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## Overview

Rural America encompasses 72 percent of the Nation's land area, houses 46 million residents, and plays an essential role in the overall economy. ${ }^{1}$ Rural areas are more economically diverse than in the past, with employment reliant not only on agriculture and mining but also manufacturing, services, and trade. Rural counties with economies based on tourism and recreation maintained higher-thanaverage population growth rates during 2010-16. For rural areas as a whole, employment has increased modestly since 2011 and median incomes are rising once again. Infrastructure investments, like expanding broadband internet access, could improve economic performance and contribute to quality of life through more robust delivery of education, healthcare, public safety, and other services.

While rural America shows signs of a strengthening economy, many rural areas face unique challenges that place them at a competitive disadvantage relative to more urban areas. Overall, the rural population is shrinking for the first time on record, due to several factors, including long-term outmigration of young adults, fewer births, increased mortality among working-age adults, and an aging population. Also, reclassification of fast-growing counties from rural to urban (nonmetro to metro) due to urbanization generally means the remaining rural counties have lower population growth potential and fewer avenues to economic vitality.

Rural employment has not returned to its pre-recession level, and job growth since 2011 has been well below the urban growth rate. Median incomes remain below those of urban areas, and rural poverty rates are higher, especially in the Mississippi Delta, Appalachia, and the Rio Grande Valley.

Rural (nonmetro) counties are fewer in number due to urbanization


Metro-nonmetro status, 1983 and 2013 - Nonmetro in 2013 ( 1,976 counties) Nonmetro - to metro,1983-2013 (447 counties) Metro in - both 1983 and 2013 ( 719 counties) - Urbanized areas as of 2013

Note: The most recent metro-nonmetro classification was released in 2013. The 'Nonmetro in 2013' group includes 17 counties that were reclassified from metro to nonmetro between 1983 and 2013. Source: USDA, Economic Research Service using data from the U.S. Census Bureau.

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## Overall rural population Ioss masks regional variation

The number of people living in rural (nonmetro) counties declined by nearly 200,000 between 2010 and 2016, the first recorded period of rural population decline. Population loss for rural America as a whole has averaged just -0.07 percent per year in that span, but this loss has not been evenly distributed across all rural counties. The number of nonmetro counties losing population reached an historic high of 1,351 during 2010-16, with a combined population loss of just under 790,000 . Long-term population loss continued in counties dependent on agriculture, in the Great Plains, Midwest, and southern Coastal Plains. New areas of population loss emerged throughout the eastern United States, especially in manufacturing-dependent regions.

The 487 rural counties with positive but below-average growth (less than the U.S. population growth rate of 5 percent) together added 281,000 people over 2010-16. Many are located in rural parts of the Mountain West, southern Appalachia, and other scenic areas where population growth slowed considerably for the first time in decades. Counties identified by ERS as having recreation-based economies grew by 4.6 percent during 2002-08 but only by 1.2 percent during 2010-16.

Most nonmetro population growth was concentrated in just 138 counties that grew by 5 percent or more during 2010-16, adding 317,000 people. Workers attracted to the oil and gas boom caused rapid growth in the northern Great Plains, western Texas/southeastern New Mexico, and south Texas.
However, production cutbacks slowed population growth in these regions during 2015-16. Most other high-growth counties during 2010-16 were counties in scenic areas that maintained higher-than-average growth despite the overall population slowdown in these types of areas.

This first-ever period of overall nonmetro population loss may be short-lived. The cyclical economic downturn that began in 2007 bottomed out in 2012, and increasing population growth since 2012 coincides with renewed nonmetro employment growth. The latest population estimates show signs of a population recovery in many parts of rural America in 201516, especially in tourism and recreation destinations.

Nonmetro population loss is now widespread in the
eastern United States


Population change, 2010-16

- Population loss (1,351 counties)
- Population growth below 5 percent ( 487 counties)
- Population growth 5 percent or higher (138 counties)

Metro areas (1,166 counties)

- Urbanized areas as of 2013

Source: USDA, Economic Research Service using data from the U.S. Census Bureau.

## Many factors contribute to rural population loss

County population change includes two components: natural change (births minus deaths) and net migration (inmigrants minus outmigrants). Since 2010, the increase in rural population from natural change ( 270,000 more births than deaths) has not matched the decrease in population from net migration ( 462,000 more people moved out than moved in). The contribution of population growth from natural change has been steadily declining. Population loss from net migration was much higher in the 1950s, 1960s, and 1980s, but was always offset by higher population growth from natural change.

Several factors have reduced rural population growth from natural change. Persistent outmigration of young adults has aged the rural population, meaning fewer births and more deaths, all else being equal. In addition, rural women of childbearing age are having fewer children, in line with national trends. The long-term decline in fertility rates accelerated during the Great Recession, in both rural and urban areas, as many couples postponed having children amid the economic uncertainty.

Increased mortality among working-age adults is a more recent and unanticipated trend contributing to lower population growth. Between 1999-2001 and 2013-15, rural mortality increased more than 20 percent for 25 - to 29 -year-olds, from 135 to 165 deaths per 100,000 people. Mortality rates also increased for rural adults between the ages of $20-24$ and $30-54$. In urban areas, increased mortality during the period was limited to adults ages 20 to 29 . Rural
mortality rates continue to decline for all ages combined, from an average annual rate of 815 deaths per 100,000 people in 1999-2001 to 785 deaths in 2013-15.

Rising rates of prescription medication abuse, especially of opioids, and the related rise in heroin-overdose deaths are contributing to this unprecedented rise in age-specific mortality rates after a century or more of steady declines. This trend, if it continues, will not only lower rural population but will increase what is known as the dependency ratio: the number of people likely to be not working (children and retirees) relative to the number of people likely to be wage earners (working-age adults).

A final factor affecting future rural (nonmetro) population growth is the reclassification of counties from nonmetro to metro due to ongoing urbanization. The United States transformed from roughly 35 percent metro in 1900 to 86 percent today. Urban transformation of rural counties and the reclassification that results each decade leaves behind a smaller rural America made up of slower-growing counties with more limited economic potential. More than 80 million people live in the 2,489 counties that were classified as nonmetro in 1974, and their population grew by 2 percent between 2010 and 2016. Fewer than 50 million people live in the 1,976 counties that remain classified as nonmetro today, and those counties lost population as a group.

## Wage and salary employ- <br> ment growth continues to lag in rural areas

After 6 years of economic recovery, increases in rural employment remain limited. While the Great Recession's impact was equally severe in urban and rural equally severe in urban and rural
counties (both showed average wage/ salary employment declines of 2 percent per year during 2007-10), subsequent job recovery has been much slower in rural areas ( 0.8 percent annual employment growth compared with 1.9 percent in urban areas over 2010-15). The same trend occurred prior to 2007: similar rates occurred prior to 2007: similar rates
of job loss during a recession and its aftermath (2001-03), followed by more rapid urban employment growth during the recovery (2003-07).

Rural wage/salary employment growth has lagged urban growth since 2005. Slower job growth both

Nonmetro mortality rates increased for working-age adults since 2000, decreased for children and older adults
Percent change in mortality rates between 3-year averages, 1999-2001 and 2013-2015


Note: Mortality rates for each 3-year period (1999-2001 and 2013-2015) are the number of deaths in a given age group divided by the age group's average population.The graph shows increases or decreases in mortality rates between 1999-2001 and 2013-2015 as a percentage of the initial period's mortality rate.
Source: USDA, Economic Research Service using data from the National Center for Health Statistics, Centers for Disease Control and Prevention.

Each decade, urbanization leads to reclassification of fast-growing counties from nonmetro to metro, reducing nonmetro population and contributing to slower nonmetro population growth

Nonmetro population (millions)


Note: New metro areas are announced by the Office of Management and Budget $3-4$ years following each decennial census. Here we place the change in population on the decennial census year to match the underlying data. Some nonmetro loss was due to changes in classification rules favoring metro status, especially in 1980 and 2000.
Source: USDA, Economic Research Service using data from the U.S. Census Bureau.

Nonmetro employment has grown at less than half the metro rate during the economic recovery (2010-15)

$$
\begin{array}{l|l|l|l|}
\hline 2001-03 & 2003-07 & 2007-10 & 2010-15 \\
\hline
\end{array}
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Average annual employment change (percent)

| Nonmetro | -0.5 | 1.1 | -2.0 | 0.8 |
| :--- | :--- | :--- | :--- | :--- |
| Metro | -0.6 | 2.2 | -2.0 | 1.9 |

Note: The Quarterly Census of Employment and Wages data used here includes wage and salary employment only. Nonmetro and metro counties are defined as of 2013. Source: USDA, Economic Research Service using data from the U.S. Bureau of Labor Statistics.

Nonmetro employment back to 2001 levels in 2015, still far below levels prior to the Great Recession


Note: The Quarterly Census of Employment and Wages data used here include wage and salary employment only. Nonmetro and metro counties are defined as of 2013. Shaded areas indicate recession periods.
Source: Economic Research Service, USDA, using data from the U.S. Bureau of Labor Statistics.
before and after the Great Recession means rural employment did not return to its 2001 level until 2015, 4 years after urban areas did. Rural employment remains well below its pre-Recession level-400,000 fewer jobs in 2015 compared with 2007. In contrast, job growth in urban areas since 2010 has more than compensated for job losses during the Recession, resulting in a net gain of 3.6 million jobs since 2007.

## Rural employment growth varies by industry

Rural economies have historically relied on goods production (farming, mining, and manufacturing), whereas U.S. job growth as a whole has been service oriented for several decades. Agriculture ${ }^{2}$ and mining are still major rural industries in terms of production and revenue. But due to productivity gains within those industries and more rapid growth in other sectors, they now provide less than 5 percent of wage and salary jobs in rural areas. ${ }^{3}$ Despite a 25-percent increase in agriculture and mining jobs between 2001 and 2015 (fueled primarily by growth in nonconventional oil and gas mining), the two sectors added just over 130,000 jobs. In contrast, a 25-percent decline in rural manufacturing jobs during the same period resulted in a loss of over 700,000 jobs. Manufacturing provides a larger (though declining) share of rural wage and salary jobs-15 percent in 2015, down from 19 percent in 2001.

Together with manufacturing, three major service industries now provide over 70 percent of rural employment: education and health ( 25 percent); trade, transportation, and utilities ( 20 percent); and leisure and hospitality ( 11 percent). All three service sectors added jobs since 2001, but below the urban growth rates for those sectors. If these sectors had grown as rapidly in rural areas as in the Nation overall during 2001-15, there would be an additional 632,000 rural jobs in education and health; another 235,000 in leisure and hospitality; and another 68,000 in trade, transportation, and utilities. To the extent such services are dependent on local demand, their slower growth in rural areas reflects slower population growth. Other sectors (including manufacturing) showed a competitive advantage in rural job creation, thus the number of jobs in those sectors was higher than expected given national trends. For example, a higher rate of rural growth in professional and business services (jobs typically found in larger cities) resulted in 56,000 more jobs than expected in rural areas.

## Nonmetro areas would have added over $\mathbf{8 5 0 , 0 0 0}$ additional jobs since 2001 if they had followed national employment growth trends by industry



Note: Expected change measures the change in nonmetro wage and salary jobs if each industry grew at its national average rate during 2001-15. If actual job growth in a sector is lower than the expected job growth, nonmetro areas are said to be at a competitive disadvantage in that sector. The Quarterly Census of Employment and Wages data used here include wage and salary employment only. Nonmetro counties are defined as of 2013.
Source: Economic Research Service, USDA, using data from the U.S. Bureau of Labor Statistics.

## Household income is lower in rural areas and poverty is more regionally concentrated

Median household income is substantially lower in rural areas than in urban areas, although this shortfall may be mitigated by differences in the cost of living. Since 2007, rural median income has averaged 25 percent below the urban median. This rural-urban income gap stems partly from lower levels of labor force participation in rural areas due to an older population, higher disability rates, and other factors. The rural shortfall in income was likely exacerbated by the sizable downturn in manufacturing, a sector that provides high-paying jobs.

Lower incomes equate to higher poverty rates, especially in the South where nearly 22 percent of nonmetro residents live in families with below-poverty incomes. The higher incidence of rural poverty relative to urban poverty has existed since the 1960 s when poverty

[^1]rates were first officially recorded. The rural-urban poverty gap has narrowed since that time, from 17.0 percentage points in 1960 to 3.6 percentage points in 2016.

Rural poverty is regionally entrenched. Over 300 rural counties ( 15.2 percent of all rural counties) are persistently poor, compared with just 50 urban counties ( 4.3 percent of all urban counties). ERS defines persistent-poverty counties as those with 20 percent or more of their populations living in poverty over approximately 30 years (measured by the 1980, 1990, and 2000 decennial censuses and 2007-11 American Community Survey). Nearly 85 percent of rural, persistent-poverty counties are in the South, comprising more than 20 percent of all rural counties in the region. Many of these counties are not entirely poor, but rather contain multiple and diverse pockets of poverty and affluence. Rural poverty is also entrenched in parts of the Southwest and northern Great Plains.

Rural poverty rates rose during the Great Recession and in initial post-recession years. Overall, the rural poverty rate declined slightly from 2010 ( 16.5 percent) to 2016 ( 15.8 percent), a slow recovery based on historic precedent. Over similar spans following the 198182 and 1990-91 recessions, the rural poverty rate declined by about 2.5 percentage points.

Persistent poverty is currently measured from 1980 to 2007-11, which captures the effects of the Great Recession (2007-09). Comparing these counties with new high-poverty counties based on more recent data identifies 71 high-poverty rural counties in 2011-15 that were not high poverty at any point from 1980 to 2007-11. Only a few of these newly poor counties are located in or around existing persistentpoverty regions. Most are in regions that are typically more affluent, including northern California and counties in the Southeast and Midwest that were affected by the loss of manufacturing jobs during the Nonmetro high-poverty regions expanded in the wake of the Great Recession


■ Persistent poverty, 1980-2011 (301 counties)

- New high-poverty, 2011-15 (71 counties)
- Other nonmetro (1,604 counties)
- Metro (1,166 counties)

■ Urbanized areas
Note: Persistent-poverty counties had 20 percent or more of their populations living in poverty in 1980, 1990, 2000, and 2007-11. New high-poverty counties had rates below 20 percent in those years but increased to 20 percent or more in 2011-15. Source: USDA, Economic Research Service using data from the U.S. Census Bureau.

## Broadband and other infrastructure investments would likely benefit rural areas

USDA programs support infrastructure development-including water and sewer, electric utilities, internet broadband services, community facilities, and housing-in rural areas. Large-scale projects to upgrade transportation networks, utilities, and internet connectivity could benefit rural communities. Increased access to high-speed internet, in particular, could improve delivery of education, healthcare, public safety, and other services. Such investments would be economically efficient if the benefits of doing so outweighed the costs.

Household broadband internet use in rural areas increased from 2 to 61 percent-versus from 5 to 72 percent for urban areas-between 2001 and 2015, with most of the growth occurring before 2010. Growth in broadband subscriptions slowed considerably in both urban and rural areas after 2010, despite increased availability, perhaps due to other means such as cellular phone service or lack of affordable options for some rural residents.

The urban-rural gap in broadband use has decreased slightly since 2007, but its persistence reflects fewer broadband options in rural areas despite significant investments. Also contributing to the continued rural-urban divide are the older average age of the population, higher poverty rates, and lower education levels in rural areas, all factors associated with diminished broadband use. Reclassification of faster growing nonmetro counties to metro status during 2001-15 also increased the rural-urban gap because reclassified counties show higher rates of broadband use than counties that remain nonmetro.

Internet service providers have been increasing access to broadband in rural areas by expanding DSL and cable technologies, wireless platforms, satellite systems, and (to a lesser extent) fiber-optic systems. Despite the slower rate of growth in broadband
subscriptions since 2010, county-level data indicate that rural household connectivity continues to improve and expand geographically. The number of rural counties in which fixed broadband subscriptions exceeded the rural average ( 60 percent or more of households) increased from 281 to nearly 1,200 between 2010 and 2016. (These data reflect the older FCC broadband standard of 200 kilobits per second, which is the best available countylevel data.)

Rural counties newly above the 60-percent threshold for broadband are concentrated in the Northeast, Upper Midwest, and the Intermountain West. Extensive parts of rural Appalachia also saw improvement in broadband access to above 60 percent. The purchase of wired broadband service by households remains more limited in two types of rural regions: (1) isolated, sparsely settled counties in the Great Plains, Nevada, New Mexico, Alaska, and elsewhere; and (2) high-poverty, high-minority regions, such as on tribal lands in the West and stretching from southern Virginia to east Texas in the South.

Metro-nonmetro gap in household broadband subscriptions persists


Note: Questions on internet use were included on the Current Population Survey only in the years indicated on the graph. Broadband is here defined as any type of service other than dial-up. Metro-nonmetro status changed for some counties in 2004-05 and 2014-15. Source: USDA, Economic Research Service using data from the U.S. Census Bureau.

The share of households with wired broadband remains below 60 percent in nearly 800 rural counties


Households with wired broadband service
$\square$ Above 60 percent in 2016 and 2010 (281 counties)
$\square$ Above 60 percent in 2016, not 2010 (891 counties)
$\square$ Below 60 percent in 2016 (804 counties)
$\square$ Metro (1,116 counties)
Note: Here broadband is defined using an older FCC standard, as connections over 200 kilobits per second.
Source: USDA, Economic Research Service using data from the Federal Communications Commission

## Data sources

Population Estimates Program, Census Bureau, U.S. Department of Commerce.
National Vital Statistics System, National Center for Health Statistics, Centers for Disease Control
and Prevention.
Local Area Unemployment Statistics, Bureau of Labor Statistics, U.S. Department of Labor.
Quarterly Census of Employment and Wages, Bureau of Labor Statistics, U.S. Department of Labor.
American Community Survey, Census Bureau, U.S. Department of Commerce.
Current Population Survey, Bureau of Labor Statistics, U.S. Department of Labor.
Form 477 County Data on Internet Access Services, Federal Communications Commission.

## Definitions and additional information

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, visit the ERS "What Is Rural?" topic page.

## ERS Website and Contact Person

Information on rural America can be found on the ERS website. For more information, contact John Cromartie at jbc@ers.usda.gov or (202) 694-5421.

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[^0]:    ${ }^{1}$ Rural areas are defined here using nonmetropolitan (nonmetro) counties. The terms "rural" and "nonmetro" are used interchangeably as are the terms "urban" and "metro." Unless otherwise stated, statistics are calculated using the 2013 nonmetro definition (yellow counties in the map above). For more on these definitions, visit the ERS "What Is Rural?" topic page.

[^1]:    ${ }^{2}$ Agriculture includes forestry, fishing, and related industries.
    ${ }^{3}$ When self-employed farm proprietors are included with wage and salary workers, the share of rural employment in these industries increases from 5 to 9 percent.

[^2]:    In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.
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