

Overcoming Persistent Poverty—And Sinking Into It

Income Trends in Persistent-Poverty and Other High-Poverty Rural Counties, 1989-94

Post-1990 income and population trends in persistent-poverty and other high-poverty rural counties suggest that, in general, economic conditions are improving in those counties. Recent per capita income growth in the persistent-poverty counties was more than twice that in other rural counties. Improvements are concentrated in the East, while trends are mixed in the Southwest, the Ozarks, and the upper Midwest. Most high-poverty counties with predominantly Black poor experienced substantial income growth, while income declined in a substantial minority of high-poverty counties with high proportions of Hispanic and Native American poverty.

The poor are not spread evenly across the landscape with the nonpoor, but are disproportionately concentrated in the centers of large cities and in remote rural areas. In some rural areas, very high poverty rates have persisted over many decades. In 535 rural counties (almost one-fourth of all rural counties), poverty rates have exceeded 20 percent in each decennial census year since 1960. In addition to these “persistent-poverty” counties, 232 “new high-poverty” nonmetro counties had poverty rates in excess of 20 percent in 1989, although they had poverty rates lower than 20 percent in at least one of the earlier census years.

The high-poverty rural counties (including both persistent-poverty counties and new high-poverty counties) are home to 44 percent of the rural poor, and are of particular concern to policymakers for several reasons. Where poverty rates are very high, resources of local government, local business, and local social networks are often inadequate to provide public services such as health and

education, and to support families and individuals with serious income inadequacies. Also, high concentrations of poverty can result in economic, social, and cultural milieus that depress aspirations and expectations of young people, making it difficult for them to develop to their full potential. For these reasons, a number of Federal programs are targeted to high-poverty counties, and several federally supported regional commissions focus resources and efforts on multicounty areas of concentrated poverty.

After two decades of substantial reduction in rural poverty in the 1960's and 1970's, progress in rural poverty reduction virtually stopped during the 1980's. In fact, more counties reverted to high-poverty status (above 20 percent poverty rate) during the 1980's than escaped from high poverty. It is of considerable interest, therefore, to know whether economic well-being in the high-poverty rural counties has improved, deteriorated, or remained unchanged since the 1990 census. Reliable county-level poverty data are available only once every 10 years, from the decennial census. However, annual county income and population data are available, and I draw on those data to provide a picture of household economic trends in the persistent-poverty and new high-poverty counties during the 5 years following the 1990 census.

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Per capita income trends in the persistent-poverty and new high-poverty counties during the 5 years since the 1990 census are generally quite encouraging. Per capita income grew 10.7 percent (adjusted for inflation) in the persistent-poverty counties, well above the all-nonmetro growth rate of 6.15 percent. As in the 1970's, income rose more rapidly in the higher poverty counties. It is likely that poverty rates have declined in a majority of the persistent-poverty counties. If these trends continue through the rest of the 1990's, a substantial number of these counties will have poverty rates below 20 percent by the 2000 census, thus escaping persistent-poverty status.

In 26 of the 535 persistent-poverty counties, however, real per capita income declined during 1989-94. Income also declined in 31 of the 232 new high-poverty counties. Some of these counties are probably becoming the persistent-poverty counties of the future. Many of the high-poverty counties with declining per capita income have the following characteristics: remoteness from urban centers, high proportions of Hispanic or Native American population, high rates of natural increase, and high employment share in agriculture, forestry, and fisheries. Very few of the high-poverty, declining-income counties had substantial population loss or substantial international immigration.

Income trends in the high-poverty counties followed a regional pattern. The persistent-poverty counties with high rates of per capita income growth are located disproportionately in the Appalachian Mountains and the Southeast, while those with deteriorating economic conditions are almost all west of the Mississippi River. The pattern of spatially concentrated poverty appears to be shifting westward and away from predominantly Black areas toward areas with high proportions of Hispanics and Native Americans. (See box on "New Intercensal Poverty Estimates" for comparison with newly available county poverty statistics.)

High-Poverty Rural Counties—Background

Persistent-poverty counties are concentrated in geographic clusters, and each cluster has a distinctive racial or ethnic character. In the Black Belt (across the Southeast from the Carolinas to Alabama) and the lower Mississippi River Valley, Blacks predominate in the poor population. In the Southern Highlands—the Appalachian, Ozark, and Ouachita mountains—Whites predominate among the poor. In the Rio Grande Valley and the high plains of the Southwest, Hispanics predominate. And in the persistent-poverty counties of the central Southwest, the northern Great Plains, and western Alaska, it is predominantly Native Americans who are poor. Most of the "new" high-poverty counties are located in or near the persistent-poverty clusters.

Changes in economic well-being in the high-poverty rural counties during the 1980's differed markedly from those of the previous two decades. During the 1960's and 1970's, rural poverty rates declined substantially (fig. 1). Of the 2,249 rural counties with poverty rates above 20 percent in 1959, only 1,220 persisted in the rural high-poverty category through 1969. (An additional 75 counties retained high poverty rates, but were reclassified as metro.) The number of persistent-poverty rural counties declined further to 646 by 1979. However, this trend did not continue into the 1980's. In general, rural poverty rates remained more or less unchanged during the 1980's, and the number of persistently poor counties declined more slowly, falling only to 535 by 1989. This decline in the 1980's was more than offset by the 171 rural counties that reverted to high poverty in 1989 after having escaped from persistent-poverty status in 1979. The discontinuity of economic trends in the 1980's raises important questions about how the high-poverty counties have fared during the 1990's:

- Are the persistent-poverty counties falling further behind other nonmetro counties, or are they holding their own or gaining ground?

New Intercensal Poverty Estimates (1993)

The Census Bureau recently released county poverty estimates for 1993, the first intercensal county poverty estimates in its new Small Area Income and Poverty Estimates series. These estimates are based on rather complex weighted regression techniques using a wide range of data sources, including decennial census data, Current Population Survey data, annual population estimates, Bureau of Economic Analysis income data, and administrative data from tax returns and welfare programs. The reliability of the estimates is uncertain. Confidence intervals (as published by the Census Bureau) are quite large, and the poverty estimates are not directly comparable with those produced by the decennial census because they are based on slightly different populations and concepts of income. This makes comparisons of *changes* in poverty rates from 1989-93 particularly problematic. In spite of these limitations, I used the 1993 poverty estimates to verify trends observed in the income data.

The poverty trends in rural high-poverty counties, as indicated by the intercensal poverty estimates, are broadly consistent with the income trends described in the article. However, the regional patterns are less pronounced. Both data sources point to some improvement in economic well-being in the lower Mississippi River Valley and to worsening economic conditions in a number of high-poverty counties in the Southwest, especially in New Mexico and western Texas. In the Appalachians and the Black Belt, on the other hand, the intercensal poverty estimates do not reflect the improving economic conditions suggested by the income trends.

- Are the new high-poverty counties falling further behind other nonmetro counties, perhaps to become additional persistent-poverty counties, or were their high poverty rates in 1989 temporary?
- Do the spatial patterns of change in rural economic well-being resemble those of the 1960's and 1970's or those of the 1980's?
- Are there regional differences in the post-1990 income trends in the persistent-poverty and new high-poverty counties?
- Are there persistent-poverty or new high-poverty counties where income trends point to serious economic deterioration that may indicate a need for special policy attention?

Income Growth Well Above National Average in High-Poverty Counties

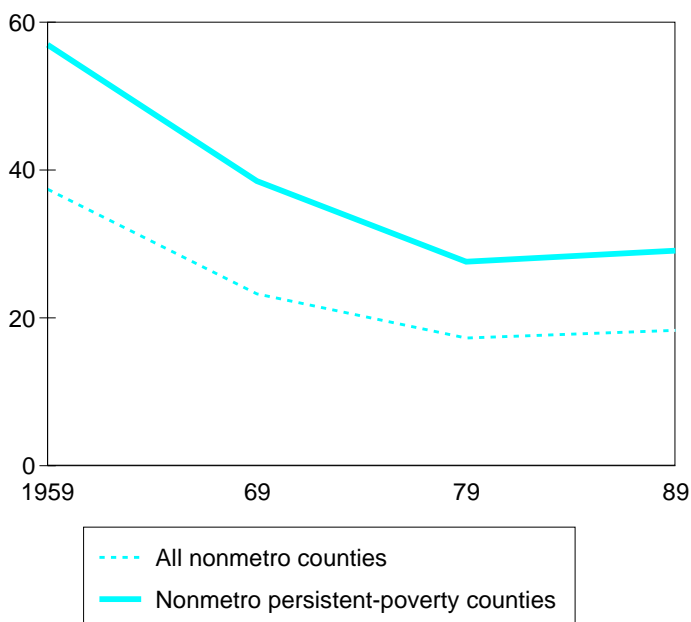
To provide a general picture of income trends from 1989 to 1994 in the high-poverty counties, I calculated per capita income change (adjusting for inflation) in three cate-

Figure 1

Poverty rates in nonmetro and persistent-poverty counties, 1959-89

Nonmetro poverty rates declined in the 1960's and 1970's but increased slightly in the 1980's

Mean poverty rate (percent)



Note: County categories are held constant for all years based on metropolitan status in 1993 and persistent-poverty status in 1989. Source: Prepared by ERS using decennial census data, 1960, 1970, 1980, 1990, from the Bureau of the Census.

gories of rural counties: persistent-poverty counties, new high-poverty counties, and other nonmetro counties. I also calculated the proportion of counties in each category that had declining per capita income, the proportion with income growing but more slowly than the national nonmetro average, the proportion with income growing at one to two times the national nonmetro average, and the proportion with income growing more than twice as rapidly as the national nonmetro average (table 1). The results indicate that the persistent-poverty counties as a group have done rather well. Per capita income (adjusted for inflation) grew 10.7 percent in the persistent-poverty counties, more than twice the growth rate in the "other" nonmetro counties. Of the 535 persistent-poverty counties, 77 percent experienced per capita income growth higher than the national nonmetro average, and 40 percent had income growth greater than twice the national nonmetro average.

In the new high-poverty counties, income growth was only moderately higher than that in the "other" nonmetro category (6.7 percent compared with 5.1 percent). This was reflected in a modest overrepresentation of new high-poverty counties with income growth more than twice the national nonmetro average.

Per capita income adjusted for inflation declined in 26 (4.9 percent) of the persistent-poverty counties and in 31 (13.4 percent) of the new high-poverty counties. In most of these counties, the declines were not large, and the income trends would perhaps be better characterized as stagnant than declining. Nevertheless, it seems likely that the high poverty rates in almost all of these counties have at least persisted, if not increased. Many of the new high-poverty counties with declining income will become the persistent-poverty counties of the future unless their economies are revitalized.

Per capita income grew, but at less than the national nonmetro average, in 18 percent of the persistent-poverty counties and in 30 percent of the new high-poverty counties. The implications for poverty rates in these counties depend on the rate of income growth and on how the distribution of income has changed.

The large proportion of persistent-poverty counties in the two highest income-growth categories suggests that poverty rates have declined in a substantial majority of the persistent-poverty counties. This is true for almost all those with income growth more than twice the national nonmetro average, for most of those with income growth between one and two times the national nonmetro average, and for at least some of those with income growth less than the national average. If these trends continue through the rest of the decade, many of these counties will escape persistent-poverty status.

Personal income in a county can be broken down into three sources: income from earnings, income from property (dividends, interest, and rent), and income from government transfers (such as social security and welfare assistance). From 1989 to 1994, the growth in per capita income in the persistent-poverty counties resulted from increases in earnings and transfers, while income from dividends, interest, and rent declined substantially. This pattern strengthens the conclusion that poverty rates declined in the persistent-poverty counties, because income from earnings and transfers tends to benefit lower income households more than does property income.

Income Grew in Most Southeastern High-Poverty Counties; Trends Mixed in West

Income change in the persistent-poverty counties during the first half of the 1990's followed a regional pattern (fig. 2). With only a few exceptions, real per capita income increased in the persistent-poverty counties of Appalachia, the Black Belt, the lower Mississippi River Valley, and in the predominantly Native American persistent-poverty counties of the Southwest, the northern Great Plains, and Alaska. Further, income growth in a substantial majority of these counties exceeded the national nonmetro average. On the other hand, in the persistent-poverty counties of the Ozark-Ouachita Plateau, the Rio Grande Valley, and the high plains of the Southwest, per capita income growth was less robust and many counties experienced income declines. Farther west and north,

per capita income declined in two counties in northern Montana, and one southwestern Idaho county.

The same general pattern characterized the new high-poverty counties (fig. 3). Of the 31 new high-poverty counties with declining real per capita income in the early 1990's, only 4 were east of the Mississippi River. With the exception of one county in Ohio, all the new high-poverty counties in Appalachia experienced increasing per capita income, most at rates higher than the national nonmetro average. There were only a few new high-poverty counties in the Black Belt and the lower Mississippi River Valley, and almost all of them recorded income growth higher than the national nonmetro rate. Across the Ozark-Ouachita Plateau and on the high plains of the Southwest, the pattern was mixed, with a number of declining-income counties. Finally, per capita income declined in a dozen or so new high-poverty counties scattered across the upper Midwest and the intermountain West.

It appears, then, that the pattern of spatially concentrated poverty may be shifting westward. The counties that are likely to escape from high-poverty status are disproportionately in the Appalachian Mountains and the Southeast, while the persistent-poverty and new high-poverty counties with deteriorating economic conditions are almost all west of the Mississippi River.

Table 1

Income and poverty characteristics of nonmetro counties

Income growth in most persistent-poverty counties was well above the national nonmetro mean

County characteristics	Persistent-poverty(a)	New high-poverty(b)	Other nonmetro
Number of counties	535	232	1,519
Poverty rate, 1989 (percent)	28.7	22.7	13.3
Per capita income, 1989 (in 1994 dollars)	12,879	14,497	17,022
Per capita income, 1994 (in 1994 dollars)	14,253	15,464	17,892
Per capita income growth, 1989-94 (percent)	10.7	6.7	5.1
Per capita income (PCI) change categories, 1989-94	----- Percent of counties -----		
PCI declined	4.9	13.4	14.9
PCI increased 0 to 6.15 percent(c)	17.9	29.7	35.3
PCI increased 6.15 to 12.30 percent(c)	37.0	35.8	34.7
PCI increased more than 12.30 percent(c)	40.2	21.1	15.1
Total	100.0	100.0	100.0

Notes: Poverty rate, income, and income growth statistics in the top panel were calculated by aggregating data within each category of counties (that is, they are equivalent to county means weighted by county population).

(a) Persistent-poverty counties had poverty rates higher than 20 percent in each decennial census: 1960, 1970, 1980, and 1990.

(b) New high-poverty counties had poverty rates higher than 20 percent in 1990, but lower than 20 percent in at least one of the previous three censuses.

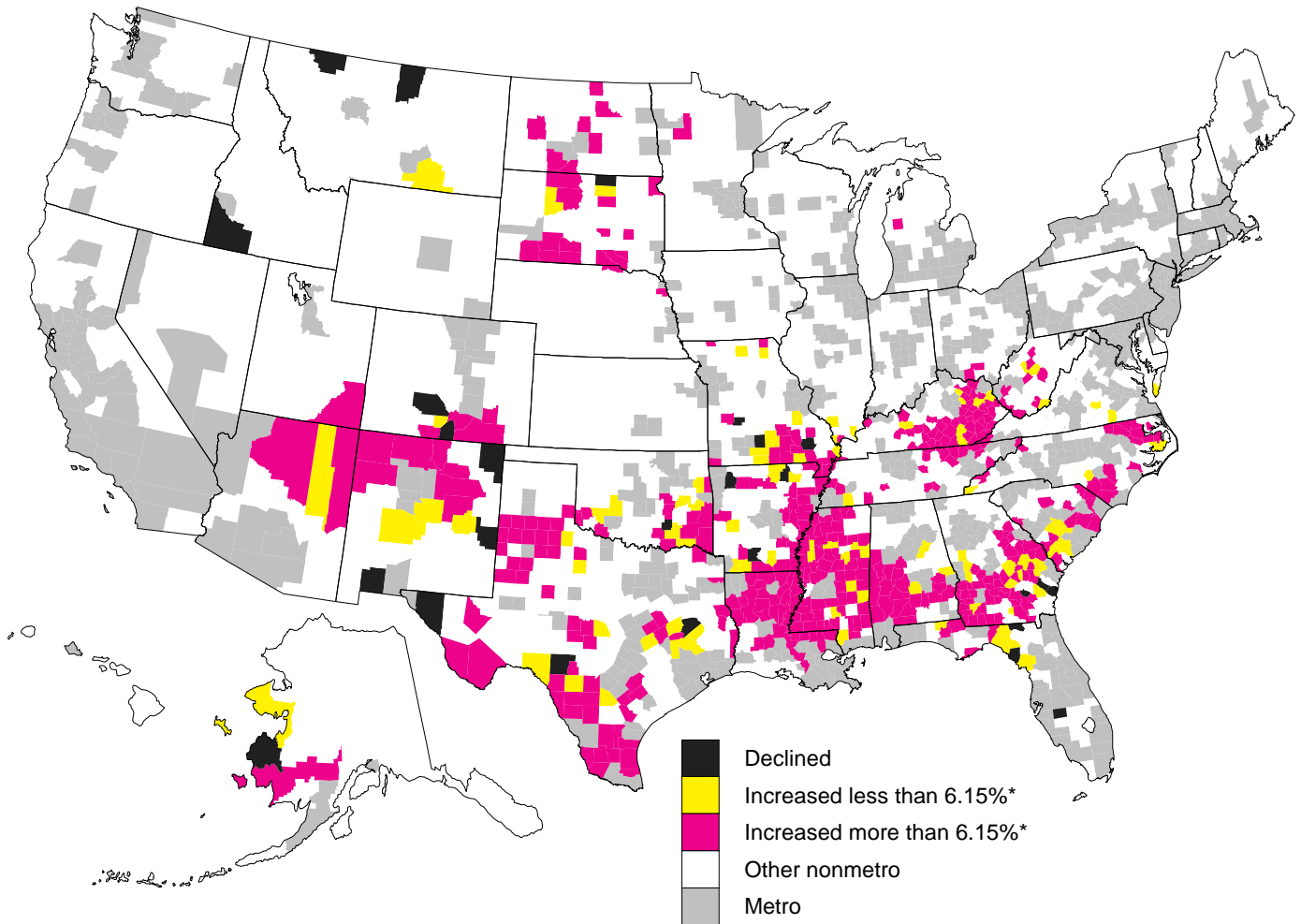
(c) Nationally, nonmetro per capita income grew 6.15 percent from 1989 to 1994.

Source: Calculated by ERS using data from the Bureau of the Census Summary Tape File 3C, 1990, and the Bureau of Economic Analysis Regional Economic Information System 1969-94 Income File.

Figure 2

Change in per capita income, 1989-94, in persistent-poverty nonmetro counties

Income increased in almost all the persistent-poverty counties in Appalachia, the Black Belt, and the lower Mississippi River Valley; trends in other areas were mixed



*U.S. nonmetro per capita income increased 6.15 percent during this period.

Source: Prepared by ERS using data from the Bureau of the Census STF3C, 1990, and the Bureau of Economic Analysis Regional Economic Information System 1969-94 Income File.

Spatial Patterns of Poverty and Income Change, 1959-94

To assess current spatial patterns of change in the high-poverty counties, it is helpful to relate them to patterns of change over the previous decades. Do changes in the early 1990's follow the spatial pattern of the 1960's and 1970's, or that of the 1980's?

In the 1960's and 1970's, two patterns are notable: first, overall rural poverty declined substantially, and second, economic conditions improved more in the higher poverty areas than in other rural areas. The average poverty rate of nonmetro counties declined from 37.4 percent in 1959 to 23.2 percent in 1969, and declined further to 17.3 percent in 1979 (fig. 1). (These averages are for counties that were still classified as nonmetro in 1993, but the averages are nearly the same if all counties that were non-

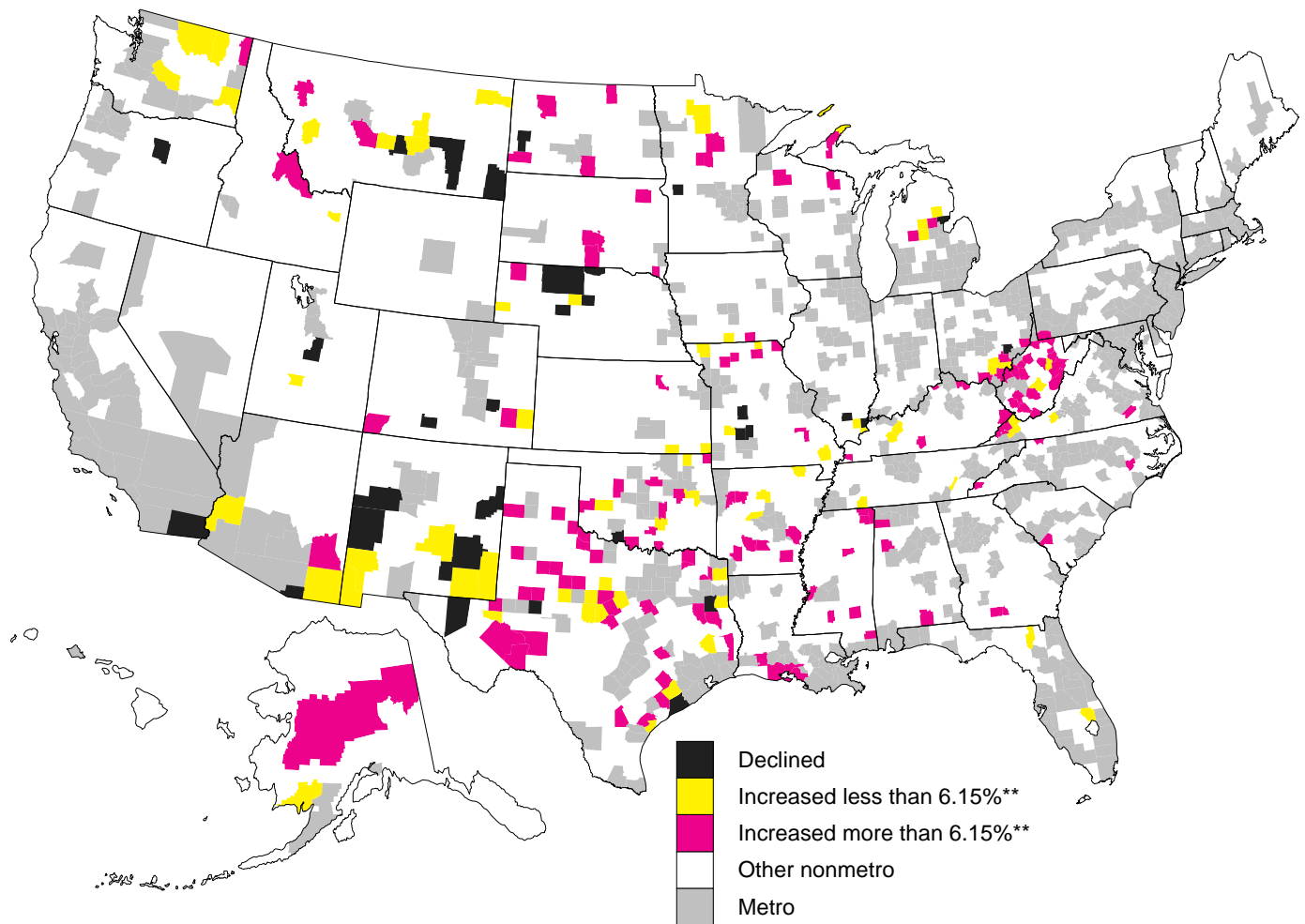
metro in 1963 are included.) Most of the counties that escaped from persistent poverty in those two decades did so as a result of the general improvement in rural economic well-being, not because their own improvement was outstanding. For example, poverty rates in the counties that escaped from persistent-poverty status during the 1960's declined an average of 13.5 percentage points—substantially less than the 17.9-percentage-point decline in the counties that remained in persistent poverty (table 2). What distinguished the escapees were their much lower poverty rates at the beginning of the decade. The same pattern is apparent in the 1970's.

This general rural economic improvement was good news for high-poverty rural areas in the 1960's and 1970's, and the second pattern—the more rapid improvement in eco-

Figure 3

Change in per capita income, 1989-94, in new high-poverty nonmetro counties*

Per capita income increased in most of the new high-poverty counties, but declined in a few, mostly located in the West



*New high-poverty counties had poverty rates above 20 percent in 1989 but below 20 percent in at least one of the previous three decades.

**U.S. nonmetro per capita income increased 6.15 percent during this period.

Source: Prepared by ERS using data from the Bureau of the Census STF3C, 1990; and the Bureau of Economic Analysis Regional Economic Information System 1969-94 Income File.

conomic conditions in the higher poverty areas—was even better news. This second pattern is apparent in the greater declines in poverty rates in the higher poverty counties (table 2). Statistical analysis using correlation techniques confirmed that this pattern was pervasive and quite strong both in the 1960's and 1970's. The same pattern is reflected in the income statistics for the 1970's (comparable income statistics are not available for the 1960's). Real per capita income during 1969-79 grew more rapidly in counties with higher poverty rates at the beginning of the decade, and this association was moderately strong both for all nonmetro counties and among persistent-poverty counties.

In the 1980's, both of these patterns disappeared or were greatly attenuated. The average poverty rate of nonmetro counties actually increased by about 1 percentage point from 1979 to 1989, and that of persistent-poverty counties increased about 1.5 percentage points. Only 104 counties escaped from persistent-poverty status during the 1980's—a much smaller proportion of persistent-poverty counties than in the previous two decades—and that was more than offset by the 223 counties that either reverted to high-poverty status or entered high-poverty status for the first time in 1989. By way of comparison, only 5 counties entered high poverty in 1969, and only 32 entered or re-entered high poverty in 1979. The counties escaping from persistent-poverty status in the 1980's, unlike those in the previous two decades, were distinguished from

counties that remained in persistent poverty by their greater declines in poverty rates as much as by their lower pre-decade poverty rates (table 2). Further, the negative association of poverty change with the poverty rate at the beginning of the decade that had been strong in the 1960's and 1970's all but disappeared in the 1980's. Similarly, the association of change in per capita income with pre-decade poverty rate weakened substantially.

Now, what is the spatial pattern of economic change in rural areas in the early 1990's? National-level Current Population Survey data indicate that the nonmetro poverty rate increased somewhat from 1989 to 1993, then declined in 1994 to about the 1989 level. However, nonmetro real per capita income grew by over 6 percent from 1989 to 1994, and it grew more rapidly in counties with higher 1989 poverty rates. The association was much stronger than it was in the 1980's and nearly as strong as it was in the 1970's. Taken in combination, this general spatial pattern and the income changes in the high-poverty counties outlined earlier suggest that recent spatial trends in economic well-being resemble those of the 1960's and 1970's rather than those of the 1980's, even though overall rural poverty has not declined as it did in the 1960's and 1970's. This provides grounds for at least cautious optimism that poverty rates are falling in the high- and persistent-poverty rural areas.

Remote Agricultural Counties with Large Share of Hispanics or Native Americans More Likely to Experience Declining Income

Although most of the high-poverty counties appear to be experiencing improving economic conditions, some continue to face serious economic challenges. To understand these counties and their economic challenges better, I focus attention in this final section on the 26 persistent-poverty counties and 31 new high-poverty counties in which real per capita income declined from 1989 to 1994.

The high-poverty counties that experienced declining per capita income during 1989-94 do not fit the popular stereotype of rural regions in general decline. Population declined during the period in only 10 of these counties (out of a total of 57), and the decline was substantial in only 4. Average population growth was 7.0 percent in the persistent-poverty counties with declining per capita income and 10.2 percent in the new high-poverty counties with declining per capita income—population growth rates well above the national nonmetro average of 4.2 percent.

Most, but not all, of the declining-income high- and persistent-poverty counties have one or more of the following characteristics:

Table 2

Characteristics of nonmetro counties by persistent-poverty status over three decades

In the 1960's and 1970's, counties that escaped from persistent poverty differed from those that remained in persistent poverty primarily in their lower poverty rates at the beginning of the decade; in the 1980's, change in poverty rate during the decade was the more important difference between the two categories of counties

County poverty characteristics	1959-69	1969-79	1979-89
<i>Counties that remained in persistent-poverty status through the end of the decade:</i>			
Number of counties	1,295	652	542
Poverty rate at beginning of decade (percent)	49.3	37.0	27.6
Change in poverty rate during decade (percent)	-17.9	-10.2	+1.5
<i>Counties that escaped from persistent-poverty status during decade:</i>			
Number of counties	954	568	104
Poverty rate at beginning of decade (percent)	28.5	25.4	22.7
Change in poverty rate during decade (percent)	-13.5	-9.1	-4.9
<i>Counties that were not in persistent-poverty status at beginning of decade:</i>			
Number of counties	427	1239	1727
Poverty rate at beginning of decade (percent)	16.0	14.0	13.6
Change in poverty rate during decade (percent)	-4.7	-1.9	+1.2

Notes: All counties that were nonmetro at the beginning of each decade are included in the analysis for that decade; persistent-poverty counties are those that had poverty rates of 20 percent or more in 1959 and in each succeeding decennial census up until the time of measurement.

Source: Calculated by ERS using data from the Bureau of the Census decennial censuses of population and housing, 1960, 1970, 1980, and 1990.

(1) They are remote from urban centers

Of the 26 persistent-poverty counties with declining per capita income, none includes an urban area with population of 20,000 or more, and only 3 are adjacent to metropolitan counties. More than half are fully rural, with no population center of 2,500 or more persons. The new high-poverty counties with declining per capita income are less remote than the persistent-poverty counties but are, nonetheless, disproportionately remote compared with nonmetro counties in general. In contrast, the high-poverty counties with per capita income growth higher than the national nonmetro mean were distributed across the rural-urban continuum similarly to all nonmetro counties.

(2) They have a high proportion of Hispanics and Native Americans

In about two-thirds of all persistent-poverty counties, a majority of the poor are either Black, Hispanic, or Native American. The declining-income persistent-poverty counties include a disproportionate share of counties in which Hispanics or Native Americans predominate, but relatively few counties in which Blacks predominate. Among the persistent-poverty counties, predominantly Hispanic counties comprise 34.6 percent of those with declining income but only 12.6 percent of those with increasing income; predominantly Native American counties comprise 11.5 percent of those with declining income but only 5.9 percent of those with increasing income; while predominantly Black counties comprise 23.1 percent of those with declining income, compared with 47.9 percent of those with increasing income. Among the new high-poverty counties with declining per capita income, the predominance of Hispanics and Native Americans also is notable, although somewhat less so than in the persistent-poverty counties. In about one-third of these counties (10 out of 31), Hispanics or Native Americans make up 40 percent or more of the poor, whereas only 1 county has a similarly high proportion of Blacks among its poor.

In spite of the predominance of Hispanic counties in the high-poverty, declining-income categories, only four of these counties recorded substantial rates of international immigration. Just two persistent-poverty counties and two new high-poverty counties had 4-year international immigration rates in excess of 3 percent.

(3) They have high rates of net natural increase (excess of births over deaths)

A high rate of natural increase, with the resulting large young population, tends to lower per capita income. It is not surprising, then, to find that many of the persistent-poverty counties with declining per capita income had

high rates of natural increase. Over 1990-94, the aggregate nonmetro rate of natural increase was 1.6 percent. In the persistent-poverty counties with declining per capita income, the rate was 2.1 percent, and in the new high-poverty counties with declining per capita income it was 3.2 percent. In 12 of the 26 persistent-poverty counties with declining per capita income, the rate of natural increase exceeded twice the nonmetro average, and this was true in 12 of the 31 new high-poverty counties with declining per capita income. Most of these very high natural-increase counties (18 of 24) had predominantly Hispanic or Native American populations.

(4) They are disproportionately agricultural

Many, though by no means all, of the high-poverty, declining-income counties had higher proportions of their workforce employed in agriculture, forestry, and fisheries than did the average nonmetro county. This is not surprising because these sectors employ a disproportionate share of persons with relatively low levels of education and work experience, and wage rates are generally low in these sectors. In the average nonmetro county in 1990, 10.8 percent of employment was in the agriculture, forestry, and fisheries sectors. In 62 percent of the persistent-poverty counties with declining per capita income, the employment share in agriculture, forestry, and fisheries exceeded the nonmetro average, and 31 percent had employment shares in that sector higher than twice the national nonmetro average. The corresponding proportions were similar in the new high-poverty counties with declining per capita income.

For the persistent-poverty counties with the highest rates of per capita income decline, the four characteristics described above predominate and coincide. Of the 10 persistent-poverty counties with the most precipitous income declines, all 10 had net natural increase rates higher than twice the national nonmetro mean, all 10 had Hispanic or Native American population shares among the poor in excess of 35 percent (8 in excess of 50 percent), and 9 had employment shares in agriculture, forestry, and fisheries higher than the national nonmetro mean.

Characteristics commonly adduced to explain declines in household economic well-being provide only a partial explanation of the declining per capita income in the high-poverty, declining-income counties. Nearly half of the counties had neither very high rates of net natural increase, nor very high shares of employment in agriculture, forestry, and fisheries, nor substantial population decline, nor substantial international immigration. The income decline in many of these counties may well be associated with characteristics, events, or processes (or measurement errors) more or less unique to the county, and not consistent with a general pattern.

Increasing Per Capita Income Does Not Always Mean Declining Poverty

I have been cautious in inferring that increasing per capita income has translated into declining poverty rates. County poverty rates depend on family structure and on the distribution of income among families as well as on average income. Further, not all income recorded by the Bureau of Economic Analysis (BEA) is included in the income used to calculate poverty rates. In particular, part of government outlays for medicare, medicaid, and food stamps are included in BEA income, but not in poverty income.

During the decade from 1979 to 1989, the last period for which we have reliable county poverty data, the nonmetro poverty rate increased 1.3 percentage points in spite of an increase in real per capita income of 11.3 percent. For the period under study here, 1989-94, county-level poverty data are not available, but national nonmetro poverty statistics from the Current Population Survey indicate that the nonmetro poverty rate increased 0.7 percentage points from 1989 to 1994. During the same period, nonmetro per capita income, based on the the BEA data, increased 6.15 percent. Only part of this disparity reflects an increase in income inequality. Other factors include:

- (1) Poverty thresholds are adjusted by the Census Bureau using the consumer price index, whereas I have used the personal consumption expenditure index to adjust for inflation in calculating per capita income growth (see box on Data and Methods). Using the CPI to adjust for per capita income growth would lower the 1979-89 per capita income growth rates by about 2.2 percentage points and those for 1989-94 by about 0.5 percentage points.
- (2) Government transfers for medicare, medicaid, and food stamps increased as a proportion of total income. These are included in income as reported by BEA, but are not included as income in calculating the poverty rate.
- (3) Average household size decreased from 2.8 persons in 1979 to 2.6 persons in 1989. From 1989 to 1994 it remained about constant at 2.6 persons. Because of assumed economies of scale, more income is required to keep the same number of persons above the poverty line if they are in smaller households.

For these reasons, I have not assumed that poverty rates have gone down in all counties with increasing income. Nevertheless, in the counties with income growth much higher than the national nonmetro mean, it is likely that poverty is, in fact, declining. On the other hand, the national-level associations of poverty change and income change are grounds for concern that poverty rates may be increasing substantially in those counties with declining per capita income, even in counties where the decline is not large.

For Further Reading . . .

Calvin Beale, "Poverty Is Persistent in Some Rural Areas," *Agricultural Outlook*, AO-200, USDA-ERS, Sept. 1993, pp. 22-27.

Peggy J. Cook and Karen L. Mizer, "The Revised ERS County Typology: An Overview," *RDRR 89*, USDA-ERS, 1994.

John B. Cromartie, "Higher Inmigration, Lower Outmigration Contribute to Nonmetro Population Growth," *Rural Conditions and Trends*, Vol. 7, No. 3, USDA-ERS, 1996, pp. 13-17.

Glenn V. Fuguitt and Calvin L. Beale, "Recent Trends in Nonmetropolitan Migration: Toward a New Turnaround?" *Growth and Change*, Vol. 27, 1996, pp. 156-174.

Mark Nord, "Rural Poverty Rate Stabilizes," *Rural Conditions and Trends*, Vol. 7, No. 3, USDA-ERS, 1996, pp. 37-39.

Data and Methods

Income and population data for 1969, 1979, 1989, and 1994 are from the Bureau of Economic Analysis Regional Economic Information System 1969-94 Personal Income File. Income statistics were adjusted for inflation to 1994 dollars using the personal consumption expenditure (PCE) index. The PCE index handles housing costs somewhat differently than does the more familiar consumer price index (CPI), and yields slightly lower inflation estimates, especially for periods prior to 1990. The CPI has been criticized recently for overstating inflation in cost of living, and the PCE is less problematic in this regard. Poverty data are from the decennial censuses of 1960, 1970, 1980, and 1990. These data refer to poverty status in the calendar year prior to the respective census, thus 1959, 1969, 1979, and 1989. Natural increase rates and international immigration rates for July 1990-July 1994 are based on the U.S. Bureau of the Census Population estimates 1990-95 data file. These are 4-year rates since 1989-90 data were not on that file. Data to calculate the proportion of employment in agriculture, forestry, and fisheries are from the Bureau of the Census Summary Tape File 3C, 1990.

Virginia independent cities were combined with their surrounding counties, and a small number of counties in other States were combined with neighboring counties to provide consistent units among the three data sources and among the years of analysis. All data were aggregated within the multicounty units.