0	41.5
Full-time (0-1)	90.8	87.7	89.0	89.2	91.2
Education[2]					
No H.S. diploma	100.0	100.0	100.0	100.0	100.0
H.S. diploma	77.7	60.2	50.8	68.8	80.4
Some college	40.2	22.7	24.8	32.4	42.2
Bachelor's degree	14.5	5.4	6.1	6.1	15.6
Master's or more	5.0	1.9	2.3	2.2	5.3
Experience					
Years experience	19.7	19.5	18.4	18.2	19.8
Square of years experience	539	531	484	464	545
Region					
Midwest (0-1)	30.1	4.8	8.6	16.8	33.4
South (0-1)	43.5	92.1	44.5	32.2	40.1
West (0-1)	14.7	1.7	44.6	47.6	13.5
Northeast (residual)					
Family					
Married (0-1)	n.a	n.a	n.a	n.a	n.a
Any children (0-1)	n.a	n.a	n.a	n.a	n.a
Number of children	n.a	n.a	n.a	n.a	n.a
Any children under 6 (0-1)	n.a	n.a	n.a	n.a	n.a
Language					
Not born in U.S. (0-1)	3.0	1.1	36.8	1.0	1.2
Speak poor or no English (0-1)	1.0	0.3	16.7	1.9	0.3
Do not speak English at home	6.5	3.0	78.1	30.6	2.8
Industry					
Agriculture (0-1)	5.1	6.3	18.7	7.4	4.4
Manufacturing (0-1)	28.2	36.8	19.9	17.6	28.2
Government (0-1)	17.3	20.2	15.1	30.0	16.9
Services (residual)					
Work disability (0-1)	6.2	6.4	5.4	9.2	6.2
Veteran (0-1)	27.7	21.4	15.8	25.5	28.9
Race/ethnicity					
Black (0-1)	6.9	100.0	0.9	0.0	0.0
Hispanic (0-1)	3.9	0.5	100.0	1.6	0.0
Native American (0-1)	1.5	0.0	0.6	100.0	0.0
Non-Hispanic whites, Asians (residual)					
Number of observations (1,000)	11,388	789	439	171	9,904

[1] For dichotomous (0-1) measures, the statistic is the percentage in the category.
[2] For each category, the statistic is the percent at that level or higher.
Compiled by Economic Research Service from Public Use Microdata Sample, 1980 and 1990 Census.

Appendix table 3b—Averages[1] of measures used in earnings regression, 1990, women

Wage earner attributes	Total	Black	Hispanic	Native American	Non-Hispanic White
Average earnings ($)	11,846	10,033	9,653	10,441	12,101
Time at work					
Weeks worked (anti-log)	36.0	35.3	31.4	29.7	36.4
Full-year (0-1)	56.2	53.9	44.7	45.1	57.0
Usual hours (anti-log)	33.5	34.3	33.6	33.9	33.5
Full-time (0-1)	71.8	77.3	71.2	74.9	71.3
Education[2]					
No H.S. diploma	100.0	100.0	100.0	100.0	100.0
H.S. diploma	83.2	70.0	63.2	75.1	85.3
Some college	44.4	31.1	32.8	40.7	46.1
Bachelor's degree	14.7	8.4	8.0	7.4	15.6
Master's or more	4.5	2.6	2.4	2.4	4.8
Experience					
Years experience	19.4	18.9	17.5	18.1	19.5
Square of years experience	527	505	446	459	532
Region					
Midwest (0-1)	30.5	4.2	10.5	18.5	34.0
South (0-1)	43.8	93.5	40.4	31.0	39.6
West (0-1)	14.1	1.0	45.8	47.7	13.2
Northeast (residual)					
Family					
Married (0-1)	65.5	42.7	62.0	53.7	67.9
Any children (0-1)	74.3	79.8	73.8	80.4	73.7
Number of children	1.8	2.0	1.9	2.1	1.8
Any children under 6 (0-1)	19.8	22.9	27.8	24.8	19.1
Language					
Not born in U.S. (0-1)	2.6	0.8	24.4	0.9	1.5
Speak poor or no English (0-1)	0.8	0.4	11.2	1.7	0.3
Do not speak English at home	5.9	2.8	72.3	29.5	3.1
Industry					
Agriculture (0-1)	1.8	2.0	6.8	1.9	1.5
Manufacturing (0-1)	18.7	33.0	13.1	13.6	17.6
Government (0-1)	21.1	23.1	22.0	35.8	20.6
Services (residual)					
Work disability (0-1)	4.5	4.9	3.2	6.7	4.5
Veteran (0-1)	1.2	1.8	1.1	1.2	1.2
Race/ethnicity					
Black (0-1)	8.2	100.0	1.0	0.0	0.0
Hispanic (0-1)	3.0	0.4	100.0	2.9	0.0
Native American (0-1)	1.5	0.0	1.5	100.0	0.0
Non-Hispanic White, Asian (residual)					
Number of observations (1,000)	10,286	843	311	156	8,901

[1] For dichotomous (0-1) measures, the statistic is the percentage in the category.
[2] For each category, the statistic is the percent at that level or higher.
Compiled by Economic Research Service from Public Use Microdata Sample, 1980 and 1990 Census.

Appendix table 4—Difference in earnings from urban[1] total by source, wage and salary workers, age 18-64

Source of earnings difference	Black 1979	Black 1989	Hispanic 1979	Hispanic 1989	Native American 1979	Native American 1989	Non-Hispanic White 1979	Non-Hispanic White 1989
				Percent				
Women								
Total difference	0.4	-4.4	-15.9	-20.9	-13.6	-17.2	0.9	2.8
Difference due to...[2]								
Time at work	2.6	2.0	-1.6	-2.2	-4.4	-3.2	-0.3	-0.1
Education	-3.4	-4.7	-7.8	-10.7	-5.2	-7.9	1.0	1.6
Experience	1.2	0.5	0.1	-1.0	-1.0	0.3	-0.2	0.1
Language	0.4	0.4	-4.0	-4.7	0.0	0.2	0.3	0.6
Region	-1.2	-1.7	0.9	1.5	1.3	0.7	0.0	-0.0
Industry	1.0	0.2	0.6	0.2	0.5	0.2	-0.2	-0.1
Family	-1.1	-1.2	-0.5	-0.7	-1.1	-1.5	0.2	0.2
Other measured sources*	-0 1	-0 1	0.0	0.1	-0.4	-0.5	0.0	0.0
Remainder	1.1	0.1	-3.7	-3.4	-3.3	-5.6	0.1	0.4
Men								
Total difference	-26.5	-28.4	-27.3	-34.1	-21.2	-29.2	5.8	8.5
Difference due to...								
Time at work	-4.9	-5.5	-3.3	-4.9	-4.5	-5.6	1.0	1.6
Education	-7.6	-9.3	-10.7	-15.1	-6.4	-8.9	1.6	2.8
Experience	0.7	0.3	0.4	-1.8	-2.2	-1.9	-0.0	0.3
Language	1.0	1.1	-9.6	-10.7	-0.3	0.3	0.9	1.6
Region	-0.8	-1.3	0.1	0.5	0.4	-0.1	0.1	0.1
Industry	-0.9	-1.3	0.1	0.2	-0.9	-0.9	0.2	0.2
Other measured sources*	-0.2	-0.1	-0.3	0.5	-0.7	-0.8	0.1	-0.1
Remainder	-13.8	-12.3	-3.8	-2.5	-6.4	-11.3	2.0	2.0

[1] Urban as used here refers to metro.
[2] See chapter appendix table 1 for definitions of these factors. *Includes work disability and veteran status.
Compiled by Economic Research Service from Public Use Microdata Sample, 1980 and 1990 Census.