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## Overview

While the U.S. economy is now in its sixth year of recovery from the Great Recession of 2007-09, its performance remains weak in some respects, and this is especially true in rural areas. While urban employment now exceeds pre-recession levels, rural employment remains well below its 2007 peak. The rural unemployment rate has declined in line with national trends, but these declines are due more to a decline in the labor force participation rate than to an increase in the number of people employed. The most recent data show evidence of a slight decline in poverty at the national level, but provide conflicting estimates of changes in rural poverty rates.

Meanwhile, total rural population has declined slightly for several years, as slowing natural population growth fails to offset net migration away from rural areas; this is the first time rural population declined since data became available in 1950 that could detect such a trend. At the same time, long-term trends continue to concentrate the most highly educated members of the working-age population in urban areas where the personal economic returns to higher education are greater.

## Many rural counties continued to lose jobs in 2014



Q = Quarter
Source: USDA, Economic Research Service using data from the Bureau of Labor Statistics.

While declines in employment and population have affected a majority of rural counties, there are exceptions. Recent years have seen rapid growth in oil and gas extraction in a number of areas, as technological developments now permit new extraction activities, and these areas have seen modest population growth and substantial job growth. Counties experiencing such energy-resource-driven growth still account for a small share of rural counties, but their numbers are significant in some areas, particularly in the Nation's midsection.

## Declining Unemployment but Little Employment Growth in Rural Areas

## Employment and Labor Force Growth Lag in Rural Counties

Over the last several years, urban areas of the United States have seen moderate employment growth. By the second quarter of 2014, urban employment was slightly above the level it held at the onset of the Great Recession in late 2007. Urban employment rose by 5.0 percent between the second quarters of 2010 and 2014.

However, over the same 4-year period, employment grew by just 1.1 percent in rural America, and it remained more than 3 percent below pre-recession levels as of mid-2014, despite a slight uptick recently. Employment losses persisted in many rural areas, including much of the South, Appalachia, Northwest, and Mountain West.

## Rural employment growth lagging during recovery

Employment Index (2008 Q1 = 100)


Q = Quarter
Note: Shaded area indicates dates of recession.
Source: USDA, Economic Research Service analysis of data from the Bureau of Labor Statistics and the U.S. Census Bureau.

## Unemployment Rates Fall With Declining Labor Force Participation

Unemployment rates have followed similar trends in urban and rural areas since the end of the recession, falling from 10 percent in late 2009 to just over 6 percent in mid-2014. However, the factors underlying this trend have been somewhat different in rural and urban areas. In rural areas, the labor force participation rate declined from 62.2 to 60.6 percent over the past $41 / 2$ years, allowing rural unemployment to fall by several percentage points despite limited employment growth. In urban areas, there was a similar decline in the percentage of the adult population that is in the civilian labor force, from 65.2 to 63.2 percent, but employment growth also made a major contribution to falling unemployment in these areas.

Unemployment falls with lagging labor force participation since 2010


Note: Shaded area indicates dates of recession.
Source: USDA, Economic Research Service analysis of data from the Bureau of Labor Statistics and the U.S. Census Bureau. UER = unemployment rate; LFP = labor force participation rate.

About half of the decline in U.S. adult labor force participation since 2010 reflects the aging of America, with an increasing proportion of the adult population falling into age groups where most are retired; this holds for both rural and urban areas. According to a recent analysis by the Council of Economic Advisors, about one-third of the national decline in labor force participation among working-age adults was attributable to normal cyclical factors; the other two-thirds was attributed to other factors, including the unique severity of the Great Recession.

## Poverty Declines Nationally and Appears To Have Stabilized in Rural Areas

The most recent data on poverty show a slight decline nationally and in urban areas based on the two national surveys reporting poverty statistics. Data from the Current Population Survey (CPS) show poverty falling 0.5 percentage point nationally and 0.3 percentage point in urban areas between 2012 and 2013, while the American Community Survey (ACS) finds a drop of 0.1 percentage point both nationally and in urban areas.

However, these two sources report divergent trends for rural areas, with the CPS finding a drop in the rural poverty rate between 2012 and 2013 while the ACS finds rural poverty unchanged. Although CPS poverty estimates are the basis of the official national-level U.S. poverty rate, the Census Bureau's recent recommendation that the ACS be used for estimating poverty for sub-

| Rural poverty rate likely unchanged despite conflicting evidence |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Percentage of persons in poverty |  |  |
| ACS |  | 2012 | 2013 | Change |
|  | Urban | 15.5 | 15.4 | -0.1 |
|  | Rural | 18.2 | 18.2 | 0.0 |
|  | U.S. | 15.9 | 15.8 | -0.1 |
| CPS | Urban | 14.5 | 14.2 | -0.3 |
|  | Rural | 17.7 | 16.1 | -1.6 |
|  | U.S. | 15.0 | 14.5 | -0.5 |

Note: All values are based on 2003 urban (metro) area definitions. Because of a change in questionnaire design, the sample supporting CPS poverty rate estimates for 2013 was reduced, increasing standard errors for rural poverty estimates. Source: U.S. Census Bureau. national geographic areas due to its larger sample size and smaller sampling errors-together with the lack of supporting evidence for a noticeable recent improvement in rural economic conditions-suggests that the ACS results, showing no change in the rural poverty rate, may more accurately reflect the trend in rural poverty between 2012 and 2013.

## Median incomes have fallen in both rural and urban areas since 2007

Rural median household income was $\$ 41,198$ in 2012. In inflation-adjusted dollars, the rural median household income in 2012 was 8.4 percent below its pre-recessionary peak of $\$ 44,974$ in 2007.

While urban incomes are higher, income trends in urban areas have been similar: the median urban household income of $\$ 52,988$ in 2012 was 7.7 percent below its 2007 value in real terms. Median household income in rural areas was 78 percent of the urban median in 2012. This may overstate the size of the rural-urban income gap in "real" terms since living costs are generally thought to be lower in rural areas, particularly for housing.

## Slowing Natural Increase and Continued Net Outmigration Leads to Net Population Loss in Rural United States

The number of people living in nonmetro counties stood at 46.2 million in 2013-about 15 percent of U.S. residents. Nonmetro areas lost population between July 2012 and July 2013, continuing a 3-year trend. However, the estimated loss of about 28,000 is less than the previous year, when nonmetro population loss was about 47,500 people.

County population change includes two major components: natural change (births minus deaths) and net migration (in-migrants minus out-migrants). From 2010 to 2013, the increase in nonmetro population from natural change has not matched the decrease in population from net migration. While there have been 193,000 more births than deaths, 276,000 more people have moved out of rural America than have moved in.

## Nonmetro population change and components of change, 1976-2013



Note: Metro status changed for some counties in 1980, 1990, 2000, and 2010. Rates are imputed for 1989-1990, 1999-2000, and 2009-10. Source: USDA, Economic Research Service using data from U.S. Census Bureau

While net outmigration from nonmetro areas was more severe during the 1980s than during 2010-13, overall population change remained positive during the 1980s because natural increase contributed roughly 0.5 percent annual growth, compared with 0.2 percent today. Falling birth rates and an aging nonmetro population have steadily dampened the contribution of natural change to nonmetro population growth.

## Declining suburban growth is accompanied by exurban decline

Urban population size and metro proximity have historically contributed to nonmetro population growth. For the time being at least, their influence has weakened. The housing mortgage crisis slowed suburban development and contributed to an historic shift within metro regions, with outlying counties now growing more slowly than central counties.

Population trends among nonmetro counties adjacent to metro areas also changed. These counties grew rapidly from exurban development for decades, but they declined in population for the first time as a group during 2010-13. The decline was marginal-31,000 fewer people-but the change from 2004-07, when over 700,000 people were added to these counties, was much more pronounced than the change in nonadjacent counties.

## Population losses affect nearly two-thirds of nonmetro counties

The number of nonmetro counties losing population

Population change by county's place on the rural-urban continuum, 2004-07 and 2010-13 Percent change


Note: Categories are based on 2013 metro definitions. Urban (metro) central counties contain urbanized areas of 50,000 or more. Urban (metro) outlying counties are tied to central counties through high commuting levels. Rural (nonmetro) adjacent counties are both physically adjacent to a metro area and have 2 percent or higher commuting to the central counties. Nonadjacent counties are divided into those with and without towns of 2,500 or more people.
Source: USDA, Economic Research Service using data from the U.S. Census Bureau.

Nonmetro population change, 2010-13


Source: USDA, Economic Research Service using data from U.S. Census Bureau.
during 2010-13 reached an historic high of 1,269 (61 percent of all nonmetro counties). Taken together, these counties declined in population by 397,000 people, while the 707 nonmetro counties that gained population added 314,000 people. Population decline or a marked slowing of population growth was seen across a wide range of county types, including recreation, manufacturing, and farming dependent.

At the same time, spurred by an energy boom, some rural areas have turned around decades of population decline. Regions such as eastern Texas and parts of rural Pennsylvania have gained population from energy-related job growth, but the demographic impact has been more apparent in sparsely settled regions such as western North Dakota and eastern Montana. Many communities in these areas face housing shortages, overburdened public services, traffic congestion, and other new challenges associated with rapid growth.

## Despite Gains, Rural Places Still Lag Urban Places in Bachelor's Degrees

## College and advanced degree completion rates are lower in rural areas

Based on 2008-2012 data, the share of working-age adults with at least a 4 -year college degree was 14 percentage points higher in urban areas than in rural areas ( 32 percent versus 18


Note: For rural-urban continuum definitions, see www.ers.usda.gov/data-products/rural-urban-continuum-codes/documentation.aspx Source: USDA, Economic Research Service using data from U.S. Census Bureau. percent). The proportional difference was even greater for the subset among those who had an advanced degree ( 12 percent versus 6 percent). There was little difference in the proportion of working-age adults with less than a high school diploma in urban and rural areas (12 percent and 14 percent). Rural areas had a far greater proportion of working-age adults with a high school diploma but no further education, and a slightly greater proportion with some college experience but less than a 4 -year degree.

## A stronger recovery where populations are better educated

Across the rural-urban continuum, recovery from the recession has generally been more successful in counties where the working-age population has relatively high education levels. Nonmetro counties in the top quarter ranked by college completion in 2007-2011 tended to gain population in 2010-2013, while lower ranked counties tended to lose population. One likely reason is that the occupations and industries associated with higher education, such as education and health services, have done relatively well since the recession, providing high-education counties with more jobs to support a growing population. However, innovative leadership, higher quality schools, and greater wealth may also have contributed to the high-education county advantage.

## Urban-rural earnings differences are greater at higher levels of education

The rural-urban differences in the proportion of working-age adults with college degrees is partly the result of considerably higher earnings levels for college graduates and advanced degree holders in urban areas. Many young adults leave rural areas to attend college, and many of these people remain in urban areas after college due to

## Median earnings more responsive to educational attainment in urban areas, 2008-12

Median earnings


Notes: Values are real median earnings for earners age 25 and older. Counties were classified using the Office of Management and Budget's December 2009 metropolitan area definitions. Source: 2008-2012 American Community Survey, U.S. Census Bureau.
the higher earnings available to them in those areas. In contrast, differences between rural and urban earnings levels are much smaller for those with only a high school diploma or with less than a high school education, who thus have less incentive to move to urban areas. However, despite the lower earnings generally available in rural areas, some individuals and families do migrate from urban to rural areas at all levels of educational attainment, as quality-of-life factors, lower housing costs, personal ties, or other specific opportunities motivate them to move or move back to rural America.

## Oil and Gas Extraction Counties See Growth in Employment

Recent advances in technology have allowed the oil and gas industry to extract energy resources in areas where this was previously not practical. These new energy resources provide benefits to the national economy and have led to striking increases in economic activity in and near extraction areas. However, their extraction has raised concerns about groundwater contamination, air pollution, and fracking-induced earthquakes. The long-term sustainability of economic growth driven by resource extraction is uncertain, and the strain caused by extraction-related activity on local infrastructure, local housing availability, and living costs is evident, especially in rural areas.

Between 2001 and 2011, oil and gas extraction was substantial relative to the local economy in 537 U.S. counties, including 444 rural counties. Oil/gas extraction at least doubled in 114 of these rural counties, mostly near major North American shale plays in Arkansas, Louisiana, North Dakota, Pennsylvania, and Texas. Some, such as Van Buren and White Counties in Arkansas and Bradford and Tioga Counties in Pennsylvania, began the 2000s with little or no oil/gas extraction activity and saw production grow by a hundredfold or more by 2011.

## Oil and gas extraction counties see more job growth

Oil and gas counties have seen substantially greater employment growth than the rest of rural America. During 2001-2010, while employment in the rural United States dropped by nearly 2 percent, employment in rural oil and gas extraction counties expanded by over 5 percent. This pattern has continued in the post-recession economic recovery. Overall nonmetro employment in 2013 was less than 1 percent higher than in 2010, but oil/gas county employment grew by 3 percent over these 3 years. Extraction growth counties experienced a gain of nearly 6 percent, but even oil and gas counties with stable or declining production saw an employment gain of nearly 2 percent in 2010-2013.

## Data Sources and Definitions

## Data sources:

American Community Survey, Census Bureau, U.S. Department of Commerce
Current Population Survey, Bureau of Labor Statistics, U.S. Department of Labor.
Local Area Unemployment Statistics, Bureau of Labor Statistics, U.S. Department of Labor.
Population Estimates, Census Bureau, U.S. Department of Commerce.
County-Level Oil and Gas Production in the United States, Economic Research Service, USDA
Definitions and additional information:
In this report, the terms "rural" and "urban" are used as synonyms for "nonmetropolitan" and "metropolitan." For more on the 2003 and 2013 definitions of metropolitan and nonmetropolitan areas as well as related concepts such as urbanized areas and central counties, see
www.ers.usda.gov/topics/rural-economy-population/rural-classifications/what-is-rural.aspx
For more on ERS county types, such as farm-dependent and recreation counties, see www.ers.usda.gov/data-products/county-typology-codes.aspx
For more on the rural-urban continuum codes and the definition of adjacency to a metro area, see www.ers.usda.gov/data-products/rural-urban-continuum-codes/documentation.aspx
In the current report, the terms "with town" and "without town" are used to distinguish counties with population centers of 2,500 or more from those without such centers.

## ERS Website and Contact Person

Information on rural America can be found on the ERS website at www.ers.usda.gov/topics/rural-economy-population. For more information, contact Lorin D. Kusmin at Ikusmin@ers.usda.gov or 202-694-5429.

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