

RuralAmerica

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On the cover:
Photo courtesy EyeWire Photography, Inc.



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The well-being of farm households involves more than income. Ashok Mishra and his coauthors analyze farm income and wealth using the Agricultural Resource Management Survey. By looking at the wealth of farm households, including wealth from nonfarm sources, they are able to provide a more complete understanding of the economic welfare of farm families. Only a small portion of farm operator households are economically disadvantaged, partly because in lean years they are able to draw on other assets to meet their consumption expenditures.

Nonmetro areas have long had an income gap compared with metro areas but, as Diane McLaughlin's article shows, they also suffer increasing income inequality. Between 1979 and 1989, real median household incomes declined in nonmetro areas faster than in metro areas. Income improved during 1989-99, but metro areas did better, leaving a gap of nearly \$16,000 between nonmetro and suburban households. Income inequality also grew between 1979 and 1999, though not so much as in the central cities and suburbs. Income inequality has increased due to a number of different causes, including changing household structure, industrial restructuring, and increased participation by women in the workforce.

Now that data from the 2000 census are becoming available, recent population trends are emerging. Willis Goudy finds the population of the Midwest is continuing to grow, but at a slower rate than the rest of the country. Nonmetro counties in the Midwest grew less than metro counties, and growth often depended on how close a county was to a metro area. The most rural counties commonly lost population, especially among the young, while counties adjacent to metro areas showed stronger growth.

The aging American population has brought more attention to the health problems of older people. Carolyn C. Rogers examines both rural health issues and Medicare restructuring in two separate articles. (The next issue of Rural America will be a special one on aging.) One out of five rural residents is over 65. Older rural people rate their health as poorer than urban people do, yet rural areas offer fewer health care options. The quality and variety of health care varies widely between rural communities, but most suffer limited access to doctors and hospitals, fewer choices among doctors, and fewer specialized facilities.

The greatest barrier to health care, however, is financial. Rural areas have had less access to managed care and rural providers have received lower reimbursements for Medicare expenses, meaning that more of the costs of care are passed on to patients. Recent legislation has tried to address the needs of rural health care providers, but rural areas are vulnerable to cuts in funding.

The Rural Updates section opens with our annual review of rural development policy. A new President, new Senate majority, recession, and the September 11 terrorist attacks all made 2001 a memorable year. Richard J. Reeder discusses educational reform, tax revisions, airport security, and funding changes in infrastructure, business assistance, housing, and general development. Debate on new farm and rural development legislation extended into 2002 and culminated in the Farm Security and Rural Investment Act, which contains a number of important rural development provisions.

James Monke and Ron Durst follow this with a close look at the new Economic Growth and Tax Relief Reconciliation Act of 2001, which reduces taxes over a 10-year period. Rural taxpayers typically pay less in Federal taxes because of lower incomes. Like other Americans, they will benefit from lower tax brackets, relief from the marriage penalty, higher child tax credits, higher IRA contribution limits, improved educational benefits, and expanded earned income tax credit eligibility. In addition, phase-out of estate taxes should benefit farmers and small business owners.

Weekly nonmetro earnings continued to rise in 2001 despite the recession, though at a slower rate than previous years. Robert M. Gibbs and Timothy S. Parker use the Current Population Survey to examine nonmetro wage growth by sex, race/ethnicity, and education level. All major demographic groups—but especially Blacks, women, and college graduates—have benefited from higher earnings. The share of nonmetro workers in low-wage jobs has fallen to under 25 percent, but almost half of workers without high school diplomas still hold low-wage jobs.

Douglas E. Bowers

Wealth and Income Contribute Jointly to the Economic Well-Being of Farm Operator Households

Ashok Mishra
Hisham El-Osta
Mitchell Morehart
James Johnson
Jeffrey Hopkins

Monitoring the levels and source of U.S. farm household income and wealth helps policymakers differentiate between those faced with long-term systematic problems versus short-term, market-driven problems. Such income and wealth measures could help extension agents and financial management specialists provide targeted information and financial planning assistance to farm families.

This article examines both the sources and the variation in the level of farm household income and wealth. It uses a farm typology—or classification system—developed by ERS to account for the differences in farm production and household characteristics. The typology sorts farms into more homogeneous categories based largely on sales of the farm and occupation of the operator

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Economic well-being of the farm sector and farm households has been historically associated with incomes, especially income from farming. However, net income of the farm business may be a small percentage of the total income available to the farm family. Since the early 1990s, just under half of U.S. farm operators indicated in USDA surveys that their major occupation was something other than farming. Thus, the true economic well-being of farms must account for all income, both farm and off-farm, as well as the growing importance of wealth such as home equity and investments.

(see “Farm Typology Group Definitions,” p. 13). Most of the information presented here is from the 1999 and 2000 Agricultural Resource Management Surveys (ARMS), conducted by ERS and the National Agricultural Statistics Service (NASS), both USDA agencies. The ARMS, collected annually, is the only source of farm business and farm household data complete enough to produce the typology. Operator household income from ARMS is defined here to be consistent with the Current Population Survey (CPS) definition of money income for all U.S. households (see “Defining Household Income,” p. 6).

Trends in Household Income and Wealth

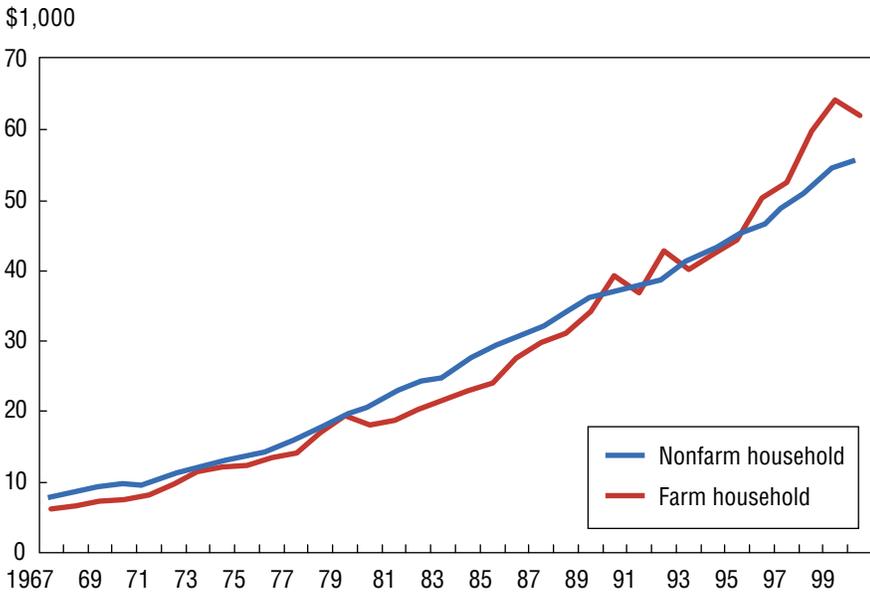
The average money income of farm operator households first exceeded the average income of all U.S. households in the 1990s and has been consistently higher since 1996 (fig. 1). Average farm household income in 2000 was \$62,019, compared with \$57,045 for the

average nonfarm household (table 1). Median income for farm households, which is less likely to be influenced by unusually large or small values, has also been roughly on par with the median income of all U.S. households in recent years.

What accounts for the ascendance of farm households with regard to average income? Earnings from off-farm sources have grown from \$10.1 billion in 1964 to \$114 billion in 2000. Sectorwide net cash income increased just three-fold during those same 35 years. Thus, the increase in farm household earnings has been substantially driven by the increase in off-farm earnings of farm families.

Wages and salaries still make up a significant portion of off-farm earnings. Though they declined from 65 percent (1964) to 56 percent of total off-farm earnings in 2000, aggregate wage earnings of U.S. farm households still grew nearly 9 times (in nominal terms) over that period. There are several reasons for this growth. First,

Figure 1
Mean income of farm and nonfarm households, 1967-2000
In recent years, farm household income has exceeded nonfarm household income



Source: Ahearn (1986) and Agricultural Resource Management Survey (ARMS), 1988-2000.

in 1999 was \$563,563, compared with \$300,000 for all U.S. households in 2000, \$291,000 for all U.S. households in 1999, and \$278,000 for nonfarm households in 1999. However, a majority of the wealth (net worth) is in farm assets, which are difficult to liquidate on short notice. Average farm household net worth has increased steadily over the years, partly from the appreciation in farmland values.

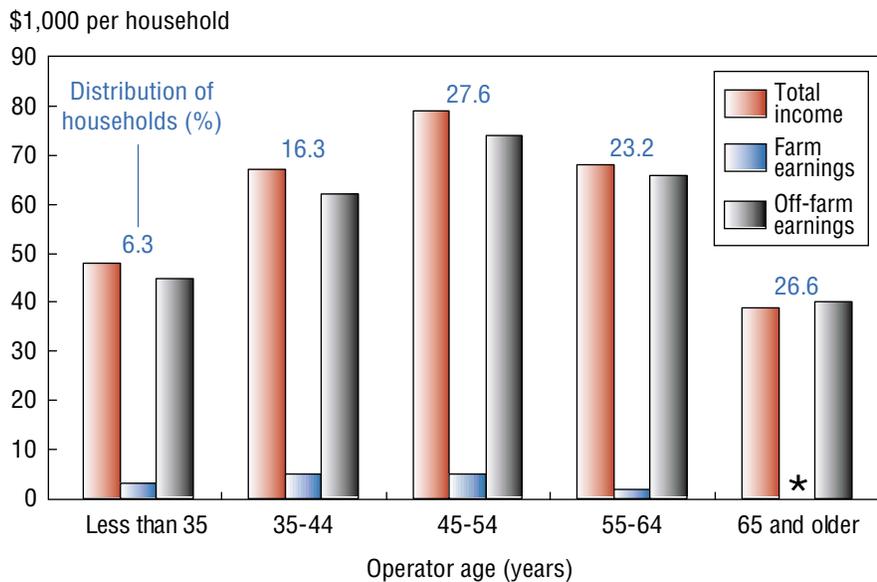
Household Income and Wealth by Age of the Operator

Farm operator household income follows a traditional life-cycle pattern, rising, peaking, and falling with age (fig. 2). Earnings peak at age 45-54. These households received 93 percent (\$78,995) of their income from off-farm sources. Like total household

approximately 52 percent of rural farm people worked off farm in the 1960s, versus 65 percent in the 1990s. Participation by farm women more than doubled during the same period. And the economic boom of the 1990s created more jobs and higher wages in areas within commuting access to farm households.

The proportion of farm households' income originating from off-farm sources is not news. Off-farm income has made up the majority of farm household income for decades and almost all farm households have sources of income other than the farm business. More surprising is the role of wealth, which represents potential spending power. Two individuals with the same income but different amounts of assets will have different consumption possibilities. And the average net worth of farm families

Figure 2
Total, farm-related, and off-farm income per operator household, by operator age, 2000
Farm operators depend on off-farm income for more than 90 percent of total income



*Earnings from farming activities suppressed because the standard error exceeds 75 percent.
 Source: USDA, Economic Research Service, Agricultural Resource Management Study (ARMS) survey, 2000.

Table 1

Operator household income, by farm typology group, 2000*Households operating limited-resource, residential/lifestyle, and lower sales farms rely the most on off-farm income*

Item	Farm typology grouping							48-State total
	Limited-resource	Retirement	Residential/lifestyle	Farming occupation/lower sales	Farming occupation/higher sales	Large	Very large	
<i>Number</i>								
Total households	127,390	319,297	913,088	455,984	172,720	78,256	54,841	2,121,576
<i>Percent</i>								
Distribution of households	6.0	15.1	43.0	21.5	8.1	3.7	2.6	100.0
<i>Dollars per household</i>								
Total household income	11,001	42,849	78,375	45,741	45,071	83,812	177,444	62,019
Farm income	*-2,979	*-1,621	-5,950	*-2,671	13,828	44,236	138,919	2,791
Off-farm	13,980	44,470	84,325	48,412	31,243	39,577	38,525	59,228
Earned ¹	5,911	11,987	75,578	25,015	20,645	23,495	25,485	43,269
Unearned ¹	8,070	32,483	8,746	23,397	10,598	16,081	13,040	15,959
<i>Percent</i>								
Operator household income compared with all U.S. households ²	19.3	75.1	137.4	80.2	79.0	146.9	311.1	108.7
Share of operator household income from off-farm ³	127.1	103.8	107.6	105.8	69.3	47.2	21.7	95.5
Share of off-farm income from earned sources	42.3	27.0	89.6	51.7	66.1	59.4	66.2	73.1
Income dependence:								
Loss from farming	64.7	63.8	75.2	46.4	13.2	9.4	7.8	57.4
0-24% from farming	17.0	25.3	20.6	19.0	9.9	7.5	5.7	19.0
25-49% from farming	na	5.4	1.9	12.1	16.1	10.8	7.0	6.4
50% or more from farming	na	na	*0.7	12.2	44.3	60.4	60.3	11.2
Negative household income	na	na	*1.6	10.3	16.5	11.8	19.2	6.0
<i>Dollars per household</i>								
Nonmoney income	2,541	5,394	5,295	6,257	4,498	4,951	5,313	5,274
<i>Dollars per farm</i>								
Depreciation	1,511	1,807	2,846	5,538	18,776	31,461	71,297	7,310
Net inventory change	*487	a496	*716	*2,652	*8,033	*7,406	*15,875	2,319

d = Data suppressed due to insufficient observations or standard error greater than 75 percent of the estimate.

* = Standard error is between 25 and 50 percent of the estimate.

¹Earned income comes from off-farm self-employment or wage/salary jobs. Unearned income includes interest and dividends, benefits from Social Security and other public programs, alimony, annuities, net income of estates or trusts, private pensions, regular contributions of persons not living in the household, net rental income from nonfarm properties, and royalties for mineral leases.²Average farm household income divided by U.S. average household income (\$57,045).³Income from off-farm sources can be more than 100 percent of total household income if earnings of the operator household from farming activities are negative.

Source: USDA, Economic Research Service, 2000 Agricultural Resource Management Study.

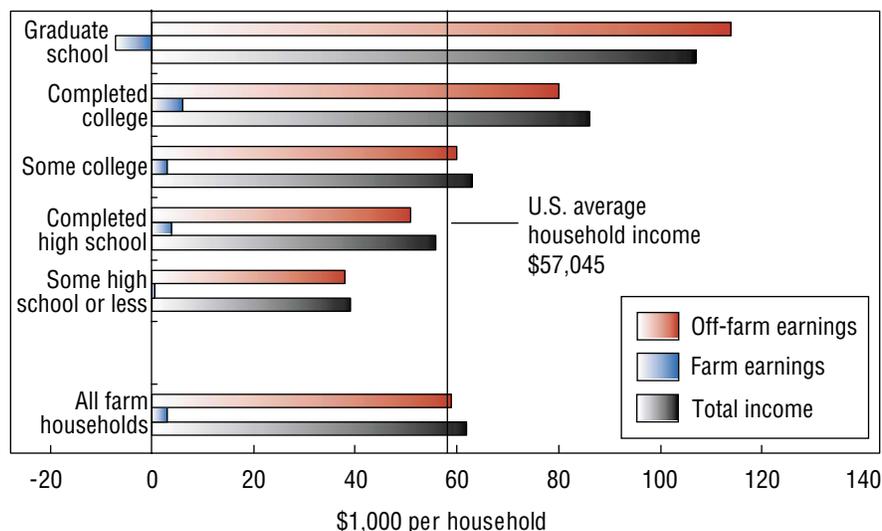
income, farm income rises, peaks, and falls with age. For example, the average income from farming decreases from \$2,878 for operators under 35 to approximately \$890 for those 65 and older. Conversely, the share of off-farm income (regardless of source) increases with age.

Younger farm operators (less than 35 years and 35-44 years) earn more than 85 percent of their income from off-farm sources (fig. 2) and derive most of their income from a variety of off-farm sources. There could be several reasons for this. First, with the strong nonfarm economy of recent years, younger farm operators have had the opportunity to engage in off-farm work, establishing the farm business while pursuing other work opportunities. Second, younger farm operators are in the wealth accumulation phase and are doing so by diversifying their portfolio, both on and off the farm. Third, modern technology enables farmers to increase their productivity and efficiency, which allows more time to work off farm. Finally, younger farm operators are motivated by farm business expansion plans or by raising a family to aggressively explore income earning alternatives.

Meanwhile, at the upper end of the age distribution, farm households have about 69 percent of the income of all U.S. households. Nevertheless, operators who are 65 or older have incomes 14 percent higher (\$39,233) than nonfarm households headed by a person in the same age group (\$32,852). For these older farm households, the majority of income is from unearned sources.

Farm household wealth also follows a distinct pattern over the life cycle. Farm household net worth peaks at age 55-64. These

Figure 3
Total farm-related and off-farm income per operator household by educational level of farm operator, 2000
More educated farm operators earn most of their household income from off-farm sources



Source: USDA, Economic Research Service, Agricultural Resource Management Study (ARMS) Survey, 2000

households tend to have almost 80 percent of their total net worth in farm assets (highest among all groups). Farming's contribution to household net worth increases with operator age until age 65. For example, the average net worth from farming rises from \$222,821 for operators under 35 to \$494,138 for those 55 to 64, then contracts again. Beginning farmers, those age 35-44, have the most debt, both farm and nonfarm. This is consistent with the view that, unless inherited, young and beginning farmers must borrow to finance farming operations.

Household Income, Wealth, and Educational Level of the Operator

As emphasized many times in these pages, farm household income increases with the level of education. Farmers with more education tend to work more off farm. For example, households headed by

operators who have attended or completed graduate school (\$106,647) earned 2.7 times more in 2000 than operators who had less than a high school education (\$38,875), who in turn earned 32 percent less than the average for all U.S. households. As the level of education increases, income from farming decreases and income from off-farm sources increases (fig. 3). This suggests that farm operators allocate time and seek jobs that improve their earning capabilities, and these capabilities derive from educational attainments.

As with income, level of education is positively related with wealth (net worth). More educated farm operators tend to have higher levels of wealth. For example, operators with college degrees or higher have approximately twice as much wealth as operators who have not completed high school. Advanced education is also associated with a

Defining Farm Household Income

The Current Population Survey (CPS), conducted by the Bureau of the Census, is the source of official U.S. household income statistics. Thus, calculating an estimate of farm household income from the Agricultural Resource Management Study (ARMS) that is consistent with CPS methodology allows income comparisons between farm operator households and all U.S. households.

The CPS definition of farm self-employment income is net money income from the operation of a farm by a person on his own account, as an owner or renter. CPS self-employment income includes income received as cash, but excludes in-kind or nonmoney receipts. No adjustments are made to the CPS income measure to reflect inventory changes, since inventory change is a nonmoney item. The CPS definition departs from a strict cash concept by deducting depreciation, a noncash business expense, from the income of self-employed people.

Farm self-employment income from the ARMS is the sum of the operator household's share of farm business income (net cash farm income less depreciation), wages paid to the operator, and net rental income from renting farmland. Adding other farm-related earnings of the operator household yields earnings of the operator household from farming activities. (Other farm-related earnings consist of net income from a farm business other than the one being surveyed, wages paid by the farm business to household members other than the operator, and commodities paid to household members for farm work.)

diversified portfolio. In 2000, operators with graduate degrees (6.5 percent) had a total net worth of \$776,929, of which one-third was in nonfarm net worth (\$222,583). However, it should be noted that this group had almost all of its income from off-farm sources.

Income, Wealth, and Size of Household

Affecting both household income and expenditures is that household's size. Farm households with 3 to 5 members have the highest income, 28 percent higher than the average U.S. household. Most of their income (94 percent) comes from off-farm sources. Farm households with 1 or 2 members were the most dependent on income from off-farm sources. Households with 5 or more mem-

bers earned 16 percent of their income from farming and 84 percent from off the farm.

Household size is also important in wealth accumulation, with the expectation being that household size and wealth are inversely related. A large household makes more expenditures and leaves less money available for savings and wealth accumulation. Farm households with 1 or 2 members (58 percent of farm households) do have the most wealth (net worth of \$543,973 including farm and nonfarm). These households have one-third of their assets invested off the farm (and 97 percent of total household income from off-farm sources). On the other hand, larger farm households (5 or more members) had the lowest total wealth and nonfarm net worth. In all

cases, farming was the major source of debt, which increased with family size.

Household Income and Wealth Differs by Farm Type . . .

Grain and soybean farms produce commodities covered by traditional commodity programs. These farm types, in addition to dairies, are relatively prominent among full-time (2,000 hours or more) operators. Beef /cattle and other livestock farms are prominent among part-time operators who work 200 days or more off the farm. Dairy farms received less than a third of their income from off-farm sources; cash grain, cotton, and oilseed farms received even less. Farm households with specialized enterprises such as dairy tend to have higher average farm income, which makes up a larger share of total household income. Dairy is also labor-intensive, limiting the hours that operators can devote to off-farm work. Despite their relatively high dependence on farm income, these farms have income above the average U.S. household.

Even though cash grain farmers have benefited most from farm programs through capitalization of government payments into land values, producers of high-value crops (such as fruit, tree nuts, vegetables, nursery and greenhouse) have the largest net worth (\$792,675), and nonfarm net worth accounts for 15 percent of that. On the other hand, other livestock producers (such as poultry) have the lowest wealth (\$423,501) since much of poultry production occurs on relatively small farming operations on a contract basis. In addition to lower capital requirements, poultry producers are able to allocate more time to off-farm work. In

fact, off-farm earnings (103 percent of household income) offset negative farm income for farms specializing in beef and other livestock. As a result, one-third of their total net worth (wealth) is comprised of nonfarm assets. Many off-farm jobs have benefits that promote investment in options such as a 401K. Actually, an IRA is a benefit for people who don't have a job with benefits or other tax-deferred savings plans.

... By Farm Size

Although most U.S. farms are classified as small farms, agricultural production is highly concentrated among large and very large family farms. These two groups together made up only 8 percent of all

farms, but accounted for 57 percent of production. Level and sources of income varied widely by farm size (fig. 4). Households operating very large farms had the highest average household income, \$177,444, about three times the average for all U.S. households. These farms received approximately 22 percent of their income from off-farm sources.

Households operating residential/lifestyle farms or large family farms (see box, p. 13) also had income above the average for all U.S. households, but the sources of income differed between the two groups. Residential/lifestyle farms received virtually all of their income from off-farm sources, while households with large farms received over half of their income

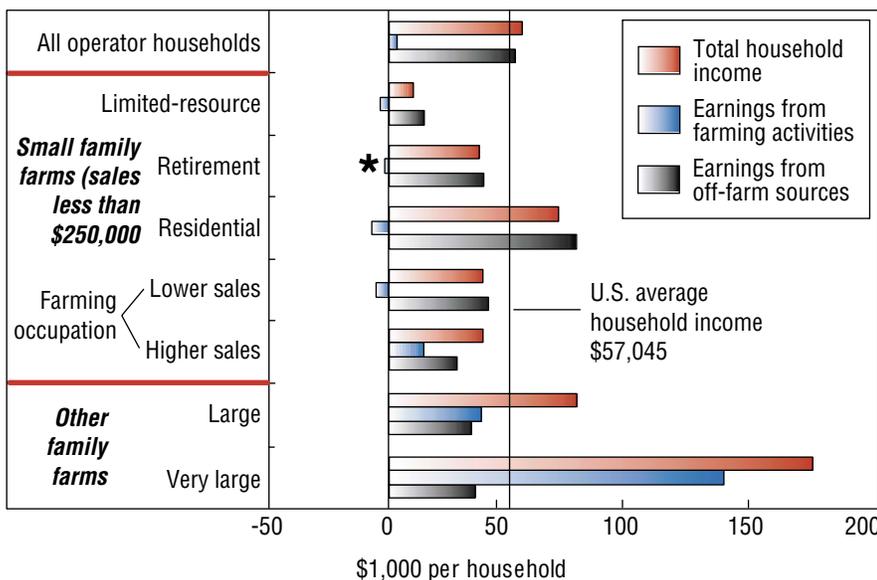
from the farm (fig. 4). Households operating higher sales small farms had an income below the U.S. average by a statistically significant amount. Seventy percent of their income came from off-farm sources.

Further, limited-resource, retirement, and lower sales farm households had average household incomes below the average for all U.S. households and relied heavily on off-farm income. Income for households operating lower sales small farms averaged \$45,741, or 80 percent of the average for all U.S. farm households. Practically all of their income came from off-farm sources. Nearly all the income of retirement farms came from off the farm, most of that (63 percent) from unearned sources such as Social Security and investment income. For 21 percent of retirement farms, the Conservation Reserve Program (CRP) was the primary source of farm income. Off-farm income averaged just \$13,980 for limited-resource farm households, and they lost an average of \$2,979 from farming. As a result, these small farms averaged only \$11,001 in total household income, or about one-fifth the average for all U.S. households.

Large farms have accumulated more wealth. The value of farm assets balloons from \$89,228 for limited-resource farms to \$2,224,522 for very large farms. Only limited-resource, retirement, and residential/lifestyle farms have farm assets below those of the average farm household (\$389,498). Farm debt follows a similar pattern. It increased from \$6,443 for limited-resource farms to \$403,039 for very large farms. Households operating very large farms (sales > \$500,000) had the highest wealth, both farm and nonfarm.

Figure 4
Total farm-related and off-farm income per operator household by farm typology group, 2000

Small farm households depend heavily on off-farm income



Note: Household income data are not collected for nonfamily farms. Earnings from off-farm sources can be larger than total household income if earnings from farming activities are negative.

*The relative standard error exceeds 25 percent but is no more than 50 percent.

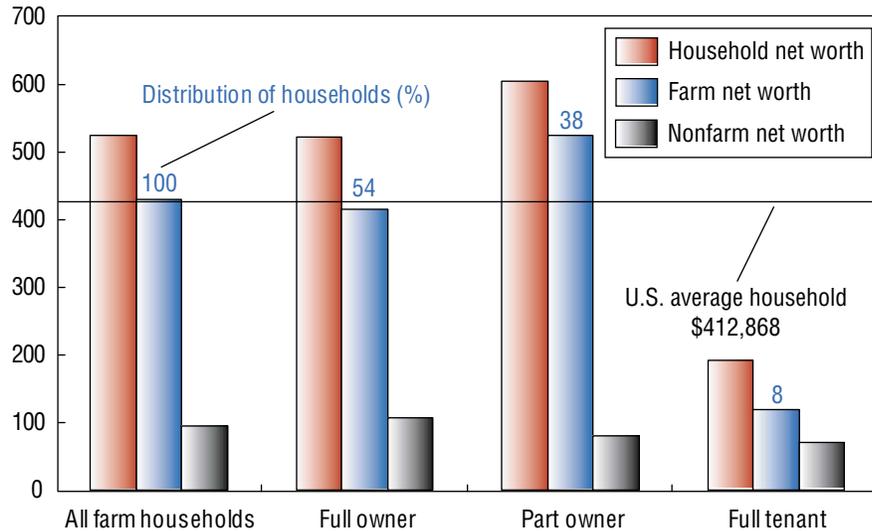
Source: USDA, Economic Research Service, 2000 Agricultural Resource Management Study, version 1, for farm operator household data. U.S. Bureau of Census, Current Population Survey, for all U.S. households.

Figure 5

Total farm and off-farm net worth per operator household by farm tenure, 2000

Farm households, full owners, and part owners have more wealth than the average U.S. household

\$1,000 per household



Source: USDA, Economic Research Service, Agricultural Resource Management Study (ARMS) survey, 2000

The wealth of residential/lifestyle farm households is equally divided into farm and nonfarm sources, reflecting the importance of off-farm income.

... By Farm Tenure

Farm tenure describes the farm operator's ownership interest in the land he or she farms. They can be (1) full-owners, who own all the land they operate; (2) part-owners, who own some and rent the remainder of their land; or (3) tenants, who rent all of their land or work on shares for others. The majority of farms reported full ownership in 1999 (58 percent), while 34 percent owned part and rented part of the farmland they operated. Only 8 percent of operators reported renting all of their land.

The composition of farm household income differs among tenure groups. In 2000, full-owner households earned \$64,885 on average, with nearly all of their income coming from off-farm sources. This is consistent with the fact that full-owners make up a large share of the limited-resource (64 percent), residential/lifestyle (62 percent), and lower sales (50 percent) groups, which depend primarily on off-farm income. The average part-owner household earned \$59,411 from both farm and nonfarm sources. Part ownership was the most common form of tenure among higher sales small farms, large family farms, and very large family groups, accounting for about two-thirds of each group. Full tenants earned \$52,335 in average income, about \$4,700 less than the average for all U.S. households.

Leasing land has been traditionally viewed as the bottom rung of the tenancy ladder. Young farmers would begin their careers by leasing land, often from relatives. As they grew older, they would buy some land, but continue to rent. The oldest farmers would cut back on farming by no longer leasing and concentrate on the land they owned. However, recent studies have concluded that farmers who rent/lease land were more successful in farming than other farmers. The choice between ownership, renting land, and any combination of ownership and lease options reduces the need for capital financing. Approximately 30 percent of the total income of full tenants comes from farming, indicating their dependence on off-farm income.

Since land is the principal farm business asset, the composition of farm household wealth differs significantly among farm tenure groups. In 2000, only part-owner households had above-average farm net worth. They also had the highest level of net worth (\$592,995), with 87 percent in farm and 13 percent in nonfarm net worth (fig. 5). However, these farm households have the largest farm debt. Full-tenant households have the least amount of wealth (\$186,595), with a greater proportion in non-farm sources due to lack of farmland holdings.

... And by Location

Since off-farm income is a major source of income to farm households, the farm's proximity to off-farm jobs is crucial. It is assumed that farmers near urban areas have access to more active labor markets and would be expected to work more off-farm hours.

Two-thirds of all U.S. farms are located in nonmetro counties (see “Geographic Units,” p. 12). Even farm households located in rural areas depend heavily on off-farm work. Total household incomes of these households are on par with all U.S. households (fig. 6). Farm households located in metro areas (central city, fringe, medium metro, and small metro) had the highest level of income (\$72,549), and 95 percent of this income is from off-farm sources, mostly wages and salaries. Metro farm households earned 27 percent more income than the average U.S. household. Finally, nonmetro farm households in urban (adjacent and nonadjacent) areas tend to have nominal income (almost \$3,000) from farming, with off-farm income crucial (fig. 6).

Wealth for farm households in different locations follows the same pattern as income. Farm households located in or near a metro area had the highest level of wealth (\$599,912) in 2000. This is consistent with the fact that this group of farms has the highest income and off-farm income. One-third of their wealth comes from nonfarm net worth. Further, farm households located near or in metro areas have the highest farm assets and lowest farm debt. This could suggest that they are full-owners and may be renting land and machinery to part-owners and tenants. At the other extreme are rural farm households, with just one-fourth of their net worth invested off the farm. Rural farm households have the highest farm debt and considerable farm assets (at \$461,660, 12 percent higher than the average U.S. farm household).

Household Well-Being Depends on Income and Wealth

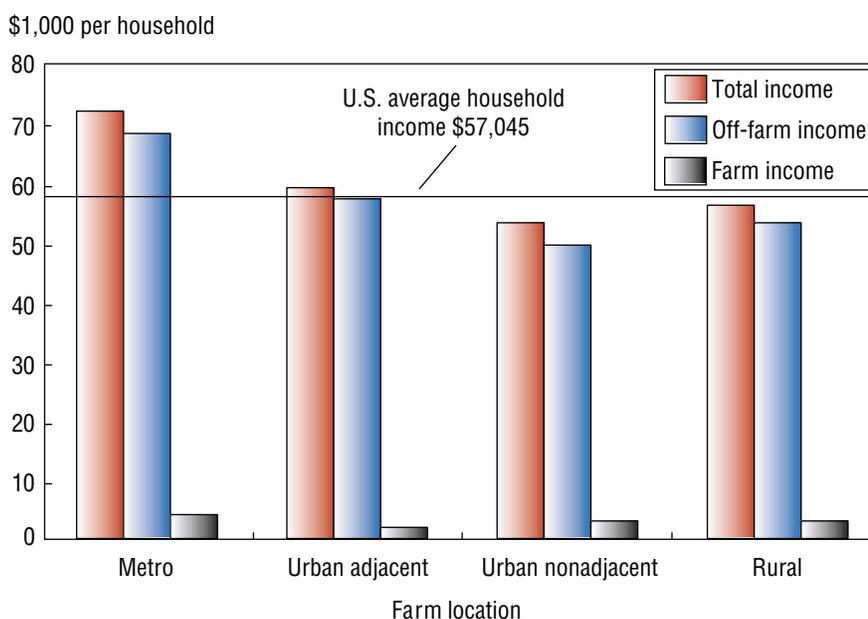
Farm household economic well-being is affected both by the level of income and wealth available to the household and by how income and wealth influence the household’s command over the consumption of goods and services. In this context, well-being has both an absolute component, which compares income and wealth to a selected standard, and a relative component, which measures the ability of households to meet consumption needs.

Traditionally, assessments of farm household economic well-being (and attendant policies) have had a singular focus: how income levels of farm households compared with incomes of nonfarm households. By developing a joint

distribution of income and wealth for farm households, we can better intuit a farm household’s ability to withstand income shocks that arise in either the farm or nonfarm economy. Falling/rising commodity prices, production shortfalls due to weather, a sectoral shift, and lack of off-farm jobs can all beset farm households. And changes in economic conditions such as interest rates can have competing effects on farm and off-farm incomes. Any of these can contribute to income rising or falling in a given year. Access to financial or other assets, including savings, by the household can forestall a tightening in consumption. Likewise, income that exceeds consumption can be added to savings or used to pay down debt. Either or both income and wealth levels for U.S. farm households can

Figure 6
Total farm and off-farm income per operator household by farm location, 2000

Farm households, even in rural areas, derive substantial income from off-farm sources



Source: USDA, Economic Research Service, Agricultural Resource Management Study (ARMS), 2000.

Table 2

Characteristics of farm operator households (based on U.S. median income and U.S. median wealth), 2000, by economic well-being

Based on income and wealth criteria only, a small proportion of farm households are economically disadvantaged

Item	Economic well-being				U.S. total
	Lower income-lower wealth	Lower income-higher wealth	Higher income-lower wealth	Higher income-higher wealth	
Number of farms	127,501	903,802	56,123	1,034,151	2,121,576
Percent of farms	6.0	42.6	2.6	48.7	100.0
Percent of total value of production	2.2	34.1	1.3	62.4	100.0
Percent of crop value of production	2.6	32.4	1.5	63.4	100.0
Percent of livestock value of production	1.8	35.8	1.0	61.4	100.0
Distribution by farm typology (percent):					
Limited-resource/retirement/residential	77.0	56.8	85.7	67.7	64.1
Farming occ. (lower sales/higher sales)	21.3	38.9	d	23.6	29.6
Large/very large/nonfamily	1.7	4.3	*4.1	8.7	6.3
Farm size (operated acres)	175	435	*197	455	423
Average government payment (\$)	3,523	6,115	*3,143	9,014	7,294
Farm income	*-5,325	-10,551	@1,351	15,530	2,791
Depreciation	3,398	7,561	*3,131	7,800	7,310
Change from 1999 in accounts receivable	@561	916	#-1,192	*-882	@-38
Change from 1999 in value of inventory	#1,805	3,878	@557	2,744	3,113
Off-farm income	23,321	24,800	82,269	92,493	59,228
Wages and salaries	18,338	11,495	63,340	52,236	33,137
Off-farm business income	*627	1,843	*5,718	17,429	9,470
Interest and dividends	*204	1,856	*1,719	6,863	4,194
Social Security and other public programs	3,009	7,010	#4,828	5,341	5,898
Other passive sources of income	#525	1,554	*5,334	*7,992	4,730
Farm operator household income	17,995	14,249	83,619	108,023	62,019
Total household expenditures	17,118	19,994	29,018	32,073	25,948
Distribution of households (percent):					
Household income < Household expenditures	31.8	42.4	d	2.5	21.3
Household income < Household expenditures (income adjusted for government payments)	37.0	47.6	d	6.7	25.9
Household income < Household expenditures (income adjusted for accounts receivable and inventories)	28.1	37.5	d	4.6	20.1
Household income < Household expenditures (income adjusted for depreciation)	24.2	30.8	d	3.4	16.4
Household net worth (\$)	39,503	449,521	*21,034	656,040	514,212
Farm net worth	43,145	387,396	38,897	517,587	420,950
Nonfarm net worth	@-3,643	62,125	#-17,863	138,453	93,263
Farm operator age	48	59	44	53	55
Farm operator education (percent):					
Some high school or less	*21.1	22.0	d	8.7	15.1
Completed high school	34.5	47.3	44.9	35.2	40.6
Some college	30.0	20.8	*26.5	28.4	25.2
Completed college (BA, BS)	*11.5	6.6	*18.7	17.8	12.7
Graduate school	d	3.3	d	9.9	6.5

* indicates that the standard error of the estimate is greater than 25 percent and less than or equal to 50 percent.

indicates that the standard error of the estimate is greater than 50 percent and less than or equal to 75 percent.

@ indicates that the standard error of the estimate is greater than 75 percent.

d indicates value is not available due to insufficient information.

Source: 2000 USDA Agricultural Resource Management Study, version = 1 only.

exceed or fall below income and wealth measures for all U.S. households.

Almost half of farm households have both higher incomes and greater wealth than all U.S. households and so cannot be considered disadvantaged. Of these farms, 98 percent reported household income greater than consumption expenditures. On average, household income for this half of farms (\$108,000) was more than three times higher than consumption expenditures (\$32,000). This group of higher income, higher wealth farms reported net worth of \$656,040, of which \$138,453 was household assets held outside the farming operation (table 2). Modifying the cash income measure to include changes in inventory or accounts receivable would substantially increase the amount of resources with which to fund consumption, add to savings, or fund business growth or investment.

The group of higher income, higher wealth households contained a disproportionate share of larger farm operations and farm operators who reported a primary occupation other than farming. On average, this group of households operated the largest farms as measured by acreage at 455 acres, accounted for 62 percent of farm output, and drew 60 percent of government payments. This group of operators also had, by far, the highest educational attainment.

About 43 percent of farm households report lower income and greater wealth than all U.S. households. A majority (58 percent) reported annual household expenditures below their annual household incomes. This group contains a disproportionate share of intermediate-size farms and farmers who report that they are retired.

More than 40 percent of farm operators in this group were 65 or older. The group also contained many limited-resource farms. For many of these farms, self-employment income is often negative. Yet, as a part of normal business practices, some may be owed money and others may hold crop and livestock outputs as additions to their business inventories at year-end. On average, money owed from sales and additions to inventory would have been sufficient to offset half of this group's income shortfall. Taking these assets into account, the proportion of households with incomes less than consumption drops from 42 percent to 38 percent.

Without accounting for these sources of liquid or near-liquid assets, the proportion of households considered disadvantaged could be substantially higher. This would have been particularly true for households of younger operators.

Thus, for farm households as with other self-employed households, it is important to consider their decisions with regard to stockholding within their businesses as well as funds owed the business from prior economic actions. Without accounting for these sources of liquid or near-liquid assets, the proportion of households considered disadvantaged could be substantially higher. This

would have been particularly true for households of younger operators.

Lower income, higher-wealth farms hold a vast majority of net worth (\$450,000 on average) in business assets. For the more elderly or retired farmers in this group who do not have sufficient current earnings from farming, they can access their accumulated assets or begin to consume capital assets (such as their machinery or equipment whose useful life is either extended or not replaced as it wears out). Generating a flow of income from the household's asset base to support household consumption would require either disposing of the farm, renting/leasing to other farmers, or participating in government programs. Many lower income, higher wealth households do report receipt of government payments.

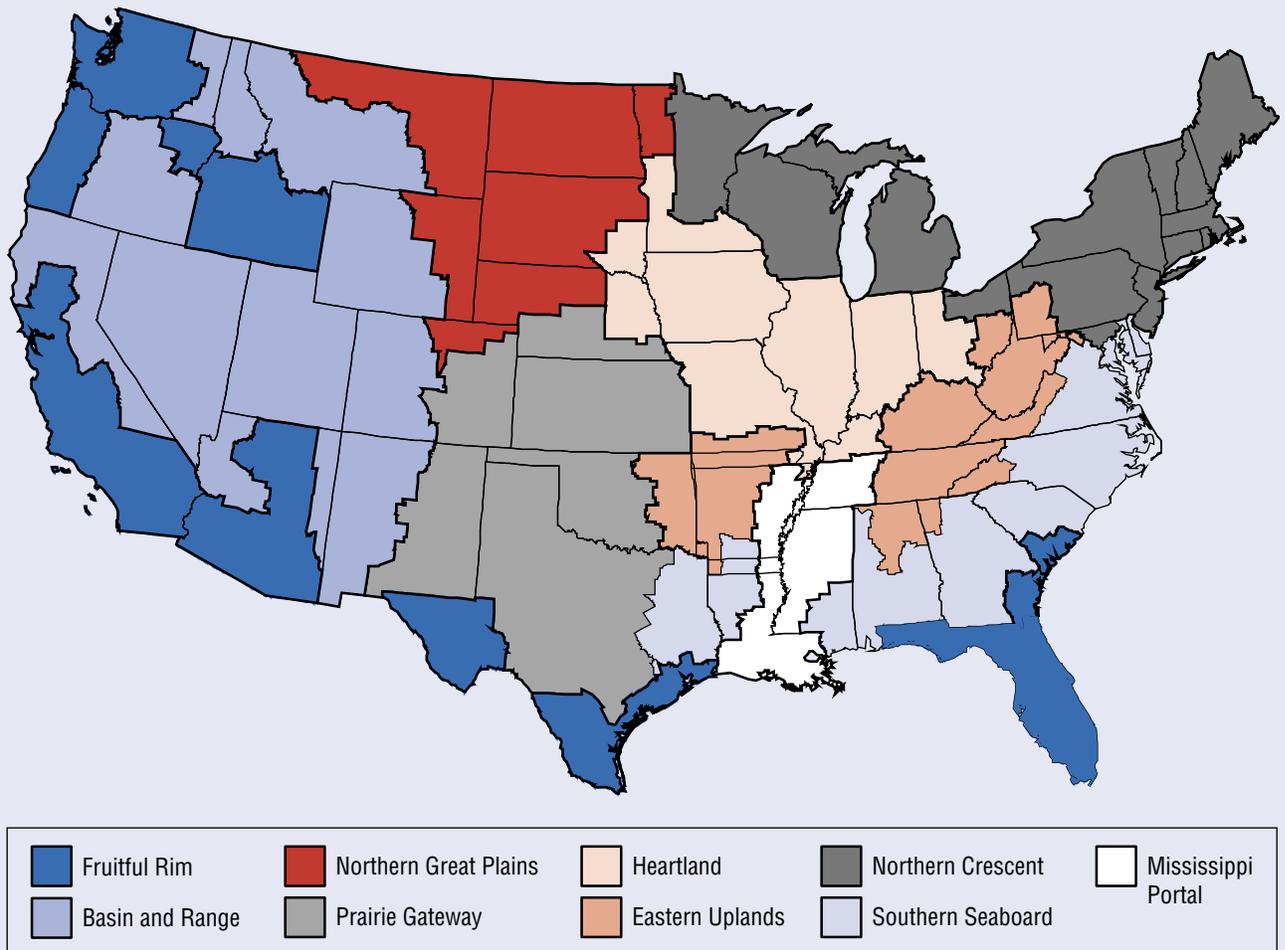
The group of lower income, higher wealth households also contains commercial-size farm businesses that have likely encountered a difficult year due to prices received or production shortfalls. For many of these operations, this categorization is likely short-term. Meanwhile, these households can maintain consumption levels by drawing on savings or other assets.

The 2.6 percent of farms with higher incomes and lower wealth are almost entirely focused on off-farm activities, with 84 percent reporting a primary occupation other than farming. This group is younger than average, with more having attended or completed college. Household incomes are almost entirely from off-farm sources and exceed consumption expenditures by a wide margin.

At the extreme portion of the distribution are the 6 percent of farm households with both lower

Geographic Units

Resource Regions. The Economic Research Service (ERS) has developed new resource regions based on characteristics of the land and the commodities produced. These regions cross State boundaries, but are more homogeneous with respect to resources or production than regions based on combinations of States.



Metro-Nonmetro Status. *Metro* areas are defined by the U.S. Office of Management and Budget (OMB) as geographic areas with a large population nucleus (generally at least 50,000 inhabitants), plus adjacent communities that are socially and economically integrated with that nucleus. Metro designations as of 1993, which identified 813 metro counties, are used in this report.

Nonmetro counties are a residual, the part of the Nation lying outside metro areas. Nonmetro counties are diverse, however, and the 2,276 nonmetro counties can be categorized into smaller groups with common characteristics. Nonmetro counties are sorted into two groups: those *adjacent* to metro areas (991 counties) and those that are *not adjacent* (1,285 counties). One would expect urban influences to be stronger in adjacent counties than in nonadjacent counties.

Economic Specialization. Nonmetro counties can also be categorized according to their economic specialization. There are 556 *farming-dependent* counties where farming accounted for at least 20 percent of earned income over the three years from 1987 to 1989.

incomes and lower wealth. Principally small and limited-resource farms, on average, this group shows little difference between household income and consumption expenditures. Of these households, 21 percent report a farming occupation and nearly 38 percent are limited-resource households. Moreover, their small asset base can be insufficient to meet any unexpected shortfall in household earnings whether from the farm or nonfarm sources. Nearly one out of three of these households reported income less than consumption expenditures in 2000. So, for about 6 percent of U.S. farm households, reported income and wealth levels imply a very difficult set of economic circumstances, with insufficient income to support even relatively low levels of current consumption and few assets to meet or enhance consumption.

Conclusion

On average farm households have higher incomes, greater wealth, and lower consumption expenditures than all U.S. households. Farm households, on average, are better able to support their consumption needs with income. It is no longer accurate to class farm households into any one all-defining group that is considered either disadvantaged or without problem with regard to household well-being. Indeed, while the economic well-being of a vast majority of farm households can be considered superior to all households, 6 percent clearly suffer difficult circumstances, falling short in both income and wealth measures.

Farm Typology Group Definitions

Rural Residence Farms

- **Limited-resource farms.** Small farms with sales less than \$100,000, farm assets less than \$150,000, and total operator household income less than \$20,000. Operators may report any major occupation, except hired manager.
- **Retirement farms.** Small farms whose operators report they are retired.*
- **Residential/lifestyle farms.** Small farms whose operators report a major occupation other than farming.*

Intermediate Farms

- **Farming-occupation farms.** Small farms whose operators report farming as their major occupation.*
 - **Lower sales farms.** Sales less than \$100,000.
 - **Higher sales farms.** Sales between \$100,000 and \$249,999.

*Excludes limited-resource farms whose operators report this occupation.

Commercial Farms

- **Large family farms.** Sales between \$250,000 and \$499,999.
- **Very large family farms.** Sales of \$500,000 or more.
- **Nonfamily farms.** Farms organized as nonfamily corporations or cooperatives, as well as farms operated by hired managers.

When the ability of income to support current consumption expenditures is taken as the measure of well-being, 21 percent of farm households might be considered to have some short-term disadvantage. As our analysis revealed, however, the vast majority of these households have wealth levels, including liquid or near-liquid assets held in their businesses, that could be used to sustain consumption. For the lower income, lower

wealth households this is not so. These households, many of whom appear to be beginning farmers, have relatively low levels of consumption, low incomes, and few resources to offset any unexpected income shortfall either from farming or elsewhere. **RA**

Income Inequality in America

Nonmetro Income Levels Lower Than Metro, But Income Inequality Did Not Increase as Fast

Diane K. McLaughlin

Income inequality has been increasing in the United States since the 1970s (Ryscavage). But how have nonmetro areas compared to central cities and suburbs, and is income inequality across race and ethnic groups increasing or abating? Median household income provides a point estimate of differences in the level of income between groups, while income inequality measures the distribution of income among households within a group. Both are used here to examine income inequality by race and residence from 1979 to 1999.

From 1979 to 1989, nonmetro median household income declined, both in comparison with central city and suburban areas and in real (inflation-adjusted) dollars. Despite improved prospects across the board in 1989-99, nonmetro median household income lagged that of central city and suburban households. The gap in inflation-adjusted median household income between central city and nonmetro areas increased from \$11 in 1979 to

The gap in median household income increased between metro and nonmetro households between 1979 and 1999. At the same time, inequality in metro household income distributions increased faster than among nonmetro households, resulting in nonmetro income inequality essentially identical to that in suburban areas and lower than in central cities. The continuing disparity in income levels by race/ethnicity and residence may reflect the local and race/ethnic-specific consequences of industrial restructuring, globalization, and changing household structures.

\$3,124 in 1999, while the difference between suburban and nonmetro incomes rose from \$13,771 to \$15,984.

Nonmetro areas experienced a 7.3-percent increase in income inequality from 1979 to 1999 (from a Gini coefficient of .398 to .427), but this increase was not as large as in central cities (12.3 percent, from .415 to .466) and suburban areas (18.2 percent from .362 to .428) (see "Assessing Income Levels and Income Inequality," p. 18, for an explanation of Gini coefficients). By 1999, nonmetro areas had the lowest income inequality overall (just slightly lower than that in suburban areas), and the lowest household income inequality among Whites and Hispanics (.418 and .406, respectively). Nonmetro Blacks (.465) had the highest household income inequality when compared with central city and suburban Blacks (.463 and .447) in 1999.

Unless we understand the factors influencing changes in the dis-

tribution of household incomes across local areas and across race and ethnic groups, we lack the information necessary to respond to the relative decline in economic well-being of nonmetro households and to develop policy to improve nonmetro conditions. In all residence areas, it is essential to identify the forces associated with increasing income inequality and to devise strategies to halt these disparities and to raise household income levels, especially among those at the bottom of the income distribution.

Explanations for Increasing Income Inequality

Increasing income inequality has been attributed to several factors. First, industrial restructuring—from a goods-production to a services-based economy—has occurred as demand within the United States has shifted and as global forces have increased their influence on U.S. markets. While

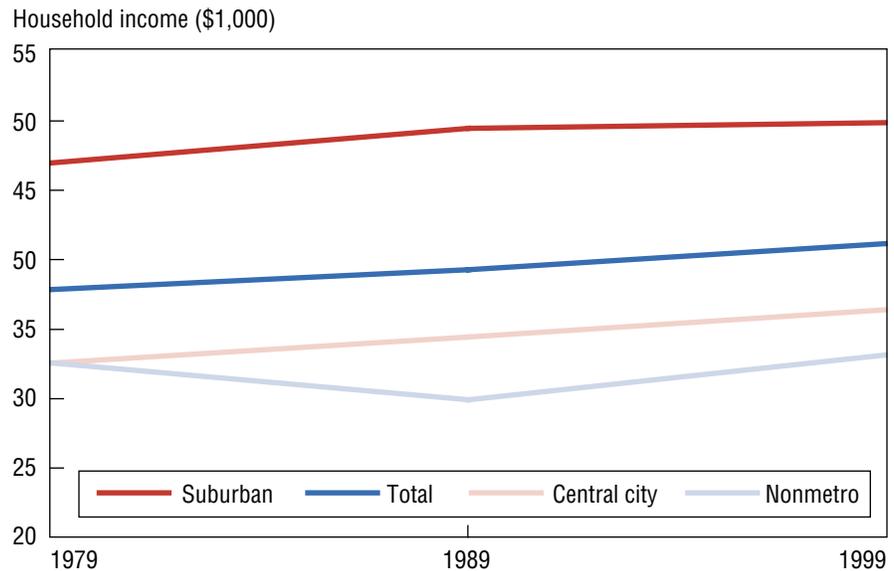
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many service sector jobs are associated with lower wages and part-time work, the service sector has more variation in wages and quality of work than the manufacturing sector. In addition, the decline of unions and introduction of increased technology and computerized production have lowered employment and wages in the manufacturing sector and eliminated jobs held by older workers who were often well paid but less educated. The increased demand for college-educated workers to fill higher level service sector jobs and to work in highly automated production facilities has increased the earnings gap between less and more educated workers.

In nonmetro areas, these changes surfaced as economic growth, especially in the South, when manufacturing plants shifted routine production to rural areas in search of cheaper labor and land. At the same time, globalization of the markets for coal, timber, and agricultural products caused fluctuations in prices, while technological change in these industries reduced the demand for labor and reduced employment in local economies reliant on extractive industries. Some manufacturers further responded to globalization by seeking even cheaper labor and land and fewer environmental restrictions overseas. While manufacturing remains more important as an employer in nonmetro than metro areas, manufacturing employment in nonmetro areas had declined from roughly six million in 1979 to just under five million by 1996 (Roth).

Nonmetro areas have had greater difficulty attracting the higher paying service sector jobs in business services and finance, insurance, and real estate found in

Figure 1
Median household income by residence, 1979-99
Nonmetro median income has continued to lag



Source: Author's calculation from the 1980, 1990, and 2000 Current Population Surveys.

central city and suburban areas. Hence, rural economies have gained a larger share of jobs in lower-paid portions of the services sector—personal services and retail trade. Industrial restructuring has thus affected nonmetro areas differently than either the suburbs or central cities (Galston and Baehler).

Changing household structures and women's participation in the paid labor force also contributed to income inequality. The increase in female-headed households, which tend to have lower incomes, is one example. Women's labor force participation increase in the 1970s was initially believed to lower household income inequality. Women entering the labor force tended to be spouses of men with working and middle-class jobs, while those married to upper-class men tended to stay out of the labor force. But in recent decades, women's labor force participation has transcended partner's economic status. As a result, households with two highly educated career earners will have very high incomes, further outpac-

ing the incomes of households with two less-educated workers. Additionally, the income gap between households with a single earner (whether the household has one or two adults) and households with two earners has increased.

These changes have occurred more slowly in nonmetro areas—where female-headed households remain a smaller share of all households—than in metro areas generally and central cities in particular. Nonmetro women also have slightly lower labor force participation than metro women. The lower educational attainment of both nonmetro men and women suggests that they are likely to hold lower paid positions if both husband and wife are employed, and the differences in household income may not be as great across household types in nonmetro areas. Combined with the lower skill employment mix in nonmetro areas, earnings are lower than in metro areas.

Racial and ethnic groups were affected differently by these changes. Blacks, in contrast to

Table 1

Median household income and Gini coefficient by residence and region*Substantial variation exists across residence*

	Median household income			Gini coefficient		
	1979	1989	1999	1979	1989	1999
Total	37,405	38,745	40,551	.393	.418	.445
Central city	32,365	34,126	36,000	.415	.440	.466
Suburban metro	46,125	48,502	48,860	.362	.387	.428
Nonmetro	32,354	29,827	32,876	.398	.412	.427
Non-South	39,240	40,832	42,500	.388	.411	.443
Central city	32,129	34,529	36,199	.416	.440	.466
Suburban	47,857	50,391	50,308	.358	.382	.428
Nonmetro	34,975	32,453	35,983	.387	.396	.415
South	34,343	34,505	37,415	.402	.429	.447
Central city	33,228	33,324	35,000	.413	.440	.466
Suburban	41,769	43,531	45,600	.373	.398	.427
Nonmetro	30,057	26,123	29,303	.406	.429	.441

Note: Median household income is adjusted for inflation to 1999 dollars; higher Gini coefficient indicates greater inequality.

Source: Author's calculations from the 1980, 1990, and 2000 March Current Population Surveys.

Whites, have held the poorer quality positions in both the service and manufacturing sectors, and so may have been affected differently by industrial restructuring. Blacks have a larger share of female-headed households and higher labor force participation by women, but greater unemployment and underemployment of men. Hispanic workers also tend to hold more marginal employment regardless of sector, but with more traditional family structures than Whites or Blacks, Hispanic women have the lowest labor force participation rates.

Finally, local variations in all of these patterns—the effects of industrial restructuring, changing household structure, and labor supply of men and women—make for varying income inequality across geographic areas. The singularity of metro and nonmetro economic growth in the South over 1979 to 1999 provides one reason to examine the South separately from the rest of the United States (Lyson).

The predominance of nonmetro Blacks in the South (just over 90 percent of nonmetro Blacks lived in the South in 2000) makes studying the South particularly salient when comparing racial variation in changes in income levels and income inequality.

Changes in Median Household Income by Residence

Median household income in nonmetro areas was lower than in metro areas at each juncture considered (1979, 1989, and 1999). Suburban metro areas had the highest income levels (fig. 1, table 1). Both central cities and suburban metro areas enjoyed increases in median household income in each decade, while nonmetro areas actually suffered a drop from 1979 to 1989 (from \$32,354 to \$29,827 in real dollars). Nonmetro income recovered to just above 1979 levels by 1999 (to \$32,876), but still trailed the U.S. average by almost \$8,000. Overall, nonmetro areas lost ground to both central city and

suburban households over the last two decades. The gap in inflation-adjusted median household incomes for central city and nonmetro areas was \$11 in 1979 and \$3,124 by 1999 (table 1). The gap between suburban and nonmetro areas approached \$16,000 in 1999.

Median household income is consistently lower in the South than elsewhere (table 1), and its gains from 1979 to 1999 lag as well (\$3,072 versus \$3,260 in non-South households). By 1999, median household income was \$37,415 in the South and \$42,500 outside the South.

Median household income for each residence area in the South lagged incomes elsewhere, but especially in nonmetro areas. In 1999, Southern nonmetro median household income was \$29,303—\$6,680 less than in nonmetro areas outside the South. Central city incomes in the South and outside the South were more similar, with a difference of only \$1,199.

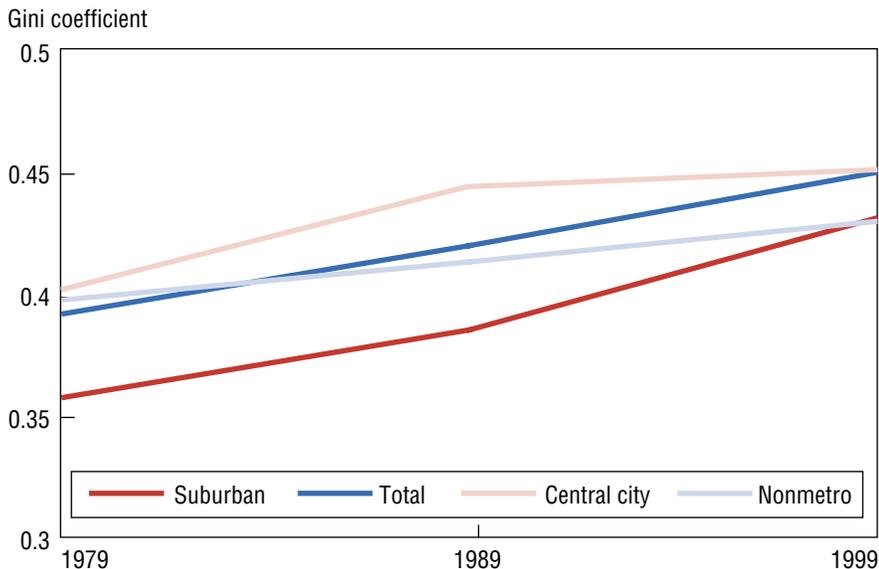
Race and Ethnic Comparisons of Median Household Income. The evolution of race/ethnic-specific median household incomes reveals how differently these groups were affected by changes from 1979 to 1999. White income increased by \$4,253 in that time, with most of the increase occurring from 1989 to 1999 (table 2). Black median household income also increased (in inflation-adjusted dollars) in each decade, rising from \$22,948 in 1979 to \$28,000 in 1999, a \$5,052 increase. Hispanics, on the other hand, suffered a decline in median household income from 1979 to 1989, and had not recovered to 1979 levels by 1999, losing \$1,290 over the 20-year period.

These national patterns are repeated in metro suburban areas, but not in nonmetro or central city

Figure 2

Gini coefficients of household income inequality by residence, 1979-99

Nonmetro areas had slower increases in inequality



Source: Author's calculation from the 1980, 1990, and 2000 Current Population Surveys.

areas. In nonmetro areas, Whites saw a drop in median household income from 1979 to 1989 of \$2,754, but by 1999 recovered to

\$34,980, just over the 1979 level of \$34,421. Nonmetro Blacks, likewise, lost income from 1979 to 1989, but made a strong gain by 1999 (to

\$21,154). This gain still left incomes of nonmetro Blacks well below those of Whites and Hispanics (table 2).

In suburban areas, median household incomes were higher than in central city or nonmetro areas for each race/ethnic group in each year. In every year, for every race/ethnic group, households in nonmetro areas had the lowest median household incomes.

Changes in Household Income Inequality by Residence

Household income inequality increased in each decade in each residence area, with the highest levels in central cities and the lowest—except for 1999—in suburban areas (fig. 2, table 1). The increase in the Gini coefficient was greatest, however, in suburban metro areas and lowest in nonmetro areas. By 1999, income inequality was

Table 2

Median household incomes by race, residence, and region

Racial and ethnic variation over time and by residence reveals a nonmetro disadvantage

	1979			1989			1999		
	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic White	Non-Hispanic Black	Hispanic
Total	40,067	22,948	31,530	41,642	24,140	29,262	44,320	28,000	30,240
Central city	36,739	22,948	28,182	40,325	22,496	26,871	43,341	26,000	28,100
Suburban	47,690	31,307	37,873	50,380	35,005	37,042	51,329	37,180	35,540
Nonmetro	34,421	17,229	26,261	31,667	16,123	23,243	34,980	21,154	24,900
Non-South	41,388	25,070	32,104	43,077	26,614	31,137	45,550	28,400	31,000
Central city	35,982	23,122	27,537	40,186	22,840	28,215	43,000	25,000	28,000
Suburban	48,651	32,127	39,447	51,490	40,676	38,096	52,150	38,000	36,580
Nonmetro	35,560	22,489*	29,258	32,862	22,905*	25,662	36,439	27,707*	25,845
South	37,246	20,993	30,176	38,693	22,017	25,595	42,000	27,600	29,900
Central city	39,078	22,154	29,832	41,381	21,939	23,324	44,001	27,000	29,000
Suburban	43,667	30,234	34,880	47,024	30,902	34,126	50,000	36,085	34,852
Nonmetro	33,045	16,717	23,503	29,803	16,089	19,569	32,202	20,350	23,633

*Estimates based on a very small number of households. View with caution.

Source: Author's calculations from the 1980, 1990, and 2000 March Current Population Surveys.

Assessing Income Levels and Income Inequality

Income inequality is generally measured using one of a class of measures related to the Lorenz curve. The Lorenz curve plots the share of cumulative income held by the cumulative percentage of households, when the households are ranked from the poorest to the wealthiest. A diagonal line indicates perfect equality, with each percentage of households receiving that same percentage of income (e.g., 10 percent of households receive 10 percent of total household income). The Gini coefficient assesses how much the actual Lorenz curve differs from perfect equality by measuring the area between the curve and the diagonal line. Thus, a larger value indicates greater income inequality. A Gini coefficient can vary between 0 and 1, where 0 is perfect equality and 1 indicates all income is owned by one household. The Gini coefficient is particularly sensitive to changes in the middle of the income distribution.

The Gini coefficient was calculated using households as the unit of analysis. The data are weighted by a value assigned to each household by the Current Population Survey (CPS) to make the data representative of all U.S. households. The formula used to calculate the Gini coefficient is that described by Allison (1978) for continuous income. A change in the collection of CPS data in 1993 has increased the maximum for reported income. Because of this and other changes in data collection, part of the increase in income inequality between 1989 and 1999 (perhaps as much as half) may be due to change in methodology (Jones and Weinberg).

The Gini coefficient gives us one side of the inequality story, indicating inequality in household income within particular groups (e.g., nonmetro residents or Hispanics). But it does not capture how income levels differ across these groups. For example, a group with low income inequality may be considered to be better off than a group with high income inequality, but that would hold only if the levels of income were equivalent. A group may have very low income inequality only because everyone in the group has extremely low income.

To capture the level of household income and how it differs across race and residence groups, the median household income—the income of the household at the 50th percentile of households ranked by income level—is adjusted to 1999 dollars (using the CPI-U). Thus, it is possible to track whether the median household income for a group has increased or declined in real terms, the extent to which income inequality has changed, and the relative gains of race and residence groups.

Using household income rather than family income ensures that all people who are not institutionalized are included in the analysis. All income from any source contributed by every household member is counted in the household's income level, without assumptions about whether household members share incomes. For simplicity, no adjustments are made for household size, noncash benefits, or taxes. The median household income values reported here are within the standard errors reported in DeNavas and Cleveland, and the 1999 Gini coefficient matches that reported by CPS.

Three race/ethnic groups—non-Hispanic Whites, non-Hispanic Blacks, and Hispanics—and three residence groups (metro central city, metro suburban, and nonmetro) are represented in this analysis (those with residence not classified are not included). The March 1980, 1990, and 2000 Current Population Survey Annual Demographic Supplements (CPS) are used as they are the most current data on income. Because of the importance of the South as the residence of nonmetro Blacks, household income by race/ethnicity and residence for the South versus the rest of the country is included. Relatively few Blacks live in nonmetro areas outside the South. As a result, only 61 Black households from nonmetro areas outside the South were included in the CPS sample for 2000. Thus, the numbers reported here for this group of households need to be viewed with caution.

Because the CPS is a sample of households and geographic detail is limited due to confidentiality reasons and accuracy concerns for smaller geographic areas, the analysis examines only broad residence categories. An updated detailed analysis of income inequality across U.S. counties awaits the availability of the data from the 2000 U.S. Census of Population and Housing.

comparable in suburban and nonmetro areas.

Nonmetro households in the South had greater income inequality in each year than did those outside the South, and the increase

from 1979 to 1999 was greater in the South. As in the rest of the country, central city areas in the South had the highest income inequality, while suburban areas

had the lowest. Unlike the country as a whole, nonmetro income inequality in the South remained higher than that in suburban areas in 1999.

Table 3

Gini coefficient by race, residence, and region*Blacks have the highest income inequality across residence areas*

	1979			1989			1999		
	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic White	Non-Hispanic Black	Hispanic
Total	.383	.431	.389	.405	.460	.423	.434	.468	.437
Central city	.401	.430	.400	.417	.465	.434	.450	.463	.438
Suburban	.358	.400	.359	.381	.419	.390	.422	.447	.428
Nonmetro	.388	.438	.405	.402	.446	.421	.418	.465	.406
Non-South	.380	.426	.387	.401	.466	.415	.433	.483	.434
Central city	.405	.431	.399	.420	.474	.429	.447	.474	.445
Suburban	.354	.394	.354	.377	.413	.385	.425	.461	.409
Nonmetro	.384	.438*	.403	.393	.424*	.415	.410	.520*	.433
South	.388	.434	.393	.413	.447	.436	.435	.453	.442
Central city	.392	.425	.399	.409	.447	.440	.456	.446	.418
Suburban	.367	.406	.367	.390	.413	.403	.416	.433	.461
Nonmetro	.391	.433	.399	.413	.445	.407	.431	.452	.373

*Estimates based on a very small number of households. View with caution

Note: A higher coefficient indicates greater inequality in income.

Source: Author's calculations from the 1980, 1990, and 2000 March Current Population Surveys.

Race and Ethnic Comparisons of Household Income Inequality. The highest within-group levels of income inequality are experienced by Blacks, with Whites having the lowest and Hispanics in between (table 3). This racial/ethnic pattern holds in each year and in each residence area except in 1999. In that year, nonmetro and central city Hispanics had lower income inequality than Whites. Levels of income inequality within each group increased from 1979 to 1999. The largest increase in the Gini coefficient from 1979 to 1999 occurred among Whites, the smallest among Blacks.

In 1979, each race/ethnic group had higher income inequality in the South than in the rest of the United States. By 1989 and in 1999, income inequality among Blacks was lower in the South than among Blacks elsewhere, although the values for Blacks in nonmetro areas outside the South must be viewed with caution because of the small sample size in the CPS.

Among Southern Whites, income inequality is lowest in sub-

urban areas, but increases steadily from 1979 to 1999. The pattern is not as straightforward for central cities and nonmetro areas. In 1979, central city and nonmetro Southern Whites had essentially equal levels of income inequality. By 1989, inequality was slightly higher in nonmetro than central city areas, but by 1999 Whites in central cities (in the South) had higher income inequality than nonmetro Whites.

In both 1979 and 1989, Southern Blacks had the highest levels of income inequality in each residence area. As with Whites, Blacks in the South experienced shifts in the relative ranking of income inequality across residence areas for the three decades examined. In 1979, Southern nonmetro Blacks had the highest income inequality compared with other Southern Blacks. By 1989, central city Blacks' income inequality crept slightly higher than nonmetro Blacks' before reverting in 1999. These shifting patterns of income inequality may reflect the economic growth in the nonmetro South during the 1980s that provided

employment for minorities, which was then followed by the movement of manufacturing to overseas locations in the 1990s and the loss of lower paid jobs.

The decline in income inequality for nonmetro Hispanics is driven by the decline in inequality among Southern nonmetro Hispanics from 1989 to 1999. Suburban Hispanics in the South had lower income inequality than did Southern Hispanics in other residence areas, except in 1999 when Hispanics living in Southern suburban areas had the highest levels of income inequality. Income inequality declined for Hispanics in central city and nonmetro areas of the South from 1989 to 1999.

The relatively high income inequality within race and ethnic groups indicates that the levels of overall inequality are not due solely to the differences in income levels between race/ethnic groups (e.g., higher White and low Black or Hispanic incomes). Within-race/ethnic-group inequality also contributes to income inequality overall.

Income Inequality: What Does It Mean?

Our society is conflicted about what increasing income inequality means. Some argue that extreme income inequality will ultimately yield a nation of haves and have-nots, with increased conflict between the two groups. Others argue that as long as everyone's income levels are increasing in real terms, the increase in income inequality is not a problem. They suggest that people are not as concerned about their economic status relative to others as by improvement in their own economic well-being. These two divergent perspectives suggest that what is important to know is whether real incomes are increasing at the same time that income inequality rises.

This has not been the case for nonmetro households. Nonmetro households experienced a decline in real income by 1989 and then a return to 1979 levels of median household incomes in 1999. At the same time, they faced an increasing gap in real income with city and suburban households. This occurred even during the prosperous 1990s. At the same time, income inequality within groups increased. The growing gap between nonmetro households and those in other areas, along with variations by race and ethnicity across residence, suggest that the extent and nature of industrial restructuring, changing household structure, and labor supply influence income levels and income inequality differently across geographic areas and across race and ethnic groups.

These factors affecting income distributions—industrial restructuring, changing household structure, and women's labor force participation—merit study. In addition, the immigration of less educated Hispanics and internal migration of minority groups from central cities to suburban and nonmetro areas may also contribute to observed changes in the distribution of income.

Clearly, the shift toward increasing income inequality occurred during both the economic malaise of the 1980s and the boom years of the mid- to late 1990s. This suggests two things. First, if industrial restructuring affects income

inequality, its influence is toward increasing inequality regardless of economic growth and type of residence. But, the mechanisms by which this occurs are likely to vary across areas with different industrial composition. Second, the variation in shifts in metro and nonmetro areas indicates the importance of recognizing that national patterns of economic and social change are experienced differently in local areas. As more geographically refined analyses of data from 1980 and 1990 have shown, variation extends below the metro and nonmetro classification to smaller geographic units, such as counties or labor markets. **RA**

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Population Change in the Midwest

Nonmetro Population Growth Lags Metro Increase

Willis Goudy

The Midwest posted population growth in both its nonmetro and metro areas from 1990 to 2000, but nonmetro areas with larger cities and closer to metro centers were more likely to gain residents than were completely rural counties. Nonmetro counties closer to urban areas were also less likely to lose youth and more likely to gain residents of working age. The Midwest saw a dramatic increase in Hispanic residents from 1990 to 2000, with numbers at least doubling in many nonmetro counties.



The Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin) has strong rural traditions, many of which are reflected in small towns, agriculture, and related processing and manufacturing industries. As the structure of agriculture has evolved, so have other industries, and this has affected rural population trends in the Midwest.

Changes in agriculture, including the consolidation of production onto larger farms and vertical integration through production contracts, have been dramatic. Such factors draw farm operators beyond the local community to take advantage of better prices and lower costs in regional trade centers (Barkema and Drabenstott). That can leave farm-dependent counties without sufficient employment opportunities to hold current residents or attract others, thus creating problems for small towns and their businesses (Rathge and Highman). Those nonmetro counties with major value-added enterprises related to agriculture have

bucked the population declines noted elsewhere; few such counties exist, however. Thus, the Midwest maintains its image as agricultural heartland, although the agricultural sector alone has been insufficient to retain residents in many of its nonmetro counties.

While manufacturing has grown, it too has failed to stem rural population decline, in part because manufacturing gains have favored areas already experiencing population growth (McGranahan). And while food processing industries continue to blanket the Midwest, their wages are relatively low (Barkema and Drabenstott). In addition, employment in such industries has caused rapid (often migrant) population growth in some rural communities, which has strained county resources and upended demographics.

Initial data from the 2000 census indicate that the Midwest's population gains in the 1990s were eclipsed by other regions, a trend evident throughout much of the 20th century. And nonmetro areas

didn't fare as well as metro counties did. Indeed, the less populous and more distant a nonmetro county was from a metro area, the less likely it was to gain residents in the Midwest. This is partly due to the different median ages of residents in metro and nonmetro counties, with the oldest age structure in the most rural counties. Rural areas, generally, lost youths to other areas. Many nonmetro counties in the Midwest gained Hispanic residents in the 1990s, but again numerical increases were much larger in metro counties.

Because the Midwest accounts for much of the U.S. nonmetro population and because many regard it as the Nation's agricultural backbone, trends in these 12 States deserve attention. What is happening there should interest policymakers who deal with such issues as migration to rural communities low in human capital and the use of technology to offset the lack of infrastructure thought to handicap some nonmetro counties (Stauber).

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Photo of Neola, Iowa courtesy, Renea Miller, Iowa State University.

Midwest Population Grows, But at a Slower Rate Than Other Regions

In 2000, the 12 States in the Midwest census region included 64 million residents, or 22.9 percent of the Nation's population. Only the South (35.6 percent) had a greater share of the U.S. total. The West

had 22.5 percent and the Northeast 19 percent. The Midwest had contained 34.6 percent of the Nation's population in 1900 and 29.4 percent in 1950, indicating a century-long decline.

The Midwest counted 4.7 million more residents in 2000 than in

1990, representing 14.4 percent of the national population increase. In the 1990s, the South had 45.2 percent and the West 31.8 percent of the Nation's growth; only the Northeast (8.5 percent) reported a smaller share of the increase than the Midwest.

Nonmetro Population Change Varies by Size of County and Distance From Metro Area

The population of the non-metro Midwest increased by more than 900,000 between the 1990 and 2000 censuses (table 1). However, the percentage of residents living in nonmetro areas slipped from 26.8 percent in 1990 to 26.2 percent in 2000. This paralleled the national shift downward from 20.5 to 20.0 percent. The West (20.7 percent) and South (11.7

Table 1

Population change in the Midwest, 1990-2000

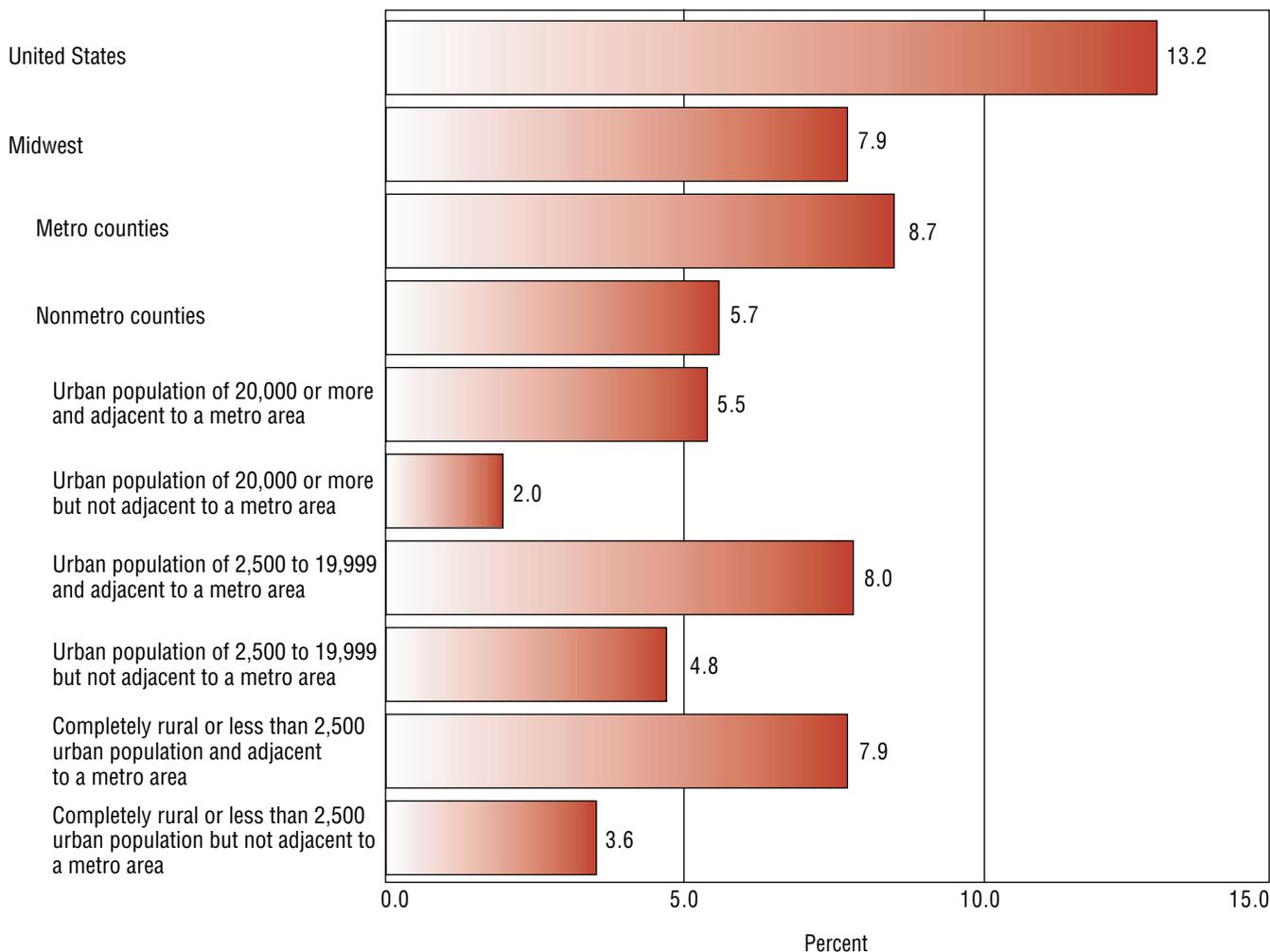
Nonmetro counties not adjacent to metro areas were less likely to gain population

Counties	1990	2000	Change	Number of counties	Number of counties with specified change from 1990 to 2000			
					Population increase	Age 0-17 increase	Age 18-64 increase	Age 65+ increase
All counties	59,668,632	64,392,776	+4,724,144	1,055	703	498	817	609
Metro counties	43,691,022	47,505,299	+3,814,277	221	196	170	197	198
Nonmetro counties	15,977,610	16,887,477	+909,867	834	507	328	620	411
Urban population of 20,000 or more:								
Adjacent to a metro area	2,711,360	2,860,267	+148,907	42	35	20	39	33
Not adjacent to a metro area	1,530,967	1,562,319	+31,352	34	20	10	25	21
Urban population of 2,500 to 19,999:								
Adjacent to a metro area	5,006,248	5,407,128	+400,880	199	172	110	190	134
Not adjacent to a metro area	4,440,312	4,653,905	+213,593	236	136	78	178	114
Completely rural or less than 2,500 urban population:								
Adjacent to a metro area	749,976	809,537	+59,561	68	45	35	53	22
Not adjacent to a metro area	1,538,747	1,594,321	+55,574	255	99	75	135	87

Note: Metro/nonmetro definitions, set after the 1990 census, were applied to the 1990 and 2000 data.
Source: U.S. Census Bureau.

Figure 1
Population change 1990-2000

Midwest growth lagged that of the Nation and growth in the nonmetro Midwest lagged that in metro areas



Source: U.S. Census Bureau.

percent) had higher percentage gains in nonmetro population than the Midwest (5.7 percent). Still, the share of nonmetro residents out of the total population was higher in the Midwest (26.2 percent) than in any other census region (Northeast, 10.3 percent; South, 24.9 percent; West, 13.9 percent).

The metro population in the Midwest increased more rapidly than did the nonmetro population (fig. 1). Nonmetro counties with urban populations of less than

20,000 and adjacent to a metro county were the only nonmetro areas in which increases approached 8 percent; nonadjacent categories grew especially slowly.

The most rapid growth among midwestern States from 1990 to 2000 was in Minnesota (12.4 percent), although even that increase was less than that of the entire Nation (13.2 percent). North Dakota grew just 0.5 percent in population, the least of any State in the 1990s. While all Midwest States

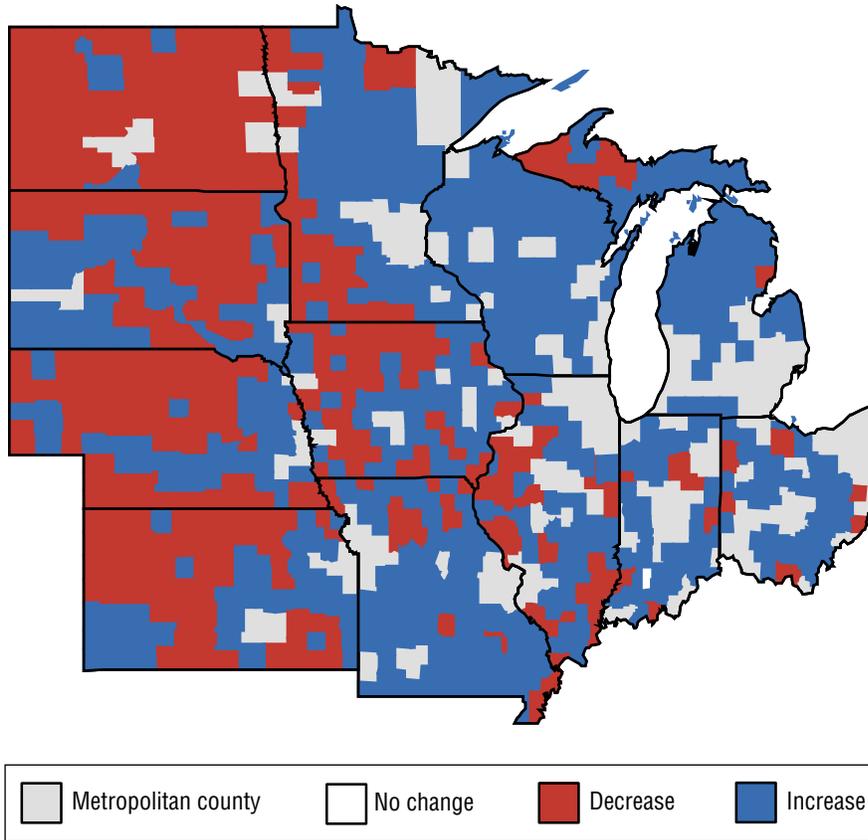
gained metro residents, North Dakota lost nonmetro population (fewer than 23,200 residents), unlike the other 11 States. Nonmetro gains exceeded 100,000 in Indiana, Michigan, Missouri, Ohio, and Wisconsin.

While 61 percent of the 834 nonmetro counties in the Midwest gained residents from 1990 to 2000, 89 percent of its 221 metro counties did so (table 1). In general, nonmetro counties were more likely to gain population in the

Figure 2

Population change, 1990-2000

A majority of nonmetro counties lost population



Source: U.S. Census Bureau.

eastern portion (Illinois, Indiana, Michigan, Ohio, and Wisconsin), where only 53 of the 288 nonmetro counties lost residents in the 1990s. In contrast, 186 of the 295 nonmetro counties in Kansas, Nebraska, North Dakota, and South Dakota reported fewer residents in 2000 than in 1990 (fig. 2).

Differences occurred among nonmetro county types as well. Using the rural/urban continuum codes developed and revised by Butler and Beale, nonmetro counties adjacent to metro counties were much less likely to lose population (18.4 percent) than nonadjacent counties (51.4 percent). Size of the largest incorporated place in

the county also affected population change. Among nonmetro counties with a place containing at least 2,500 residents, about 7 of every 10 had growth. Among counties in which the largest place had fewer than 2,500 residents, a majority (55.4 percent) lost population from 1990 to 2000. The combination of adjacency and size of largest incorporated place led to relatively great differences in the nonmetro Midwest. For example, 207 of the 241 nonmetro counties with places of at least 2,500 and adjacent to metro counties had higher populations in 2000 than in 1990. But among nonmetro counties with no place of at least 2,500 and not adja-

cent to a metro county, 156 of the 255 counties lost population (table 1).

Of course, nonmetro counties can be categorized by different criteria. Of the 292 farm-dependent counties¹ in the Midwest, for example, two-thirds (196) had fewer residents in 2000 than in 1990. Among those designated as dependent on manufacturing, however, more than 4 of every 5 (123/149) gained population. Those nonmetro counties in the Midwest that were dependent on services also tended to increase (80 of 123), as did those that were nonspecialized (144 of 181).

Population Continues To Be Older in Nonmetro Than Metro Areas

The average median age in nonmetro counties of the Midwest in 2000 was more than 3 years higher (38.9) than in metro (35.4) counties. While only 2 of the 221 metro counties had medians of 40.0 years or greater, 323 of the 834 nonmetro counties did.

The loss of youth in nonmetro counties has been a long-term concern in the Midwest. That trend continued in the 1990s, with about three-fifths of the nonmetro counties having fewer residents under age 18 in 2000 than in 1990 (fig. 3). Only 13.3 percent of the metro counties noted declines among youth, however. Major influx of youth was much more likely in metro counties, where more than 4 of every 10 reported gains of at least 10 percent among youth from 1990 to 2000. (Increases of 10 percent or more took place in only 1 of every 10 nonmetro counties.) In

¹Defined by Cook and Mizer as counties in which farming contributed a weighted annual average of 20 percent or more of total labor and proprietor income over the 3 years from 1987 to 1989.

sum, the Midwest's 221 metro counties had over 1 million more residents under the age of 18 in 2000 than 10 years earlier; the corresponding gain among the 834 nonmetro counties was less than 21,000.

Nonmetro counties adjacent to a metro area or with a larger city (> 2,500 population) were far more likely to gain youth in the 1990s than were nonadjacent (smaller city) counties. Residents under age 18 increased in more than half of the nonmetro counties adjacent to a metro area and with an urban population of at least 2,500. In contrast, such gains occurred in less than a third of the completely

rural counties that were not adjacent to a metro area.

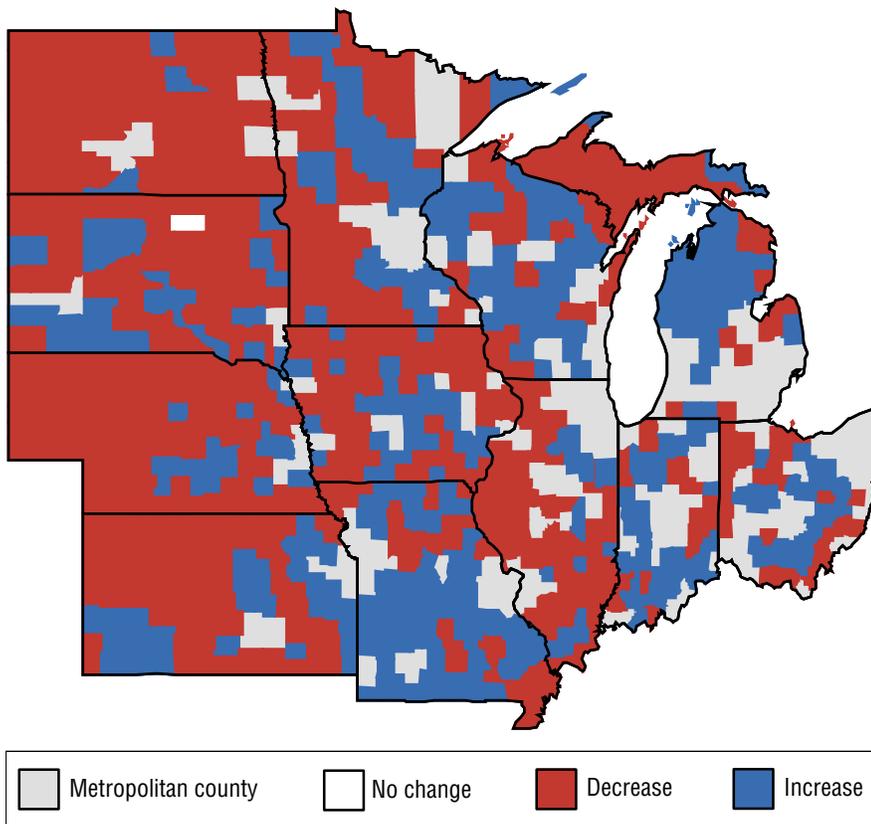
At the other end of the age continuum, slightly fewer than half (49.3 percent) of the nonmetro counties noted increases in residents 65 or older from 1990 to 2000 (fig. 4). The total increase in older residents across nonmetro counties in the Midwest was 83,000. Meanwhile, 90 percent of metro counties in the Midwest gained older residents, for a total of 427,000 more in 2000 than in 1990.

Differences between older residents in nonmetro counties were relatively great; for example, 39 counties declined by at least 10

percent while another 278 gained by that amount. Changes among those 65 or older were not as great in many counties as in previous decades, however. That's because the 10-year cohort that aged into the 65-or-older group between 1990 and 2000 was born in the late 1920s and early 1930s; the birth rate dropped substantially during that period, particularly in the initial years of the Great Depression. Thus, there were fewer born into that category than in previous cohorts.

The working age group (18-64) is critical to nonmetro areas because they are most likely to be fully employed, to head families, and to patronize institutions such as local schools, businesses, health-care agencies, and churches. Here the results were encouraging. Three-quarters of the nonmetro counties reported more 18-64 year-olds in 2000 than in 1990 (fig. 5). Those completely rural counties that were not adjacent to a metro center were least likely to gain in this age category. Still, 53 percent of these counties increased their numbers age 18 through 64. Indeed, across all nonmetro counties, there were 806,000 more members of this age group counted in the most recent census than in the previous one. The metro gain of 2.4 million among those 18-64 was much greater.

Figure 3
Change in population age 17 or younger, 1990-2000
Fewer youth lived in a majority of nonmetro counties



Source: U.S. Census Bureau.

Residents of Hispanic Origin Increase in the Midwest

Perhaps no segment of the population changed as rapidly in the Midwest as did residents of Hispanic origin. The increase between 1990 and 2000 was 81 percent, greater than the change in the Nation or in other census regions (table 2). Numerically, however, the gain of nearly 1.4 million

Table 2

Hispanic population by census region, 1990 and 2000

The Midwest had the greatest percentage gain but the lowest numerical gain

Region	1990	2000	Change	
			Number	Percent
Midwest	1,726,509	3,124,532	1,398,023	81.0
Northeast	3,754,389	5,254,087	1,499,698	39.9
South	6,767,021	11,586,696	4,819,675	71.2
West	10,106,140	15,340,503	5,234,363	51.8
United States	22,354,059	35,305,818	12,951,759	57.9

Source: U.S. Census Bureau.

Hispanics in the Midwest was lowest of all regions.

In the Midwest, Hispanic residents more than doubled in 7 of the 12 States (Indiana, Iowa, Kansas, Minnesota, Nebraska, South Dakota, Wisconsin) during the 1990s. Percentage gains across nonmetro areas of all but Kansas, Ohio, and South Dakota were greater than those for metro sections. Still, numerical gains among Hispanics were greater in metro than nonmetro areas in all but North Dakota. The differences were relatively great in some States. For example, Illinois counted nearly 610,000 more Hispanics in metro counties in 2000 than it did 10 years earlier; its increase across nonmetro counties was less than 16,100 (table 3). For the entire census region, the absolute increase of Hispanics in metro areas (1,180,955) far outnumbered that in nonmetro locations (217,068).

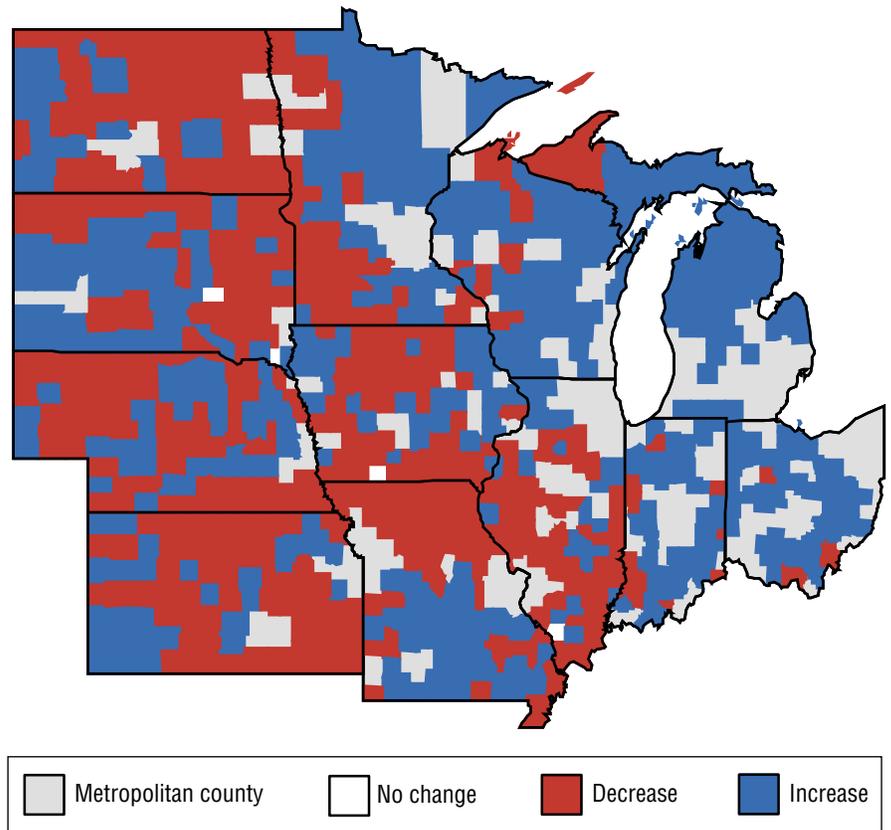
In 458 of the 834 nonmetro counties, the Hispanic population in 2000 doubled that reported in 1990 (some from a very low base). Indeed, 27 counties reported increases of at least 1,000 percent. When only the 524 nonmetro

counties with at least 50 Hispanic residents as of 1990 were examined, nearly half (251) at least doubled their populations by 2000, and 10 increased by more than 1,000 percent (fig. 6). Each of these 10 counties (Cass in Illinois; Cass in Indiana; Buena Vista, Crawford, Marshall, and Sioux in Iowa; Barry and McDonald in Missouri; Colfax and Saline in Nebraska) included one or more major food processing industries. In most instances, relatively young males constituted the first wave of migrants, followed shortly by young females, thus changing the age structure of the local community. Such rapid increases occurred in selected non-

Figure 4

Change in population age 65 or older, 1990-2000

Older residents increased in more than half of the nonmetro counties



Metropolitan county
 No change
 Decrease
 Increase

Source: U.S. Census Bureau.

Table 3

Hispanic residents of metro and nonmetro counties by State, 1990 and 2000*Numeric gains among Hispanics were greater in the metro than the nonmetro population in each State*

State	Metro population					Nonmetro population				
	Number of counties	1990	2000	Change		Number of counties	1990	2000	Change	
				Number	Percent				Number	Percent
Midwest	221	1,534,108	2,715,063	+1,180,955	+77.0	834	192,401	409,469	+217,068	+112.8
Illinois	28	881,657	1,491,405	+609,748	+69.2	74	22,789	38,857	+16,068	+70.5
Indiana	37	85,535	177,615	+92,080	+107.7	55	13,253	36,921	+23,668	+178.6
Iowa	10	19,470	46,862	+27,392	+140.7	89	13,177	35,611	+22,434	+170.3
Kansas	9	50,186	102,236	+52,050	+103.7	96	43,484	86,016	+42,532	+97.8
Michigan	25	182,939	290,367	+107,428	+58.7	58	18,657	33,510	+14,853	+79.6
Minnesota	18	42,450	108,522	+66,072	+155.6	69	11,434	34,860	+23,426	+204.9
Missouri	22	50,421	90,785	+40,364	+80.1	93	11,281	27,807	+16,526	+146.5
Nebraska	6	20,004	49,861	+29,857	+149.3	87	16,965	44,564	+27,599	+162.7
North Dakota	4	2,188	3,509	+1,321	+60.4	49	2,477	4,277	+1,800	+72.7
Ohio	39	115,609	184,176	+68,567	+59.3	49	24,087	32,947	+8,860	+36.8
South Dakota	3	2,448	5,697	+3,249	+132.7	63	2,804	5,206	+2,402	+85.7
Wisconsin	20	81,201	164,028	+82,827	+102.0	52	11,993	28,893	+16,900	+140.9

Note: The metro and nonmetro definitions set in the mid 1990s are used with both the 1990 and 2000 data.

Source: U.S. Census Bureau.

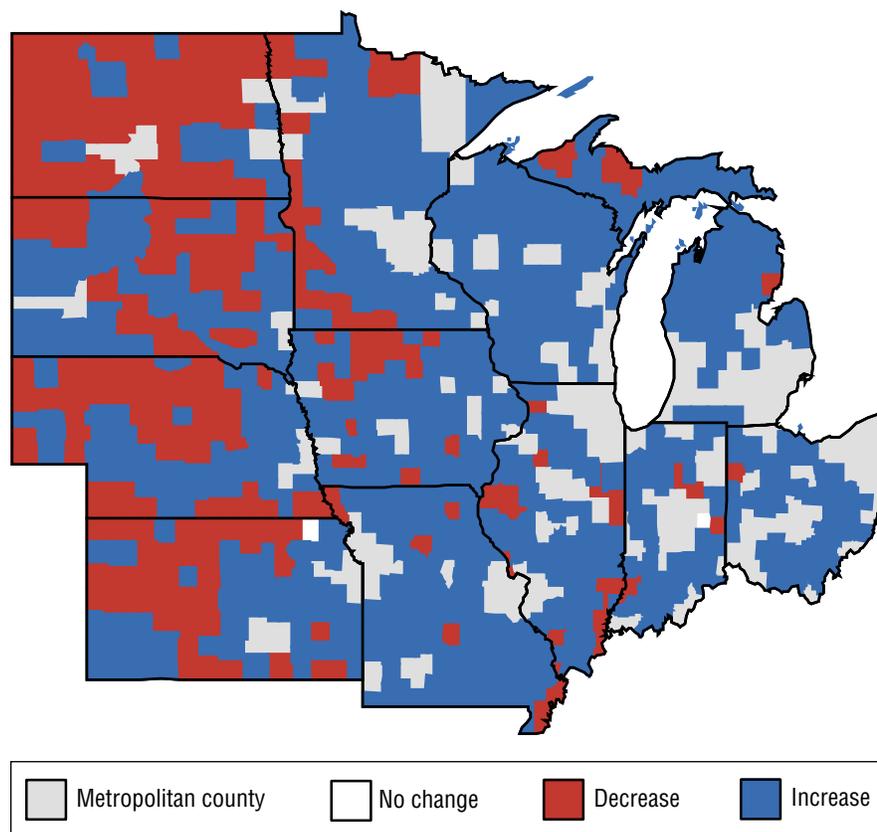
metro counties in previous decades, with employment opportunities again being the primary cause of the gain among Hispanics.

Population Change and Policy Needs Vary Widely Across the Nonmetro Midwest

While population has increased in the Midwest as a whole, metro areas have been far more likely to benefit than nonmetro counties. And rural counties with fewer residents in the largest town and more distant from a metro county are particularly at risk for further decline. Many such counties not only lost population from 1990 to 2000, but lost a disproportionate number of youth, which makes it more difficult to reverse population decline in the future. Finding ways to provide services, including education and medical care, to less dense residential settlements will continue to be an important issue.

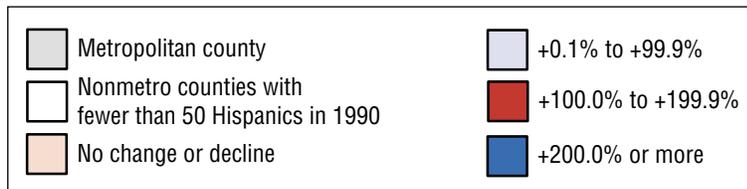
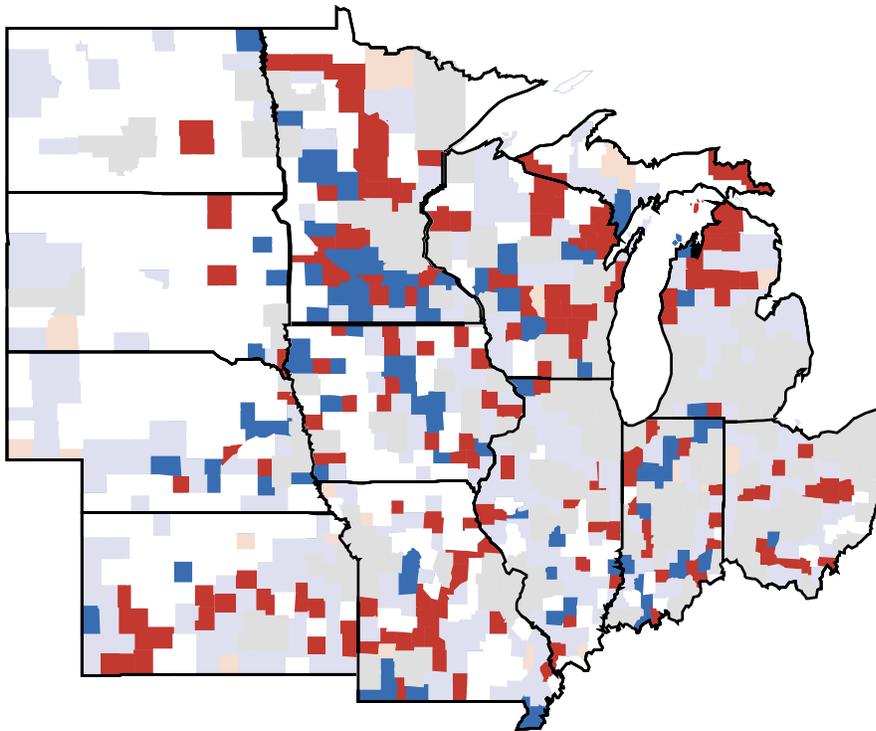
Many nonmetro counties near metro centers in the Midwest, on the other hand, continue to grow. Indeed, rapid increases occurring in

Figure 5

Change in population age 18 to 64, 1990-2000*Working-age residents increased in most nonmetro counties*

Source: U.S. Census Bureau.

Figure 6
Percent change in Hispanic population, 1990-2000
Hispanic residents in some nonmetro areas more than tripled



Note: Includes only those counties with 50 or more Hispanic residents in 1990.
 Source: U.S. Census Bureau.

several will likely push them into the metro category once metropolitan statistical areas are redesignated, as they are after a census. The needs of these counties vary greatly from those of other nonmetro areas.

In many parts of the Midwest, populations in nonmetro counties did not change greatly in the 1990s. Some have had slow declines or modest growth for decades. This frequently masks major changes occurring within the population,

however. Some, for example, have much older populations than previously; others, however, have a share of youth much like that in suburban portions of metro counties. Such differing trends make one rural development policy impractical. Policies must be geared to geographic places as well as economic sectors (Johnson). Not only do metro and nonmetro areas differ, but nonmetro counties vary greatly within each of the 12 midwestern States. Discussions and programs need to address the great variety of situations in rural areas even in the Midwest, a region often characterized as homogeneous. *RA*

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Rural Health Issues for the Older Population

Carolyn C. Rogers

Americans are living longer, and as the population ages, major public attention turns to the declining health and consequent loss of independence in old age. With an aging population and an increasing number of persons at risk of disability and chronic conditions, the need for medical, rehabilitative, and social services will increase. Because older persons are primary users of health care services, the growth of this age group implies an increased burden on the Nation's health resources. Population aging has wide-ranging implications for health care, housing, and transportation, as well as social and health policy.

Rural areas generally have a higher proportion of older persons in their total population than urban areas; as of 2001, persons 65 and older constituted 20 percent of the U.S. nonmetro (or rural) population and 15 percent of the metro (or urban) population. The rural elderly assess their health as poorer than urban elders, and may thus have a greater need for health care services. Moreover, the range of health care services for the older

The rural elderly assess their health as poorer than that of the urban elderly. The range of health care providers and services in rural communities is narrower than in urban areas, and the rural elderly may experience structural barriers to accessing doctors, hospitals, or advanced medical services. For example, the per capita supply of physicians in nonmetro areas is considerably lower than in metro areas. Rural communities differ in their ability to meet the growing need for health care and other services of an aging population.

population in rural communities is narrower than in urban areas. Fewer treatment alternatives are available, and fewer health care providers practice in rural areas. The older rural population is also more likely to be poor than the urban elderly, which introduces a financial barrier to obtaining adequate health care services.

Across rural America, some counties have grown by attracting older persons (retirement counties), while other nonmetro counties have aged through the outmovement of young adults. The different dynamics in the growth of the older population result in disparities between communities in terms of resources to meet the medical, social service, economic, housing, and long-term care needs of their populations. Sparsely populated rural communities are often far from specialized medical care and other health care services, which are concentrated in metro centers.

The problems affecting health care in rural America, such as greater travel times to obtain care

and higher out-of-pocket health expenditures, often require solutions that differ from those appropriate in urban areas. This article examines rural-urban differences in health status, health resources, and access to health care services. The continued growth of the older population, especially in rural areas, will greatly affect resources such as medical care facilities, nursing homes, Medicare/Medicaid, and Social Security funds.

More Rural Than Urban Elderly Report Fair or Poor Health

Most people age 60 and older assessed their health as good to excellent in 2001, with metro elders reporting better health than nonmetro elders (fig. 1). Nearly 37 percent of nonmetro elders reported their health as fair or poor, compared with 32 percent of metro elders. Self-assessed health is a critical measure because it is associated with mortality, quality of life, and other important indicators of health status such as physical exams.

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With advancing age, self-assessments of health consistently decline. At age 60 to 64 years, 40 percent of nonmetro elders reported excellent or very good health; by age 85 and older, only 21 percent did so. As people live longer, many are active and healthy well past retirement. Those in their 80s, however, may have to cope with chronic disabilities and declines in physical functioning.

Difficulties in performing personal care tasks and home management tasks are referred to as “functional limitations.” Activities of Daily Living (ADLs) measure ability to perform physical tasks such as eating, bathing, dressing, toileting, and getting in or out of a bed or chair. A higher proportion of elders in nonmetro counties reported a functional limitation than in metro counties—40.5 percent in adjacent nonmetro areas and 37.6 percent in nonadjacent nonmetro areas versus 34.3 percent in metro areas



Photo courtesy USDA PhotoLab.

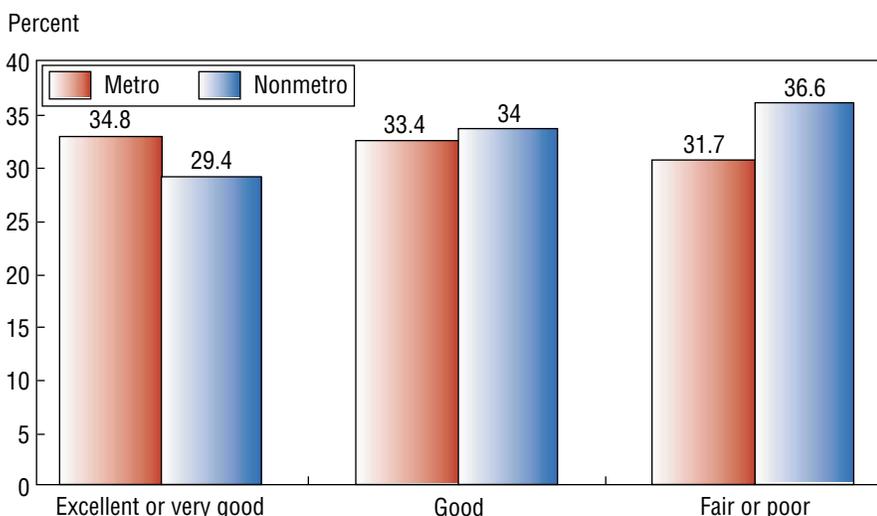
(Coburn and Bolda). In terms of restricted activity due to illness, residence made no difference in the number of days the elderly restricted their usual activities (about 31 days per year) or stayed in bed (about 14 days) (Van Nostrand).

Higher socioeconomic status, measured by education and income

levels, is strongly associated with more positive self-assessments of health and fewer functional limitations. Poorer health is found among the oldest old (age 85 and older), women, minorities, and those with fewer sources of social support. A significant proportion of the older population suffers from chronic conditions that affect their physical functioning and ability to live independently.

Residential location appears to affect health status indirectly. Nonmetro elders are more likely to have characteristics associated with poorer health because they tend to be less educated and financially worse off than the metro elderly, and lower socioeconomic status is strongly associated with poor health. Nonmetro elders are also more likely to have certain chronic conditions (for example, arthritis and hypertension) that darken self-assessed health status and impair the ability to perform various activities of daily living. Hence, the rural elderly may have a greater need for health care services than their urban counterparts. Furthermore, rural communities often lack

Figure 1
Health status of persons 60 years and older, by residence, 2001
A larger share of nonmetro elders reported fair or poor health than did urban elders



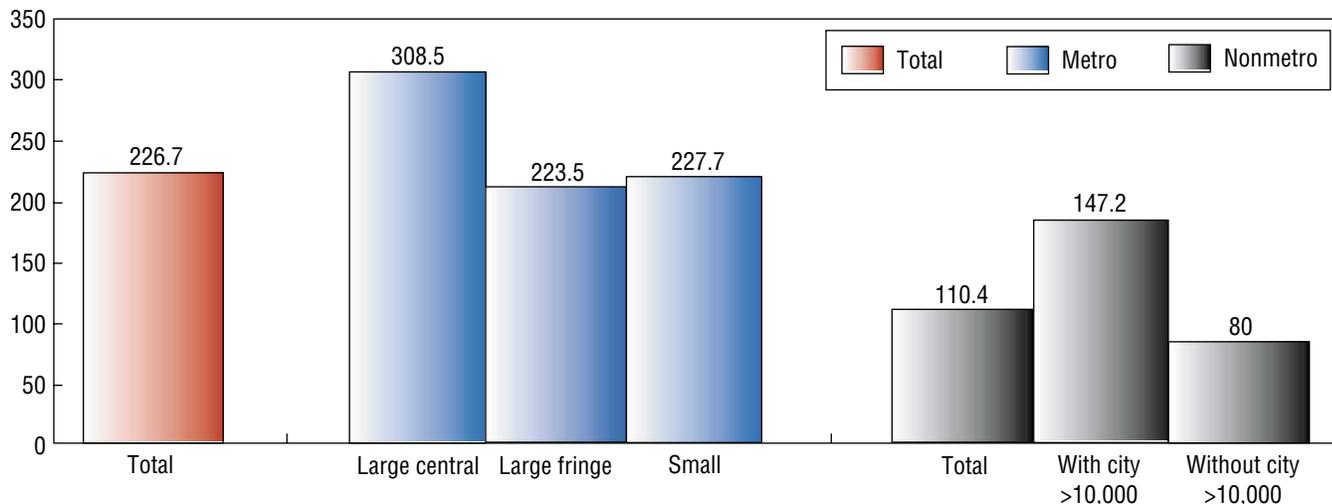
Source: March 2001 Current Population Survey (CPS) data file.

Figure 2

Number of physicians per 100,000 residents, by residence, 1998

Rural areas have a lower physician-to-population ratio

Physicians per 100,000 population



Source: National Center for Health Statistics, CDC. *Health, United States, 2001.*

comprehensive medical services and access to public transportation, which could compound the already poorer health of their older residents.

Rural Areas Have Fewer Physicians and Smaller Hospitals

Physicians. The rural elderly may experience structural barriers to accessing doctors, hospitals, or other medical services. In all regions, the per capita supply of physicians in nonmetro areas is considerably lower than in metro areas. In metro areas, there were 308.5 physicians per 100,000 population in large central counties in 1998, 223.5 in large fringe counties, and 227.7 in small metro counties (fig. 2). In contrast, nonmetro counties overall had 110.4 physicians per 100,000 population. Within nonmetro counties, physician-to-population ratios were related to county population size. Nonmetro counties without a city of 10,000 population had substan-

tially fewer physicians per 100,000 people (80) than those counties with a city of 10,000 or more (147.2). The number of physicians practicing in nonmetro areas in

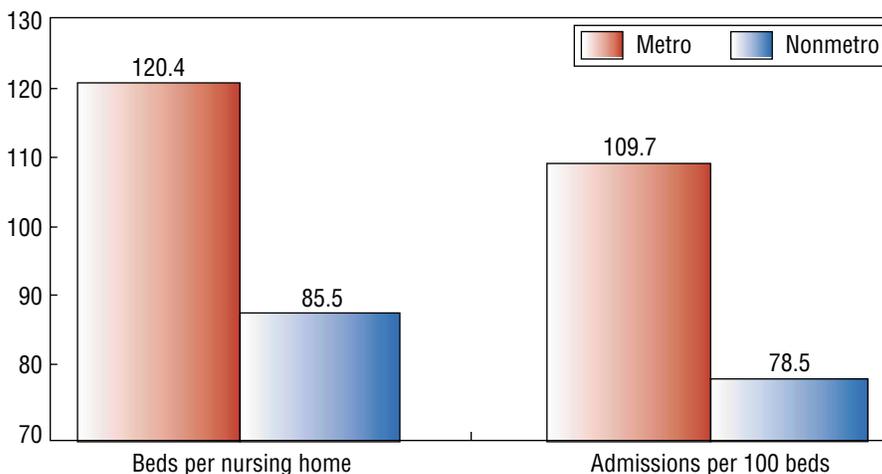
relation to population has increased during the 1980s and 1990s, but more slowly than in metro areas (Ricketts et al.).

Figure 3

Nursing home beds and admissions, by residence, 1996-97

Nonmetro nursing homes are smaller than metro nursing homes

Rate



Source: Gabrel.

The comparison of all physicians is somewhat distorted due to the inclusion of specialists who are concentrated in urban centers. Even so, the per capita supply of primary care physicians in nonmetro areas is lower than in metro areas. In 1998, just 14 percent of primary care physicians in the U.S. practiced in nonmetro areas (Ricketts et al.), substantially lower than the nonmetro share (20 percent) of the total population. In remote rural areas that have a shortage of physicians or other primary health care providers, older persons may have to travel farther to obtain primary care and thus may visit physicians less frequently.

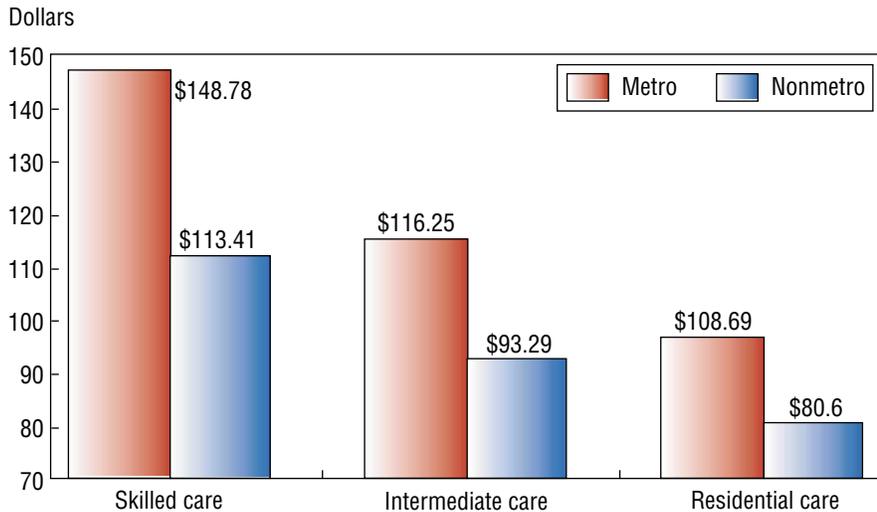
Hospitals. Rural hospitals are often small facilities that treat a low volume of patients. Many rural Medicare beneficiaries are treated in urban hospitals, primarily for specialized care that is not available locally. In 1998, 33 percent of rural Medicare beneficiaries were treated in urban hospitals (Buczko). Rural patients with severe conditions requiring complex surgical procedures are frequently referred or transferred to nearby urban hospitals. Those conditions most often responsible for rural beneficiaries' use of urban hospitals are related to coronary and other specialized surgical care.

In 1998, rates of hospitalization per 1,000 persons age 65 and older were 347.2 in rural areas and 274.1 in urban areas. Rural hospitals represent about half of all hospitals and about one-fourth of all inpatient beds in the United States. They are often small facilities (fewer than 100 beds) with small staffs. In urban areas, only 26 percent of hospitals have fewer than

Figure 4

Average daily charge for private-pay nursing home residents, by level of care of facility and residence, 1997

Nonmetro nursing home residents pay less for nursing home care than do their urban counterparts



Source: Gabrel.

100 beds, while in rural areas 81 percent of hospitals have under 100 beds. Many of these small hospitals depend on Medicare patients. Because of low patient volume, rural hospitals are more financially vulnerable than urban hospitals.

The 1990s brought several changes to the organization of rural health care, such as managed care, hospital mergers, and the development of multi-hospital systems. Many rural hospitals joined multi-hospital networks, alliances, or systems to increase their viability and better cope with the growth of managed care. However, the growth of managed care in rural areas and the development of rural hospital systems have lagged in comparison with urban areas. Because of this, rural residents may have been increasingly drawn to urban areas for inpatient care in

the 1990s. Although this necessitates traveling farther to obtain health care, rural residents gain in obtaining specialized and more comprehensive medical services.

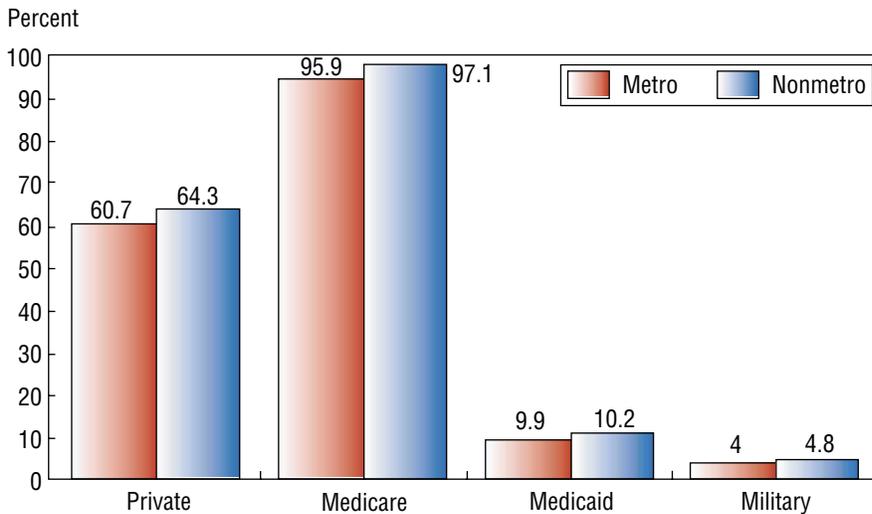
Nursing Homes. Only a small portion of the elderly population resides in nursing homes—in 2000, 4.5 percent of those 65 and older (Census Bureau). However, as this population grows, an increased need for nursing home care is inevitable. When the leading edge of the baby boom generation reaches age 65 in 2010, the need for nursing homes will increase even more.

The 1997 National Nursing Home Survey indicates that there were 10,500 nursing homes (61.5 percent) in metro areas and 6,600 nursing homes (38.5 percent) in nonmetro areas. Metro nursing homes are larger (120 beds per

Figure 5

Health insurance coverage of persons 65 and older, by type of coverage and residence, 2001

Nonmetro persons 65 and older were more likely to have private health insurance coverage than were metro persons



Source: March 2001 Current Population Survey (CPS) data file.

nursing home) than nonmetro homes (85.5 beds). The number of nursing home residents 65 and older was 1,006,500 in metro areas and 458,500 in nonmetro areas. Thus, a disproportionate share was in nonmetro areas in 1997 (31.3 percent), as only 24 percent of the population 65 and older resided in nonmetro areas. Nursing homes in metro areas had higher admissions (109.7 per 100 beds) than nonmetro areas (78.5) (fig. 3), suggesting that because nonmetro homes are smaller, they are less able to accommodate demand.

Of the total number of nursing homes in metro areas in 1997, 81 percent were certified by Medicare and Medicaid; in nonmetro areas, 71 percent were certified. Daily charges are higher in homes certified by Medicare. In 1997, the average daily charge in Medicare-certified homes was \$234.72 in metro areas and \$183.19 in nonmetro areas. The level of nursing home

care also affects the average daily charge of private-pay nursing home residents. Charges were highest in skilled-care (versus residential) facilities (fig. 4), with charges higher for metro areas (\$148.78) than nonmetro areas (\$113.41). Nursing homes located in nonmetro areas are less likely than those in metro areas to have certified skilled nursing beds or special care units.

Rural and urban elderly differ in the mix of long-term care services they use. Home health care services serve as an alternative to institutionalization. The rural long-term care system is characterized by a larger supply (per elder) of nursing home beds than in urban areas and fewer community-based home health services and residential care options. This may contribute to the higher rate of nursing home use among the rural elderly and the lower rate of home health and other community-based inhome services.

Health Insurance. Most elderly persons have some form or combination of health insurance coverage. Less than 1 percent of the 65-and-older population have no health insurance coverage. In 2001, 96 percent of the metro elderly were covered by Medicare and 97 percent of the nonmetro elderly were covered. About 10 percent of all elderly persons had Medicaid coverage. A slightly higher share of the nonmetro elderly had private insurance (64 percent) in 2001 than the metro elderly (61 percent) (fig. 5). This includes “Medigap” policies that fund various services not covered by Medicare such as prescription drugs.

Rural Access to Health Services Is More Difficult

Structural barriers to health care access include a lack of specific medical services in the local area, fewer health professionals, and difficulty in reaching facilities. Other access barriers are financial and include the lack of affordable and available transportation, limited income, and less insurance coverage. Income has a strong effect on access to health care resources. Low income has a more pervasive relationship to self-reported access, satisfaction, and use of health care services than does rural residence per se (Stearns et al.).

Access to health care varies between urban and rural areas as well as within rural areas. The older residents of nonadjacent and remote nonmetro counties have the greatest difficulties. Medicare beneficiaries in nonmetro counties that are adjacent to metro areas and have their own city of at least 10,000 population report higher levels of satisfaction and fewer access problems than do residents of metro counties (Stearns et al.).

Preventive vaccination rates in non-metro areas are on par with or better than rates in metro areas. However, preventive cancer screening for women and dental care are less accessible in rural than urban areas (Stearns et al.).

Across rural America, some counties have grown by attracting older persons (retirement counties) while other nonmetro counties have aged through the out-movement of young adults. Rural retirement counties are presently defined as those with an increase of 15 percent or more in population age 60 and older from immigration between 1980 and 1990 (Reeder). Retirement communities benefit from an increased population and tax base and are better able to provide needed services. Older persons who move to retirement areas are generally better educated than the average older person and more aware of programs and services available to them. They also tend to be in better health than average and bring higher than average income to the retirement area. On the other hand, rural areas with a high proportion of older persons but without an influx of retirees have a declining population and tax base, which may result in unanswered needs of the elderly in terms of income, health care, housing, and transportation.

There are numerous barriers and challenges to reducing the differences in health and long-term care access and use for rural older persons. First, the current financing of long-term care generally, and in rural areas particularly, limits the availability of services in rural areas. As the rural elderly are less able to pay for long-term care services out of their own pockets than the urban elderly, they are more

dependent on Medicare, Medicaid, and other public programs to meet their long-term care needs. The Balanced Budget Act of 1997 reduced Medicare post-acute care expenditures, and continuing pressures on public programs may limit access to critical services for rural older persons (see “Implications of Medicare Restructuring for Rural Areas” in this issue). Moreover, the smaller economies of scale, higher costs of developing and providing services, and lower supply of critical health personnel handicap the development of adequate long-term care services in rural communities.

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A related challenge will be to develop better models for delivering health and long-term care services in rural areas. This is especially important in light of limited financing for long-term care and the competition for health personnel. The development of partnerships and service networks among rural and urban health and long-term care providers may be one solution. The expansion of newer financing and delivery systems in rural areas could provide the neces-

sary incentives for service expansion and integration among acute and long-term care providers.

Conclusion

Several aspects of the aging U.S. population are of major public concern and will affect future programs and services for the elderly. Growing numbers of older persons, especially those age 85 and older, will lead to increased needs in terms of health services, finances, housing, and social and psychological support. Declining health and poverty in old age are serious concerns, especially for subgroups such as the oldest old and the most rural elderly. The oldest component of the older population is the most likely to need health care and physical support, and may also need special programs to alleviate their financial situation.

Rural communities are more limited in public sector capacity than urban areas and are usually economically concentrated in a few industrial sectors. Within rural America, there is wide diversity. Rural retirement areas are benefiting from growth, as immigrating retirees boost the tax base and help sustain local businesses. Alternatively, farming- and mining-dependent rural areas have been losing working-age persons and experiencing declining populations and tax bases. The remaining older population in these areas has increased demands for medical and social services and long-term care. While Medicare provides significant health insurance at relatively little or no cost, it offers very limited coverage of long-term care services—whether in the community or in a nursing home—and much of the cost is borne by older people and their families. The need for long-term

care will most likely increase with the growth of the oldest old.

Based on trends in the 1990s, nonmetro retirement counties are expected to continue their rapid growth. Retirement counties constitute only 9 percent of all nonmetro counties, but they accounted for 25 percent of the population growth during the 1990s. With the aging of the population, nonmetro retirement counties will most likely continue to outpace other nonmetro counties in population growth. Many retirement areas benefit from an influx of highly educated older persons, since they tend to have higher incomes as well. Older persons in good health

and highly educated will be in a position to better avail themselves of available programs and services. Although remote rural areas have not experienced as large an increase in their older populations, these areas are less equipped to provide services and programs to meet the needs of the elderly. Furthermore, the most rural counties are also the most likely to have higher rates of elderly poverty, putting them at an even greater disadvantage in providing needed services.

The restructuring of the Medicare program and payment policies will have significant impli-

cations for the sustainability of rural health systems. In addition to ensuring that Medicare policies support rural people and health care systems, attention needs to focus on the long-term care needs of rural populations. The rural elderly are less able to pay for long-term care services out of their own pockets and are therefore more dependent on public programs. Yet currently, public funding of long-term care cannot meet the growing demand for such care. If significant shortfalls in Medicare funding occur, the underserved rural communities and populations could easily fall through the cracks. **RA**

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Implications of Medicare Restructuring for Rural Areas

Carolyn C. Rogers

Medicare is the Federal health insurance program that in 2000 covered 34 million Americans age 65 and older and another 5 million persons under age 65 with permanent disabilities. The program was enacted in 1965 and went into operation on July 1, 1966, covering 19.1 million older persons. With the aging and growth of the U.S. population, the number of beneficiaries age 65 and older nearly doubled between 1966 and 2000 and is projected to double again by 2030.

Total Medicare spending (benefit payments and all other expenses) has steadily increased since the 1960s. In fiscal year 2001, Medicare benefit payments totaled \$239 billion, accounting for 19 percent of national health expenditures (Henry J. Kaiser Family Foundation). The Balanced Budget Act (BBA) of 1997 set out to balance the Federal budget by the year 2002 and to curb Medicare expenditures. The BBA included many changes to the Medicare payment system, turning to the marketplace for managed care options and extending inpatient hospital prospective

As the American population ages, the Nation's health resources are bearing an increased burden. The elderly are the primary users of health care services, and as their numbers have increased so has spending for the Medicare program. Balanced budget legislation introduced many changes to the Medicare system in an attempt to curb spending. The legislation creates opportunities to improve the rural health delivery system, but low population density, limited managed care experience, and less access to health care providers in rural areas make market-based efficiencies and equity difficult to achieve in rural areas.

payment methods to nursing homes, home health care services, outpatient care, and ambulance services (see "Key Legislative Changes for Medicare," p. 39).

Over its history, Medicare has undergone several legislative changes that have redefined the population covered by the program, the benefits to which they are entitled, and the method of payment to physicians, hospitals, and skilled nursing facilities. Medicare has moved from reimbursing providers for their "usual, customary, and reasonable" costs to a series of payment formulas that prospectively set reimbursement levels for each use of a service. This article will examine recent legislative changes to the health care system and Medicare program and payment policies, and the impact of these changes on rural beneficiaries and communities. Overall, 23 percent of Medicare beneficiaries live in rural areas. Fourteen States have more than half of their Medicare

populations living in rural areas, with the highest shares of rural beneficiaries in Montana (76 percent), South Dakota (74 percent), and Vermont (74 percent) (Henry J. Kaiser Foundation). Medicare is an important part of the Nation's health care financing system, but it is especially important to rural America because a larger share of the rural population is elderly.

Enrollment in Medicare + Choice Plans Remains Low in Rural Areas

The BBA made significant changes in a number of programs such as Medicare, with direct impacts on rural health care delivery systems. Overall, the legislation creates opportunities to improve the stability of rural delivery systems and for urban-based systems, to extend their influence into rural areas, but it also reduces traditional payment support.

Before the BBA, few nonmetro counties had Medicare + Choice (M + C) plans available. In 1996,

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Definitions

Capitation. A uniform payment payable on a per capita basis; an annual fee paid to a doctor or medical group for each participant enrolled under a health plan.

Risk contracts. Health plans with contracts accepting all insurance risk for enrolled beneficiaries; under such an arrangement, a plan agrees to provide all Medicare-covered services to enrolled beneficiaries for a fixed monthly capitation payment from Medicare.

Medicare. Medicare provides broad coverage of basic benefits, but does not cover outpatient prescription drugs or long-term care. Part A finances 45 percent of benefits and covers inpatient hospital services, skilled nursing facility (SNF) benefits, home health visits following a hospital or SNF stay, and hospice care. Part B accounts for 33 percent of Medicare benefit spending and covers physician and outpatient hospital services, annual mammography and other cancer screenings, and services such as laboratory procedures and medical equipment. Medicare + Choice plans (defined below) contract with Medicare to provide both Part A and B services to enrolled beneficiaries, accounting for about 18 percent of Medicare payments. Home health care is also funded under Parts A and B, accounting for 4 percent of Medicare spending.

Medicare + Choice Plans (M + C plans). The Medicare + Choice program began in 1998 and was intended to provide beneficiaries with a range of options from which to select the Medicare health plan of their preference. The choices include traditional fee-for-service Medicare; managed care plans (HMOs); provider-sponsored organizations (PSOs) and preferred provider organizations (PPOs); medical savings account plans (MSAs), and hybrids that combine fee-for-service payment to providers with capitation to Medicare and beneficiaries. M + C plans offer Medicare beneficiaries considerable benefits (prescription drugs, eye care, and preventive care) beyond the traditional fee-for-service Medicare program. The Medicare + Choice program, as written in the Balanced Budget Act, includes provisions intended to help spread the program into rural areas. These include capitated payment to plans that would retain a fee-for-service payment system for health care providers, contracting with provider-sponsored organizations (PSOs) as managed care plans, and establishing a floor payment for all counties.

Federally Qualified Health Centers (FQHCs). Urban or rural centers that provide comprehensive community-based primary care services to the medically underserved regardless of their ability to pay. FQHCs have two major revenue sources—Medicaid (34 percent) and Federal grant funds from the Health Resources and Services Administration (23 percent).

Rural Health Clinics (RHCs). Established in 1977 to provide primary care services in rural underserved areas, and may be operated either as independent clinics or as parts of larger organizations, such as hospitals. On average, RHCs receive approximately 25 percent of their revenue from Medicaid, and almost 60 percent of their revenue from Medicare and private insurance payments. RHCs operated as an independent practice have always been subject to a maximum cap on reimbursement per visit. The BBA extended the reimbursement cap to provider-based RHCs, exempting only those clinics owned by rural hospitals with fewer than 50 beds.

only 3 percent of nonmetro counties not adjacent to a metro county and 20 percent of nonmetro counties adjacent to metro counties had M + C plans available, compared with 95 percent of central metro and 45 percent of other metro counties (RUPRI, 2001b). Balanced budget legislation created financial incentives to offer M + C plans in rural counties, and increased

Medicare payment rates to encourage managed care plans to offer products in areas that previously had low rates.

While enrollment in managed care by Medicare beneficiaries has increased considerably in recent years, it remains quite low in rural areas. And despite the higher payments, the availability of managed care for rural Medicare beneficia-

ries remains modest at best. In 1997, 22.5 percent of nonmetro counties adjacent to a metro county had an M + C plan available, but availability declined to 20.5 percent by 2000 (RUPRI, 2001b and c). About 4 percent of nonmetro counties not adjacent to metro counties had plans available in 1997, basically the same as in 2000 (RUPRI, 2001b). Many M + C plans either

dropped out of Medicare completely or reduced their service areas in 1999 through early 2001, and these nonrenewals disproportionately affected rural areas. In 2001, 68 percent of rural M + C enrollees in non-renewing plans (compared with 17 percent of urban enrollees) had no other M + C plans to choose from in their area (RUPRI, 2001c).

Under the BBA, provider-sponsored organizations (PSOs) are recognized as entities that may contract directly with the Federal Government to enroll Medicare beneficiaries and to offer M + C plans. PSOs are organizations of physicians, hospitals, and other providers that accept risk through such contracts. In effect, they function both as insurance organizations and providers. With as few as 500 Medicare beneficiaries enrolled and no private-pay enrollees, rural PSOs can contract with Medicare as a health maintenance organization (HMO) and receive capitated payments for those beneficiaries. If States resist licensing PSOs, the legislation allows the Federal Government to do so.

Balanced budget legislation has not dramatically increased the rural availability of M + C plans as intended, with low enrollment in managed care plans in rural counties. Although the rate of payment from Medicare to M + C plans is one factor affecting the availability of M + C plans, county and market characteristics also affect Medicare managed care enrollment. Non-metro counties with larger Medicare populations, larger populations of “young old” people, higher population density, higher per capita income, and lower percentages of population employed in agriculture and manufacturing are more likely to be included in HMO service areas (McBride and Mueller). These

Key Legislative Changes for Medicare

Balanced Budget Act (BBA) of 1997:

- Influenced payment in the traditional Medicare program by restricting fee-for-service reimbursement;
- Encouraged initiatives to change to different payment systems;
- Created incentives for beneficiaries to enroll in capitated plans (presumably to enhance their insurance benefits);
- Encouraged changing the delivery system;
- Encouraged an emphasis on measuring quality of services;
- Established a National Bipartisan Commission on the future of Medicare, though with no assurance of rural representation.

Balanced Budget Refinement Act (BBRA) of 1999:

- Provided for additional payment to plans that enter underserved counties;
- Enabled plans to re-enter counties earlier than previously allowed.

Medicare, Medicaid, and State Children's Health Improvement Program (SCHIP) Benefits Improvement and Protection Act (BIPA) of 2000:

- Numerous provisions addressed the needs of rural health care providers;
- Replaced the requirement for cost-based reimbursement with a new prospective payment system (PPS), effective January 1, 2001. Under the PPS, the first year's payment is set at a FQHC's or RHC's average cost per visit for 1999 and 2000. Future years' payments are adjusted annually for inflation, and when necessary, for changes in the scope of services;
- Restored some portions of the cuts in growth of inpatient payment, outpatient payment, and payment for bad debt to hospitals. Fiscal relief was provided for sole community hospitals, and the Medicare-dependent hospital program was extended with some recalculation;
- Required that reimbursement to Critical Access Hospitals (CAH) for outpatient clinical diagnostic lab services be cost based. Also established payment for professional services based on 115 percent of the fee schedule;
- Reduced beneficiary copayment for outpatient services, addressing the disproportionate impact of increases in Medicare cost-sharing on rural beneficiaries;
- Provided additional payment for home health services delivered to rural beneficiaries. Changed the definition of the branch office by including technology to provide supervision, and also provided payment for services delivered using telehealth;
- Established a new floor payment of \$475 in rural areas and \$525 in urban areas for M + C plans, with an update in 2001 of 103 percent phase-in of risk adjustment. Payment in rural areas has been inadequate to induce offering of plans and enrollment in them;
- Provided bonus payments for entering markets where there were no plans previously, including where plans withdrew, and also allowed expansion of service areas during a contract year.

counties also have more community hospital beds and physicians per capita, more commercial managed care enrollment, and higher adjusted average per capita costs for Medicare. Late in 2000, Congress passed BIPA, which will have a significant impact on the payment to M + C plans (these rates went into effect in March 2001).

As health plans meet standards for access to services, rural systems may be strengthened. On the other hand, rural-based systems could be disadvantaged by requirements for open enrollment and disenrollment, and by requirements for information to meet quality assurance standards. Comprehensive quality assurance programs are expensive to develop and operate, and plans most capable of doing so tend to be large plans that can achieve economies of scale in operating expenses. The program of quality assurance, however, does not address questions of geographic access to services—such as distance from primary care, and time to specialty and hospital acute care—and rural inequities in access.

Payments to Medicare Risk Plans Will Increase, But Rural Payments Remain Below Urban Rates

Medicare risk plans or managed care plans have traditionally offered a richer benefit package or lower premiums. Prior to the BBA, Medicare risk plans received a monthly capitation payment based on the adjusted average per capita cost (AAPCC) of serving beneficiaries in the traditional fee-for-service sector. This was problematic for rural areas because payment rates generally fell below rates paid in urban counties, and rates were highly volatile from year to year. The low AAPCC in many rural areas has deterred the expansion of

Medicare risk contracting in rural counties.

The BBA replaced the AAPCC payment rate with one in which each county's payment rate is the higher of a local-national blended rate, a national floor payment, or a 2-percent minimum update from the county's prior rate. Payments to health plans offering risk-based plans in rural areas will increase, in some instances substantially. The implementation of the new payment rate improves Medicare risk plan payments to the benefit of most rural areas, reducing the geographic disparities in risk plan payment rates and eliminating the possibility of payment decreases. Both changes should make rural markets more attractive to managed care plans serving Medicare beneficiaries. Rural areas and other areas with low payment rates and/or low Medicare HMO enrollment rates experienced large rate increases between 1997 and 1998 (Mueller et al.). Despite these gains, rural payments continue to fall below urban rates.

Although the BBA was generally perceived as favorable to M + C plans in rural areas, certain limitations became evident as it was implemented. These include limits on increases in payment to M + C plans, requirements for budget neutrality that resulted in delayed implementation of the blended payment formula, an inability to tailor benefits and premiums to segments of service areas, and a requirement to enroll all those who sign up (unless the capacity of the network providers in the plan is exceeded). The BBRA provides additional payments to plans that enter underserved counties and enables plans to re-enter counties earlier than previously allowed.

Both of these legislative changes could benefit rural areas.

Prospective Payment Will Take Into Account Low Volume in Rural Health Care Facilities

The Medicare program is designed to make fair payments to providers by covering the costs of an efficient provider, and adjusting for factors beyond what the provider is accountable for. Low patient volume results in underpayment by Medicare to small rural hospitals. In 1998, Medicare payments to all hospitals totaled 2.6 percent over their Medicare costs (Atkinson). In contrast, Medicare payments to rural hospitals are 6.4 percent under their Medicare costs; payments to small rural hospitals (under 50 beds) are 11.1 percent under costs (Atkinson). A prospective payment system would take account of the impact of low volume (due to low population density) on the cost per unit of service where the service preserves access to care in the area.

The hospital flexibility program, introduced under the BBA, relaxes some Medicare rules to give hospitals flexibility in the delivery of health care services and to allow small rural hospitals to continue functioning as institutions eligible for Medicare cost-based reimbursement. The program is designed to encourage small hospitals (fewer than 15 acute care beds) to become Critical Access Hospitals (CAHs), patterned after existing rural primary care hospitals. CAHs would not be required to have the same staffing complement as full-service acute care hospitals.

Because Medicare payments to small rural providers are a fraction of total Medicare payments, payment inequities could be corrected at little cost to Medicare. First,

there is a long-recognized bias toward urban hospitals in the payments that Medicare makes to hospitals shouldering a disproportionate share of low-income patients, known as disproportionate-share hospitals (DSH). And second, Medicare's geographic wage adjustment, which is supposed to account for differences in urban and rural labor rates, undercompensates many rural hospitals. Adjustments in these two areas would have a minimal financial impact, as small, low-volume rural hospitals are reimbursed for the higher per-unit cost they incur in providing care under prospective payment.

A vast majority of Medicare payments will continue to flow through the traditional fee-for-service system, at least for the near future. Those payments are constrained in the balanced budget legislation in order to achieve budget savings by reducing the deficit and/or saving the Medicare trust fund. For the immediate and near-term future, Medicare payment to rural providers will continue to be through the existing rules, as fewer than 10 percent of rural beneficiaries are covered under any other arrangement.

Payment changes in Medicare can affect rural hospitals more dramatically than urban hospitals because rural hospital operating margins are lower, sometimes even negative. Changes that lower Medicare outpatient payments could lower operating margins further. Shortfalls in Medicare revenues for rural hospitals include payments for home health, skilled nursing care, bad debt, and post-acute transfers. Home health payments were reduced by the BBA, and nursing home payments will bundle previously separate pay-

ment for therapists into a single facility rate. These changes may lead to home health agencies avoiding high-cost patients or reducing services per user. Moreover, rural nursing homes may have difficulty recruiting physical therapists as employees.

New prospective payment systems to replace cost-based payment systems for outpatient care, skilled nursing, home health care, and ambulance services will profoundly affect rural providers because rural hospitals are more dependent on Medicare reimbursement than urban hospitals.

Medicare payment-to-cost ratios reported by the American Hospital Association's annual survey show the initial impact of prospective payment under the BBA. Overall, Medicare payments for rural hospitals were 6.4 percent less than their costs in 1998, down from their 3.9-percent loss in 1997. In contrast, Medicare payments for large urban hospitals exceeded their costs by 4 percent (Atkinson). The downward turn in 1998 for rural hospitals and Medicare revenues reflects only the leading edge of changes due under the BBA and the extension of prospective payment.

New prospective payment systems to replace cost-based payment systems for outpatient care, skilled

nursing, home health care, and ambulance services will profoundly affect rural providers because rural hospitals are more dependent on Medicare reimbursement than urban hospitals. Medicare costs as a percentage of total hospital costs/patient expenses in 1999 accounted for 45 percent of rural patient care expenses, compared with 34 percent of urban hospitals (Wakefield). A rural provider infrastructure that is already thin could suffer under the expansion of prospective payment. Hospitals and other small rural providers are likely to lose revenue as the new prospective payment systems are implemented. However, balanced budget legislation (BBRA) may ameliorate some of these adverse effects. The BBRA protects hospitals up to 100 beds, or fully 82 percent of all rural hospitals, and BIPA provides some fiscal relief for certain hospitals and programs.

Rural Implications

Over the past three decades, health spending and hospital use increased more for the elderly than for persons under age 65. This greater spending may reflect legislative developments such as the fee-for-service nature of Medicare and/or changes in the health care delivery system such as the rapid growth in managed care enrollment among persons under age 65. Regardless, when the leading edge of the baby boom reaches age 65 in 2010, there will be increased needs in terms of health services, finances, housing, and social and psychological support for elders in poorer health.

Rural Medicare beneficiaries face greater income-related barriers to health care access. The rural elderly have lower per capita incomes and higher out-of-pocket

expenses than urban elderly beneficiaries. Rural beneficiaries have greater health care needs, use fewer preventive services, and are more ill at hospitalization. They are also burdened by fewer financing options and greater travel distances to health care, but the greatest barrier appears to be cost of care. Data from the 1995 Medicare Current Beneficiary Survey show that rural beneficiaries spend \$2,700 out of pocket (23 percent of their income) on annual medical expenses while urban beneficiaries spend \$2,540 (18 percent). Furthermore, the

Balanced budget legislation provides new opportunities in Medicare programs and reimbursements for rural areas, but even with these changes, rural areas will not achieve equity with urban areas.

threat of hospital closures, fewer medical professionals, and lack of specialty services can confound access problems for rural Medicare beneficiaries. Because Medicare payments represent a substantial portion of the total revenues for many rural providers, changes in the Medicare program introduced by the BBA will have a significant impact on the financial well-being of small rural hospitals and the delivery and use of services in rural areas.

Rural characteristics such as low population density, limited managed care experience, limited access to health care providers, and poorer beneficiary health discour-

age managed care options in rural areas. In many rural areas, the number of persons and population density are not sufficient to support competition among several plans. In areas with few providers, HMOs and other health plans may have problems getting providers to contract with them. Even in rural areas where managed care plans are offered, beneficiaries may face a more limited menu of benefits.

Critical issues in rural health care include access to services, payment to providers, quality of services, and choices for beneficiaries. Remote rural beneficiaries are less likely to have access to certain types of care—timely electrocardiograms, timely gall bladder removal, timely followup after hospital discharge, and screening mammograms (RUPRI, 2001a). Quality of care is an issue for rural communities, and such factors as size and scope of facility/practice vary dramatically among rural communities and affect health care availability.

Reductions in Medicare payments threaten the financial viability of many rural providers, especially home health agencies and skilled nursing facilities that might reduce services and/or be selective in who they see. Most of the savings in the BBA resulted from changing reimbursement paid through the traditional Medicare program to limiting annual payment increases and converting cost-based reimbursement to prospective payment systems. Rural health care providers are likely to look increasingly to consolidation of service networks, including participating in urban-based systems.

Medicare provides significant health insurance at relatively little or no cost, but it offers very limited coverage of long-term care ser-

vices—whether in the community or in a nursing home—and much of the cost is borne by older people and their families. The need for long-term care will most likely increase with the growth of the oldest segment of the older population. Rural communities are usually economically concentrated in a relatively small number of industrial sectors and are more limited in public sector capacity than urban areas, affecting the range of services available to older persons. Rural retirement areas have increasing populations and tax bases, putting them in a better position to meet the increasing demands for medical and social services than rural areas dependent on farming and mining.

Balanced budget legislation provides new opportunities in Medicare programs and reimbursements for rural areas, but even with these changes, rural areas will not achieve equity with urban areas. Studies of the impact of the BBA on rural health systems show low rural enrollment in M + C plans and lower reimbursement payments than in urban areas. Provisions of the BBRA and BIPA could help overcome some of the structural barriers to equity in rural health care systems. The challenge for rural health care providers, communities, and advocates is to be first in organizing and establishing rural-based health plans. Provisions in the balanced budget legislation for critical access hospitals, payment for services provided through telemedicine, and a grant program for network development support such work. The key is to support local development as opposed to large outside health plans (such as national companies that recently withdrew from rural markets under the new M + C experiment).

The most recent budget law—the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act (BIPA) of 2000—contains numerous provisions addressing the needs of rural health care providers. Yet, if significant shortfalls in Medicare funding occur, the underserved rural com-

munities and populations could easily fall through the cracks. Ensuring that underserved rural communities and older people receive public funding for these services is critical for improving the capacity of the rural health care system to meet the growing needs of rural elders and their families. **RA**

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Transition Year Brings Changes for Rural Development

Richard J. Reeder

The year 2001 was characterized by dramatic political, social, and economic transition. A new President and a new majority party in the Senate changed the Nation's domestic policy priorities, reducing income and estate taxes and expanding and reforming education programs. With the September 11 terrorist attack came a transition to a more security-minded society. The Federal Government responded with legislative and regulatory changes to improve "homeland security," with immediate effects on air travel in many rural areas. Meanwhile, the economy moved from slow economic growth to mild recession. While efforts to pass an economic stimulus package failed in 2001, Federal spending on the military, homeland security, and disaster assistance increased after September 11, as did funding for some important rural development programs. Farm and rural development legislation was reauthorized in May 2002.

This article describes the most important recent changes in Federal policy for rural develop-

ment. It examines Federal tax, spending, and regulatory policy. Tables cover most of the major programs affecting rural development, along with recent changes in funding and an indication of the types of places affected most by these programs, based on recent geographic fund allocations.

The farm legislation that reauthorized most rural development programs through fiscal year 2007 and created some new programs was enacted in May 2002 and is covered briefly at the end of this article.

Income and Estate Taxes Cut

The income tax cuts enacted in June 2001 are discussed in greater detail in the following article by Jim Monke and Ron Durst. Although not aimed at stimulating rural economic development, this legislation's importance for rural economies should not be understated. Income tax cuts increase disposable income and can stimulate the economy. In places where tax cuts provide relatively large increases in disposable income, local economies may particularly benefit.

As noted by Monke and Durst, people in rural areas may be more likely to benefit from provisions eliminating the marriage penalty, and farming areas will be major beneficiaries of the repeal of the estate tax. In addition, some poor rural communities may benefit from expanded eligibility for earned income tax credits and

refundable child tax credits, and from reductions in tax rates for low-income individuals. However, it is hard to pinpoint the effect of the legislation on different types of rural areas because of the complexity of the tax system and lack of appropriate data.

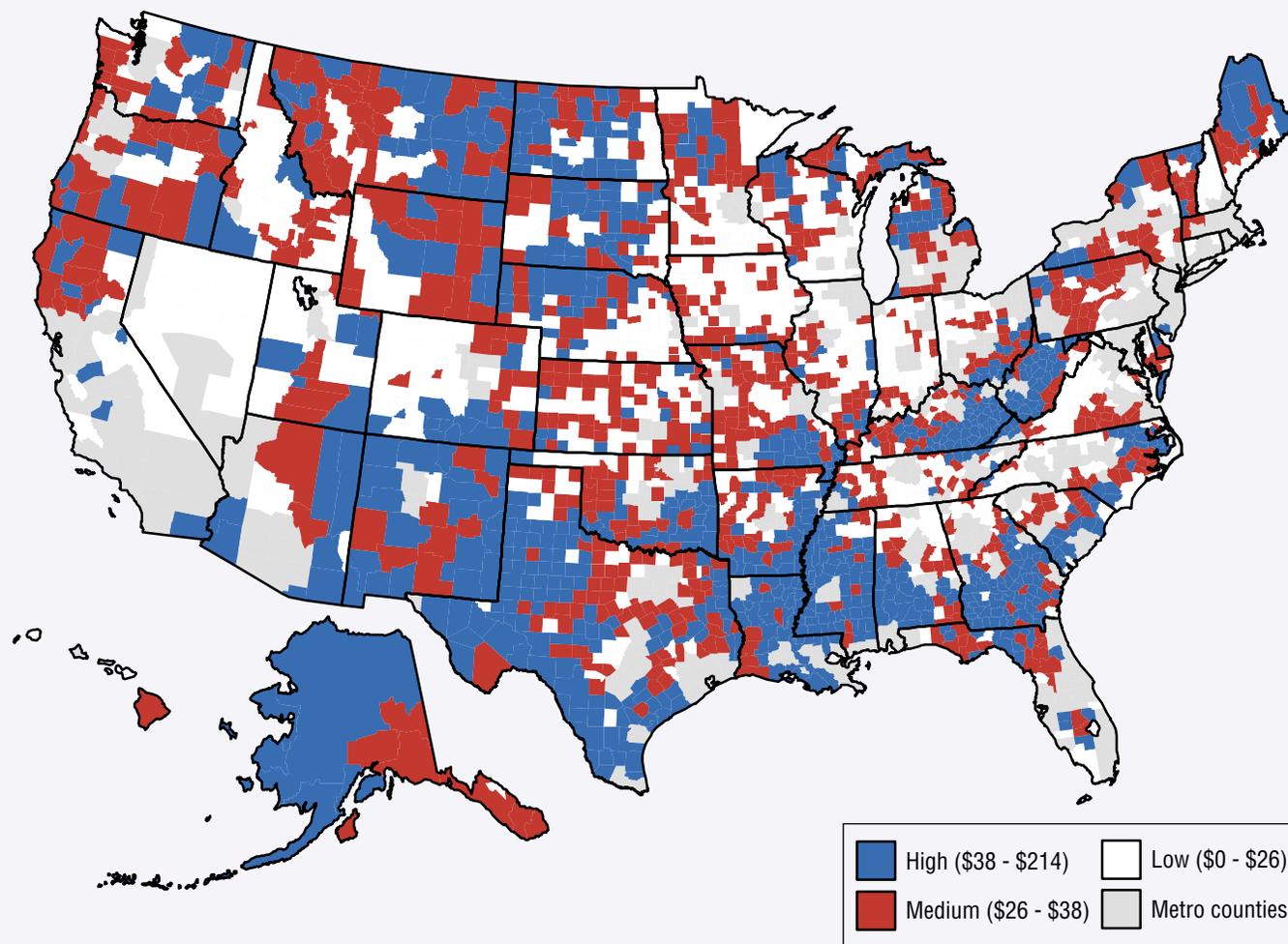
One potentially negative impact of the tax legislation is that it reduced surplus Federal tax revenues that might otherwise be used to pay for rural development programs. The cost of the tax cut to the Federal treasury was estimated at \$1.35 trillion over 10 years. At the time it was enacted, this left a considerable amount of surplus revenues available for other uses. Subsequent events—including the onset of the recession and the increased spending on education, defense, and homeland security after September 11—used up most surplus funds, raising the possibility that the Federal budget could end in deficit in fiscal 2002 and in subsequent years. This could jeopardize the future funding of some existing or proposed rural development programs.

Education Reform

In December 2001, Congress reformed and expanded the Nation's education programs, authorizing over \$26 billion in spending on elementary and secondary education in fiscal year 2002, an increase of \$8 billion from 2001. The actual increase in spending is only about half that much, as Congress appropriated

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Figure 1
Title 1 per capita education aid in nonmetro counties, fiscal year 1999
Low-income areas benefit; many are in the South



Source: Calculated by ERS using Federal Funds data from the Bureau of the Census.

only \$22 billion for 2002 (from here on, 2002 refers to fiscal year 2002 unless otherwise stated). Much of the increase is in Title I aid to schools with disadvantaged students. This funding increase, together with new rules designed to target funds more effectively to these disadvantaged students, could particularly benefit rural communities with high concentrations of these students, many of which are located in the South (fig. 1). New money is also provided for specific initiatives, such as charter schools,

school partnerships with colleges for math and science education, and \$1 billion per year for reading instruction.

Although schools receive more money and States and localities can use it more flexibly, the money comes with new responsibilities. Over the next 12 years, all students must become “proficient” in reading and math skills and disadvantaged students must improve relative to advantaged students. Annual tests will measure student progress, and teachers must

become qualified in their subjects. Meeting these worthwhile objectives could challenge some hard-pressed rural schools and localities. Schools that fail to meet these standards (after a trial period when they would first get additional funds and technical assistance) would be penalized.

Infrastructure Funding Mostly Increased

Funding for most major infrastructure programs either rose or remained constant in 2002

Table 1

Federal funding for selected infrastructure programs by fiscal year*Funding has increased or remained unchanged for most infrastructure programs in 2002*

Program	2001 actual	2002 estimate	Change ¹	Rural areas most affected by the program ²
	<i>Billion dollars</i>		<i>Percent</i>	
DOT Highway Planning and Construction Program	29.39	32.40	10	Totally rural and farming counties, and counties in the West
DOT Nonurbanized Area Formula Transit Grants Program	0.21	0.22	5	Rural, farm, and poverty States
DOT Airport Improvement	3.29	3.48	6	Rural and farm States, in the West
EPA Drinking Water SRF Capitalization Grants	0.82	0.85	3	Disadvantaged communities with small water systems
EPA Clean Water SRF Capitalization Grants	1.35	1.35	0	Urban States, in the Northeast
USDA Water and Waste Disposal Programs ³	1.41	1.56	10	Transfer-dependent, totally rural, and nonadjacent counties
USDA Community Facility Loan and Grant Program	0.53	0.69 ⁴	30	Totally rural, nonadjacent counties
EDA public works grants	0.28	0.25	-12	Mining and transfer-dependent counties
RUS telecommunication loans ⁵	0.50	0.50	0	Rural areas in general
RUS broadband grants	0.00	0.24	-----	Rural areas in general
RUS Distance Learning and Telemedicine Program	0.13	6	6	Rural areas in general
RUS Electric Loan Program	2.61	4.07	56	Rural areas in general

Note: DOT = U.S. Department of Transportation; EPA = U.S. Environmental Protection Agency; SRF = State Revolving Fund; RUS = Rural Utility Service, U.S. Department of Agriculture; EDA = Economic Development Administration, U.S. Department of Commerce.

¹Change is computed using actual amounts in millions of dollars, rather than rounded amounts shown in table.

²When possible, program receipts per capita were computed for fiscal year 1999 to indicate the types of counties or States affected most. County and State types are defined in the appendix of *Rural Conditions and Trends*, Vol. 11, No. 1, 2000.

³Includes both grants and loans, plus emergency community water assistance grants and solid waste management grants.

⁴Includes economic initiative impact grants, hazardous weather early warning grants, and rural community development initiative grants.

⁵Excludes Rural Telephone Bank loans.

⁶Loan levels are expected to increase, but they cannot be estimated reliably.

Source: Budget of the United States Government, Appendix, Fiscal Year 2003.

Table 2

Federal funding for selected business assistance programs by fiscal year¹*Most business loan guarantee programs are expected to have reduced loan activity in 2002*

Program	2001 actual	2002 estimate	Change	Rural areas most affected by the program ²
	<i>Billion dollars</i>		<i>Percent³</i>	
SBA 7(a) business loan guarantees	9.12	7.29 ⁴	-20 ⁴	Federal lands counties and counties in the West
SBA Certified Development Company guarantees (section 504)	2.27	5	5	Federal lands counties and counties in the West
SBA disaster loans	0.87	0.59 ⁶	-30 ⁶	Places experiencing disasters
SBA New Markets Venture Capital (NMVC)	0	0.15	---	High-poverty and low-income areas
Treasury Department Community Development Financial Institutions (CDFI)	0.11	0.08	-28	Low-income and minority areas
RBS Business and Industry loan guarantees (B&I)	1.09	1.15	5	Federal lands counties and counties in the West
RBS Intermediary Relending Program	0.04	0.04	0	Totally rural, farming, services, Federal lands, and poverty counties and counties in the West
RBS Rural Business Enterprise Grants (RBEG)	0.05	0.04	-16	Totally rural and farming counties and counties in the South ⁷
EDA Economic Adjustment Grants	0.05	0.04	-18	Mining and government counties

Note: SBA = Small Business Administration; RBS = Rural Business-Cooperative Service, U.S. Department of Agriculture; EDA = Economic Development Administration, U.S. Department of Commerce.

¹Budget authority used for grant programs; projected loan levels (obligations or program level) used for loan programs. In some cases, budget authority may be falling at the same time that projected loan obligations are rising (or vice versa due to subsidy use changes). This can happen for any number of reasons, including making use of greater efficiencies, reducing subsidies, charging fees, and using unobligated balances of funds from prior years.

²When possible, program receipts per capita were computed for fiscal year 1999 to indicate the types of counties or States affected most. County and State types are defined in the appendix of *Rural Conditions and Trends*, Vol. 11, No. 1, 2000.

³Calculated on actual expenditures and estimated expenditures. Does not correspond to table entries due to rounding.

⁴Excludes \$4.5 billion in terrorist response loans in 2002.

⁵The fiscal 2002 amounts are impossible to estimate with any degree of reliability.

⁶Excludes \$324 million in terrorist response loans in 2002.

⁷Also, farming, nonspecialized, Federal lands, and transfer-dependent counties were particularly affected by this program.

Source: Budget of the United States, Appendix, Fiscal Year 2003.

(table 1). For example, highway funds rose by \$3 billion, from \$29.4 billion in 2001 to \$32.4 billion in 2002, and funding for most of the transit programs, including the nonurbanized area formula grant program, also rose. In addition, about \$1 billion from excess trust fund revenues (called revenue-alignment budget authority or RABA funds) was earmarked to specific transportation infrastructure projects. This includes \$247 million for the Transportation and Community and System Preservation program and \$334 million for the borders and corridors programs.

The Environmental Protection Agency's (EPA) main infrastructure programs were funded at about the same levels as in 2001, though the Safe Drinking Water Program got a \$25-million increase to \$850 million. In addition, \$1.1 billion went to State and tribal categorical grants, with much earmarked for specific water projects. This \$1.1 billion also includes \$40 million for rural Alaska and \$75 million for the U.S.-Mexico border area.

Rural areas should benefit from increased rural electric loans from USDA's Rural Utilities Service (RUS) and from \$24 million in RUS grants for broadband telecommunications (table 1). In addition, rural communities will benefit from increased loans and grants from USDA's community facilities programs, funded at \$693 million in 2002, up from \$535 million in 2001.

Funding dropped for the public works program of the Economic Development Administration (EDA)—from \$286 million to \$250 million—and for the technology opportunities program of the National Telecommunications and Information Administration (NTIA)—from \$45 million to \$15

million. For the latter program, the funding is already committed for continuing projects and no new projects will be funded. For each of these Commerce Department programs, the 2002 funding reduction followed a significant funding boost in 2001.

Business Assistance Programs Did Not Fare As Well

Interestingly, Federal funding was reduced for many business assistance programs at a time when the economy was moving into recession (table 2). Funding was cut in 2002 for the group of newly established programs operated by the Small Business Administration (SBA) as part of its New Markets initiative. This includes the Business LINK mentorship/technical assistance program, the Program for Investment in Microenterprise (PRIME), and HUBZones. Funding for one-stop-capital-shops was ended. In addition, funding was cut for the Community Development Financial Institutions (CDFI) program, which assists banks and other institutions that finance private sector development in underserved areas. EDA's main business assistance programs also received budget cuts for 2002. This includes economic adjustment grants, reduced from \$50 to \$41 million. EDA's defense adjustment assistance (\$31 million in 2001) was eliminated because the time limit expired for the last military base closures eligible to receive such assistance. While these cutbacks mainly affect distressed areas, the estimated \$2-billion reduction in SBA's 7(a) regular business loan guarantee program in 2002 affects rural and urban areas nationwide.

Most of USDA's business assistance programs, operated by the Rural Business-Cooperative Service

(RBS), did not receive budget cuts. Funding for rural business opportunity grants fell from \$8 million to \$5 million in 2002, and rural business enterprise grants dropped by less than \$1 million. However, funding either increased slightly or remained constant for rural cooperative development grants, rural economic development loans, and the intermediary relending program (table 2). RBS's business and industry loan guarantees, which are to a certain extent demand-driven, are expected to rise from \$1.09 billion in 2001 to \$1.15 billion in 2002.

Less Change Expected in Housing and General Assistance

Assistance will rise for most of USDA's main housing programs. Funding increased only slightly, from \$686 million in 2001 to \$701 million in 2002, for USDA's rental assistance program, run by the Rural Housing Service (RHS) (table 3). Funding also increased for the much smaller very low-income housing repair loan program, rising from \$31 million to \$46 million, and RHS's mutual/self-help grants will rise from \$18 million to \$56 million. An increase in activity may also occur in RHS's section 502 single-family housing loan guarantee program, but this is another demand-driven program and loan levels are difficult to estimate for 2002. Similar demand-driven uncertainties may occur in the much larger home mortgage and loan programs operated by the Federal Housing Administration (FHA) and the Department of Veterans Affairs. Meanwhile, the Department of Housing and Urban Development's (HUD) subsidized housing assistance should rise about 6 percent, and HUD's home investment assistance should rise 8 percent.

Table 3

Federal funding for selected housing programs by fiscal year*The largest percentage increase is expected for USDA's single-family guaranteed loan program*

Program	2001 actual	2002 estimate	Change	Rural areas most affected by the program ¹
	<i>Billion dollars</i>		<i>Percent²</i>	
USDA/RHS:				
Single-family (sec. 502) direct loans	1.07	1.08 ³	1	West, retirement and Federal lands counties
Guarantees	2.34	3.13 ³	34 ³	Retirement and Federal lands counties, in the Midwest and West
Multifamily (sec. 515)	0.12	0.14 ³	21 ³	West, South, mining, poverty, commuting, retirement, Federal lands, and adjacent counties
Rental assistance	0.69	0.70	1	Totally rural, transfer- dependent, and poverty counties
VA:				
Loan guarantees	31.13	4	4	West, government, and Federal lands counties
HUD:				
FHA single-family mortgage insurance	107.45	4	4	West, South, retirement, and nonadjacent counties
Subsidized housing assistance ⁵	20.94	22.10	6	West, urbanized adjacent, and poverty counties
Home Investment (HOME)	1.71	1.84	8	Northeast, urbanized adjacent, and government counties

Note: HUD = Housing and Urban Development; RHS = Rural Housing Service, USDA; VA = U.S. Department of Veterans Affairs; FHA = Federal Housing Administration.

¹When possible, program receipts per capita were computed for fiscal year 1999 to indicate the types of counties or States affected most. County and State types are defined in the appendix of *Rural Conditions and Trends*, Vol. 11, No. 1, 2000.

²Calculated on the actual and estimated expenditures. Does not correspond to the table entries due to rounding.

³These estimates may overstate the increase in 2002. For example, last year's budget estimated increases of over 30 percent for these two programs; the actual increases were closer to 10 percent.

⁴The fiscal 2002 amounts are impossible to estimate with any degree of reliability.

⁵Includes Section 8 low-income housing assistance.

Source: Budget of the United States, Appendix, Fiscal Year 2003.

Of the main general assistance programs important for rural development, funding changed little for HUD's State/small cities portion of the community development block grant program and section 108 loan

guarantee program, or for USDA's extension activities run by the Cooperative State Research, Education and Extension Service (table 4). HUD's \$25-million rural housing and economic develop-

ment program is also funded at the same level as in 2001. However, funding for the Bureau of Indian Affairs programs will increase 13 percent in 2002 (table 4), and even excluding supplemental funding for

the September 11 crisis response, disaster assistance from the Federal Emergency Management Agency (FEMA) may increase, depending on what disasters occur in the remainder of the year. In contrast, funding for EDA's adjustment programs (which can be viewed both as business and general assistance) was reduced, while funding for EDA's planning and technical assistance programs was unchanged.

Funding for EPA's brownfields redevelopment program increased \$6 million to \$98 million in 2002. New legislation authorizes EPA to spend up to \$200 million per year on the program through 2006, plus \$50 million per year for State and tribal response programs. USDA's Fund for Rural America, which provided flexible money for rural development programs and research, was prohibited from new spending in 2002 and was later repealed as part of the 2002 farm legislation.

Regional Development Programs Gain Momentum

Last year's *Rural America* article on rural development policy (Vol. 16, No. 2) reported on the emergence of the Delta Regional Authority (DRA) and the Denali Commission, which joined the Appalachian Regional Commission (ARC) as large-scale regional development authorities. Both of these new authorities made progress in the last year. The DRA, which covers the lower Mississippi River region, is just beginning operations.

Table 4

Federal funding for selected general assistance programs by fiscal year¹

Little change in funding for most of the main general assistance programs in 2002

Program	2001 actual	2002 estimate	Change	Rural areas most affected by the program ²
	<i>Billion dollars</i>		<i>Percent</i>	
HUD State/small cities community development block grants	1.27	1.30	2	Small towns and rural areas, particularly in poverty States.
HUD section 108 loan guarantees	0.34	---	---	Same as above
EDA adjustment assistance, includes economic and defense adjustment, planning, and technical assistance	0.11	0.07	-35 ⁴	Low-income areas, varies from year to year ⁵
FEMA disaster relief ⁶	3.17 ⁶	---	---	Earthquake,- storm-, floodprone areas
USDA extension activities	0.43	0.44	2	Small towns and rural areas
BIA Native American assistance programs	1.92	2.18	13	Indian reservations

Note: HUD = Housing and Urban Development; EDA = Economic Development Administration; FEMA = Federal Emergency Management Agency; BIA = Bureau of Indian Affairs.

¹Unless otherwise indicated, new budget authority is used for funding levels.

²When possible, program receipts per capita were computed for fiscal year 1999 to indicate the types of counties or States affected most. County and State types are defined in the appendix of *Rural Conditions and Trends*, Vol. 11, No. 1, 2000.

³The fiscal year 2002 amounts are impossible to estimate with any accuracy.

⁴Most of the decline (\$31 million) was from the elimination of defense adjustment aid.

⁵In fiscal year 1999, these programs provided the most assistance, per capita, to mining and government-dependent counties and to those adjacent to metro areas. Nonmetro areas got higher per capita payments in the Northeast and West than in other regions.

⁶FEMA funding amounts are for new obligations and exclude terrorism response aid.

Source: Budget of the United States, Appendix, Fiscal Year 2003.

It now has \$30 million (including \$20 million carried over from 2001) to work with in 2002. The Denali Commission, which covers Alaska and began in 1998, is beginning to pick up steam. In 2002, it has a direct appropriation of \$30 million, plus \$25 million in earmarked funding from other agencies (including \$15 million from USDA's RUS to fund rural power system upgrades and \$10 million in Health and Human Services funding for job training). Denali will also get \$11 million from the Trans-Alaska Pipeline Liability Fund. Meanwhile, funds for the ARC's highway program (funded through the Department of Transportation) will rise significantly in 2002, while funds for ARC's nonhighway programs will remain at \$78 million.

Some other distressed rural regions may soon benefit from similar programs. The 2002 farm legislation authorizes the establishment of a Northern Great Plains Regional Authority covering 399 counties in 5 States (Iowa, Minnesota, Nebraska, North Dakota, and South Dakota). In addition, 2002 appropriations included \$250,000 for the University of Georgia to undertake a study of the need for a similar regional authority for the crescent-shaped portion of the Black Belt in the Southeast.

Several programs that target assistance to distressed communities, including in some cases multi-county regions, have recently designated new places to receive assistance, including 12 rural renewal communities (RCs), 2 rural empowerment zones (EZs), and 20 new resource conservation and development (RC&D) areas in 16 States and American Samoa (fig. 2). The 2002 farm legislation authorizes new programs to help small-scale

About the Federal Funding Tables

These tables contain budgetary information from the Budget of the United States and the Budget Appendix for fiscal year 2002, and from summary information obtained directly from USDA and other Federal agencies. Unless otherwise indicated, the amounts cited refer to obligations of budget authority or new loans or loan guarantees. The amount for fiscal year 2001 is the actual amount, while the amount for fiscal year 2002 is estimated. These 2002 estimates can be inaccurate at times, particularly for credit programs. The last column, indicating the types of areas most affected by the program, is based on our analysis of the geographic distribution of funds in fiscal year 1999, using the Consolidated Federal Funds Data from the Census Bureau. Note, however, that a program's geographic distribution can change from year to year.

regional entities plan and implement development in rural areas.

Competition for HUD's new renewal community program took place in 2001, and HUD announced its 40 designated RCs in January 2002. The 12 rural RCs, which receive various tax incentives, were Green-Sumter Counties, AL; southern Alabama (9 counties); Orange Cove, CA; Parlier, CA; northern Louisiana (14 parishes); central Louisiana (11 parishes); west-central Mississippi (13 counties); eastern Kentucky (4 counties); El Paso County, TX; Turtle Mountain Band, ND; Jamestown, NY; and Burlington, VT.

USDA's two new rural empowerment zones will get tax incentives, but so far, unlike the other eight rural empowerment zones, no grants have been awarded them.

They are Aroostook County in Maine and the Futuro EZ (four counties along the middle Rio Grande in Texas).

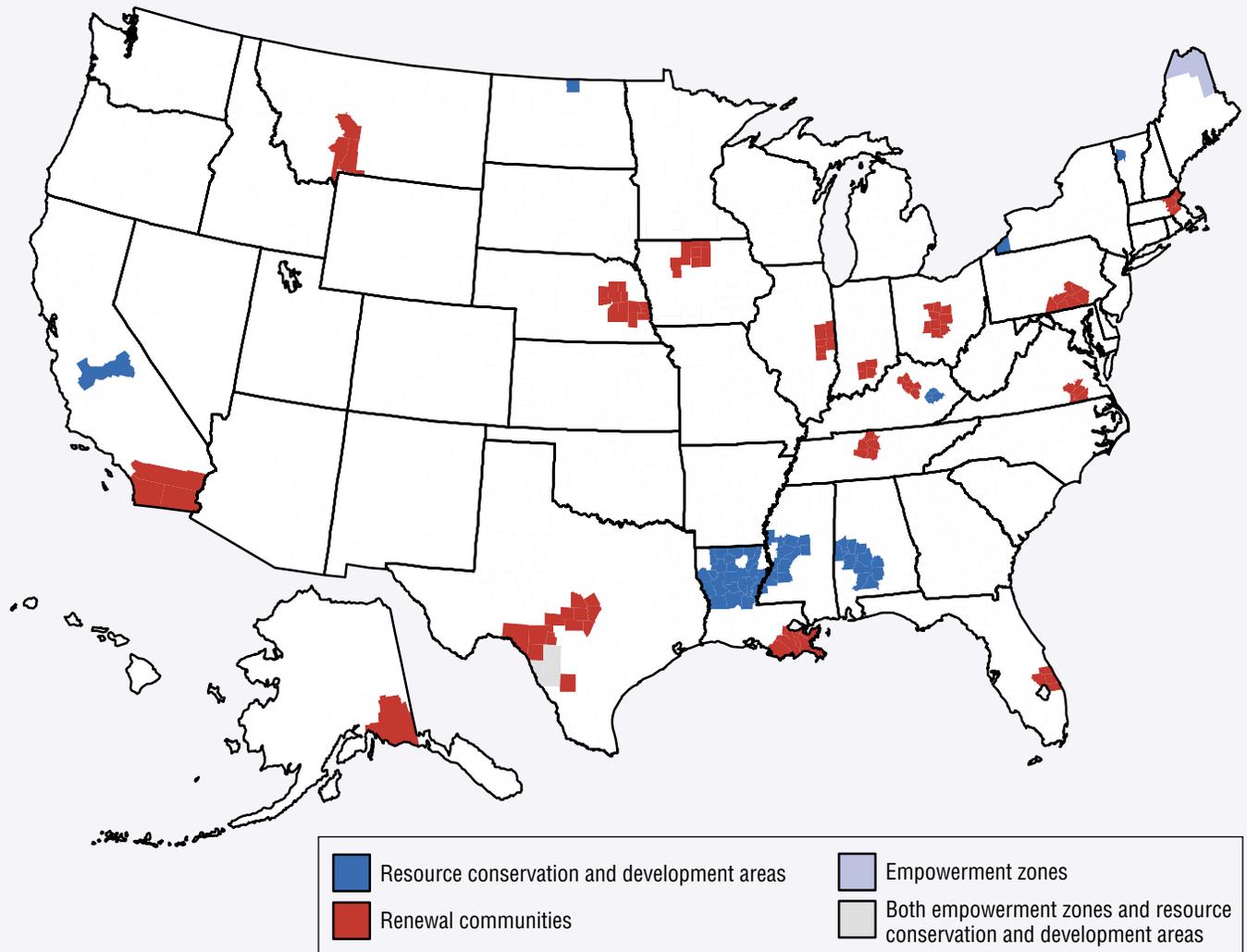
The 20 new RC&D areas receive technical assistance from USDA's Resource Conservation and Development program, operated by the Natural Resources Conservation Service. This brings the total number of RC&Ds to 368. The designated areas cover about 85 percent of U.S. counties and 77 percent of U.S. population.

Rural Air Travel Affected by New Security Rules

Following the September 11 attack, air travel was halted nationwide for a short period of time, then it resumed with new requirements aimed at making air travel more secure. With attention focused on the larger hubs in the air transportation system, the challenges these new restrictions posed to small regional and general aviation airports garnered less national attention. In fact, their challenge is in many ways more difficult, because they typically lack economies of scale and the financial resources to meet the new requirements. In addition, some rural airports experienced significant cutbacks in regular air service when principal airlines cut service.

Congressional action is helping to alleviate some of these problems. In addition to federalizing baggage inspection, Congress has allowed grant funding from the Airport Improvement Program (AIP) to be used for security activities mandated by the new security rules, with no local match funds required. In addition, some special provisions help smaller airports. For example, some smaller (nonprimary) airports can now use AIP funding to meet debt service payments to avoid

Figure 2
Newly designated rural places receiving special assistance
Most regions received assistance



Source: Economic Research Service.

default on the debt. A new small community air service development program was funded at \$20 million (part of the increase in funding for AIP), and the essential air service program that subsidizes air service in some rural areas got a funding boost from \$50 million in 2001 to \$113 million in 2002.

Other Regulatory Changes

Aside from security issues, the Bush administration has generally argued for less Federal regulation, providing States, localities, and the private market with more flexibility. This is evident in policy changes associated with economic regulation (antitrust and corporate mergers), electric regulation, and environmental regulation. For example, the Army Corp of Engineers announced in January 2002 that it

is revising 11 “general permits” that allow construction on wetlands. The new permits would provide more flexibility to developers and leave local and State governments with more responsibility to see that wetlands are protected. Changes in EPA’s main water infrastructure programs allow each State to shift funding between the Clean Water and the Drinking Water programs to address the most pressing priorities.

Not all recent regulatory changes have moved toward less Federal regulation. For instance, in lifting the moratorium on railroad mergers in June 2001, the Surface Transportation Board issued new, stricter rules for future railroad mergers. Another example—one of the most significant regulatory decisions during 2001 for rural development—was EPA's decision to uphold its earlier proposal to tighten restrictions on arsenic in drinking water. The new rule reduces the allowable levels by a factor of 5 (from 50 parts per billion to 10 parts per billion). EPA requires compliance by 2006 and plans to undertake research and development of more cost-effective technologies to help small water systems comply with the new standards. The increased rural water system grants authorized by the 2002 farm legislation would help rural communities meet the costs of complying with this new water standard.

Another important regulatory issue for rural development—one that still needs to be resolved—concerns rural consultation in transportation (highway) planning. The Transportation Equity Act for the 21st Century contained provi-

sions requiring rural local officials' input into the State transportation planning decisions. However, the Department of Transportation's efforts to issue regulations to implement these TEA-21 provisions have been caught up in controversy over regulations concerning environmental planning. This has left States without clear guidelines on how to consult with rural communities when making important planning decisions.

The 2002 Farm Legislation

The Farm Security and Rural Investment Act of 2002 (P.L. 107-171) contained many provisions authorizing new or expanded rural development programs. With regard to infrastructure, several new USDA programs were authorized to improve rural water and waste disposal systems, and \$360 million was authorized to reduce the backlog of pending applications for water and waste disposal and community water system grant applications. The act also included various telecommunications provisions, covering broadband, telework, local television broadcasting, and e-commerce. With regard to business development, a new program would provide equity

capital and operational assistance to small businesses, and the level of assistance to value-added agriculture would be increased. Various new general assistance programs were authorized, covering a wide range of activities, including fire fighters and emergency personnel, community facilities grants benefiting rural seniors and Tribal colleges, and a program to preserve historic barns. In addition, several new programs would promote regional planning and comprehensive, strategic development. These include the Rural Strategic Investment Program, the Multijurisdictional Regional Planning Organizations program, and the Northern Great Plains Regional Authority. However, the Fund for Rural America was repealed.

If Congress appropriates funding for these programs, most authorized over the next 5 years, they could have a significant impact on rural development. For more information on these and other provisions in the 2002 farm legislation, see the ERS web page covering the legislation (<http://www.ers.usda.gov/Features/FarmBill/>). **RA**

Numerous Changes Lower Income and Estate Taxes

James Monke
Ron Durst

The Economic Growth and Tax Relief Reconciliation Act of 2001, P.L. 107-16, was signed on June 7, 2001, and makes some of the most significant changes to the tax code since the mid-1980s. Its 10-year budget cost for all taxpayers was estimated at \$1.35 trillion. While the law does not include provisions specifically targeted to rural areas, most of the law's provisions apply to people living in rural areas as general taxpayers. About 88 percent of all individual taxpayers will benefit from one or more of the income tax reductions.

The act gradually reduces Federal income taxes in several ways over a 10-year phase-in period, with the largest cut being an across-the-board reduction in income tax rates. The law also increases income tax benefits for families with children, and addresses other issues such as the marriage penalty, education incentives, and pension and IRA provisions. Federal estate taxes will be reduced and eventually repealed, a cut that was particularly promoted to help

farmers and small businesses. While some tax cuts began in 2001, many reductions are implemented gradually and some provisions do not begin until later years. Furthermore, without future action, the law will expire in 2011 and the tax code will revert to what it was before the 2001 Act.

Federal Income Taxes

Before the new law, 23 million rural taxpayers paid \$88 billion in Federal income taxes in 1998. This compares with \$695 billion in such taxes paid by 101 million urban taxpayers. The average Federal income tax bill for rural tax filers was \$3,800, and their average adjusted gross income (AGI) was \$32,500. This compares with \$6,900 in average income taxes for urban filers on an average AGI of \$46,000. Thus, the average rural Federal income tax rate (12 percent) was lower than the urban rate (15 percent), reflecting the progressive tax rate system that imposes higher marginal tax rates on higher incomes.

Tax bracket reduction. Before the new law, ordinary taxable income (excluding capital gains) could be taxed in five progressive brackets—the 15-, 28-, 31-, 36- and 39.6-percent tax brackets. Higher proportions of rural than urban taxpayers are in the lower brackets. In 1998, about 23 percent of rural tax filers ended up paying no Federal income tax, compared with 18 percent of urban tax filers. About 61 percent of rural residents were in

the 15-percent tax bracket, compared with 54 percent of urban residents. By contrast, 14 percent of rural residents were in the 28-percent bracket compared with 23 percent of urban taxpayers. Fewer than 2 percent of rural taxpayers paid more than a 28-percent marginal rate, compared with nearly 5 percent of urban taxpayers (fig. 1).

The new law creates a new 10-percent income tax bracket for the first \$12,000 of taxable income on a joint return (\$6,000 if single, \$10,000 if head of household). This new bracket was carved out of the 15-percent bracket and benefits everyone with taxable income. Tax rates also are reduced for the other brackets. The reductions are gradual and become fully effective in 2006 when the rates will be 25 (from 28), 28 (from 31), 33 (from 36) and 35 (from 39.6) percent. The rate for the 15-percent bracket remains unchanged.

Marriage penalty relief. The so-called marriage penalty arises when the tax bill for a married couple filing a joint return is greater than if paid as two unmarried singles. This generally affects two-earner households and becomes more noticeable if the couple's income is split nearly evenly. The three most important aspects of the tax code that contribute to the marriage penalty are the standard deduction, tax rate schedules, and earned income tax credit.

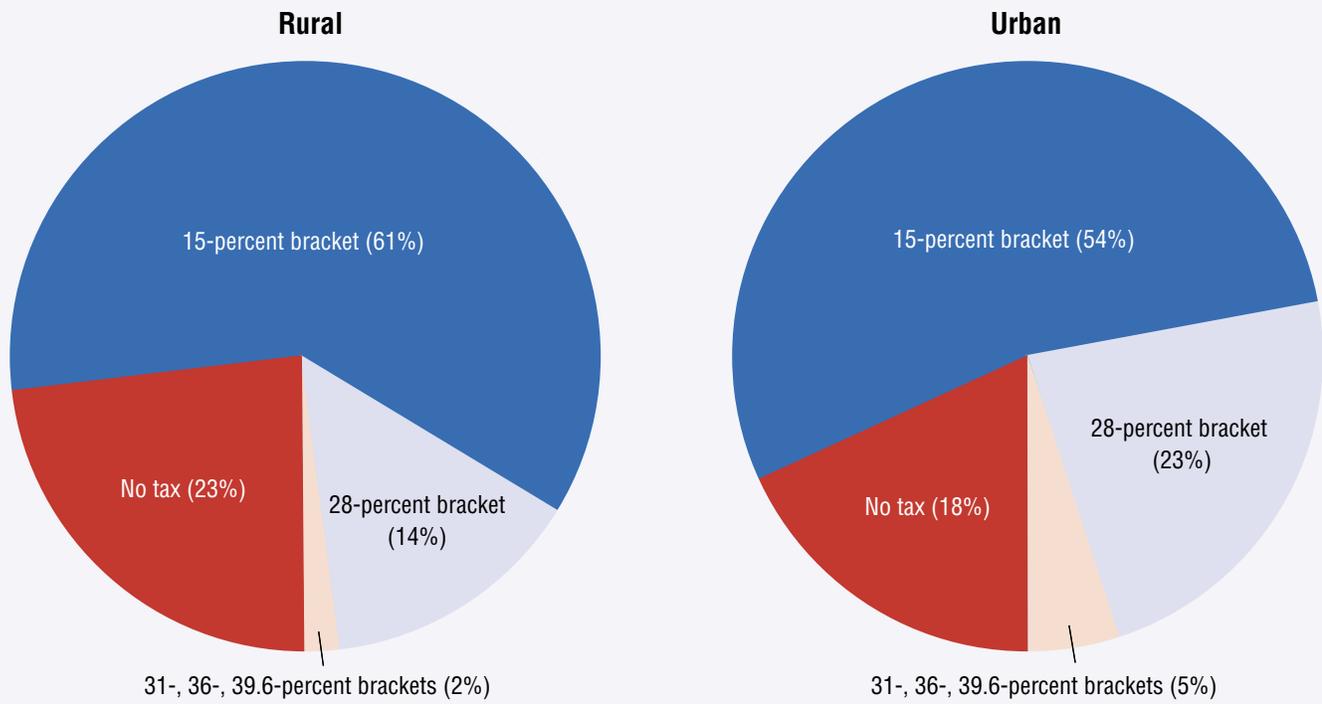
Congressional Budget Office reports indicate that the marriage penalty affected 43 percent of mar-

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Figure 1

Incidence of marginal Federal income tax brackets for rural and urban households, 1998

A greater share of rural households are taxed in the 15-percent bracket or owe no tax



Source: USDA/ERS, based on 1998 IRS data.

ried couples in 1999. Rural residents are more likely to be affected since a larger share file joint tax returns (45 percent compared with 39 percent for urban) and use the standard deduction.

Under prior law, the standard deduction and the amount taxed in various brackets for joint returns were less than twice the amounts allowed for single filers (actually about 67 percent greater than the single's amounts). The new law expands the standard deduction and the 15-percent tax bracket for married couples. Beginning in 2005, these amounts are increased gradually and eventually reach double the amount for single filers. Such increases help all married couples whether or not they previously suffered the marriage penalty. The law also increases the point at

which the earned income credit begins to be phased out for joint returns.

Child tax credit. The new law increases the child tax credit from \$500 to \$600 in 2001, \$700 in 2005, \$800 in 2009, and \$1,000 in 2010. The child credit begins to be phased out if household AGI exceeds \$110,000 for couples or \$75,000 for singles or heads of household. The new law also makes the credit refundable for more families. Under the new law, the child credit is refundable for all families in an amount up to 10 percent of their income over \$10,000 (15 percent beginning in 2005). In 1998, the first year this credit was available and the only year with rural data, about 20 percent of all taxpayers claimed the child credit, with no significant difference

between rural and urban households.

Retirement. Annual contribution limits for Individual Retirement Accounts (IRAs) rise under the act from their long-time level (\$2,000) to \$3,000 in 2002, \$4,000 in 2005, and \$5,000 in 2008. Contribution limits on other types of retirement accounts also increase, and greater flexibility and portability are allowed. For lower income taxpayers, the law creates a new nonrefundable tax credit for contributions to IRAs and qualified retirement plans. For example, on joint returns with adjusted gross income under \$30,000, individuals will receive a 50-percent tax credit on contributions up to \$2,000. Smaller 20- and 10-percent credits are available at higher incomes until the credit becomes zero (on

joint returns, the credit is zero when AGI exceeds \$50,000). The credit applies to tax years 2002-2006.

Education. The tax act expands benefits for education in several ways. It increases the annual contribution limit for Education Savings Accounts (“Education IRA”) from \$500 to \$2,000 and makes the beginning of the phaseout point for joint returns (\$190,000) double that of single returns. It now also allows such accounts to be used for elementary and secondary school expenses, in addition to higher education fees. Withdrawals from Education Savings Accounts are made easier when done in the same year as using the Hope Scholarship credit or Lifetime Learning credit. While contributions to Education Savings Accounts are not tax deductible, earnings in the account are tax-exempt if used for qualified expenses.

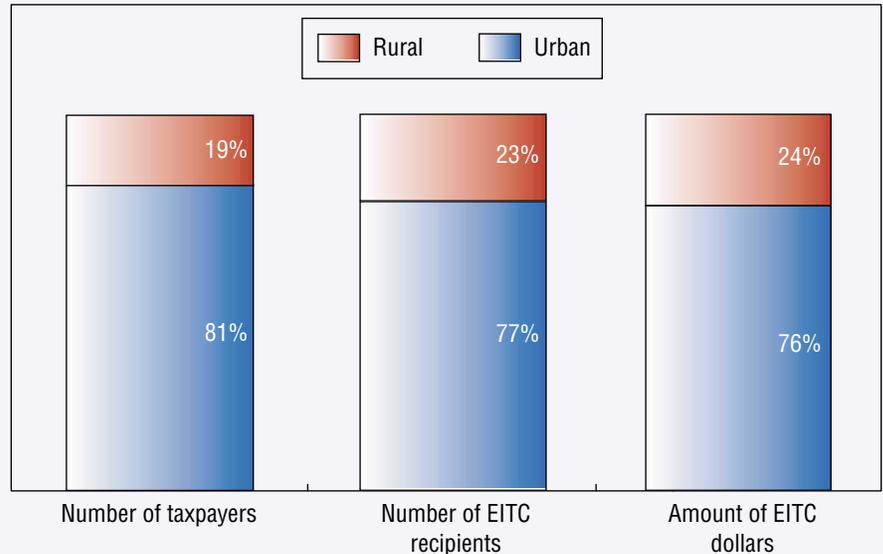
The ability to deduct student loan interest grows by removing the restriction that limited the deduction to only the first 5 years of loan repayments. The phaseout ranges for student loan interest deductions were raised and now begin when AGI exceeds \$50,000 for singles and \$100,000 for couples.

A new above-the-line deduction for higher educational expenses is available, but it expires after 2005. Beginning in 2002, up to \$3,000 of education expenses may be deducted if AGI is less than \$130,000 for couples (\$65,000 for singles). Expenses used for this deduction cannot be used for other education tax incentives. While education tax credits have fixed values (\$1,500 for Hope Scholarship credit, \$1,000 for Lifetime Learning credit) and separate income limits, the value of the new deduction will depend on the taxpayer’s marginal tax rate.

Figure 2

Distribution of earned income tax credit (EITC) for rural and urban households, 1998

Compared with the base population, the share of EITC benefits is greater in rural areas



Source: USDA, Economic Research Service, based on 1998 IRS data.

Only about 4 percent of all taxpayers used the education credits and 3 percent used the student loan interest deduction in the first year that they were available in 1998, with little difference between rural and urban areas.

Earned Income Tax Credit. The earned income tax credit (EITC) is the Federal Government’s largest program designed to aid working poor families. In 1998, the program provided 19.7 million low-income taxpayers and their families with over \$31.6 billion in refundable tax credits. One out of every 5 rural taxpayers or about 4.5 million received a credit, which averaged \$1,674. A smaller share of urban residents, about 15 percent, received the EITC. Thus, compared with the overall ratio of rural to urban taxpayers, EITC benefits are slightly skewed toward rural areas (fig. 2). While a small portion of the credit is used to offset Federal

income and other taxes, most of the credit is refunded to taxpayers when they file their Federal income tax return.

The EITC is available to working families that generally earn less than 200 percent of the poverty level. While regular tax liability rises with increasing income, EITC recipients are eligible for an increased tax credit as earned income increases up to a maximum dollar amount. The maximum credit is available over a \$2,000-to-\$3,000 range of income but then is phased out as earned income increases beyond this amount. The EITC reduces their net income tax liability and may even provide a cash refund since the credit increases at a faster rate than regular income tax liability before the maximum credit is reached.

The 2001 Tax Act modified the EITC benefit formula for married couples, instituting a separate bene-

fit schedule for them. This is accomplished by extending the beginning point of the phaseout range by \$1,000 in 2002-2004, \$2,000 in 2005-2007, and \$3,000 in 2008 and thereafter. This will increase both the number of low-income married couples eligible for the credit and the average amount of the credit for all eligible married couples with earned income above the point at which benefits begin to be phased out (\$13,090 in 2001). Once the changes are fully phased in, the EITC amount will increase by over \$600 for those married

couples in the phaseout range for the credit.

Federal Estate Tax

While only about 2 percent of all estates end up owing any Federal estate taxes, a larger share of farmers and other rural business owners do. Over the next decade, the law makes a number of changes that will greatly reduce the number of estates affected by the Federal estate tax. These changes include an increase in the amount of property exempted from tax by the unified credit (from \$675,000 in

2001 to \$3.5 million by 2009) and a reduction in the top estate tax rates from 55 to 45 percent. The estate tax is completely repealed in 2010.

While these changes will reduce the amount of Federal estate taxes owed, the most dramatic effect during the phaseout period will be the sharp drop in the number of estates required to file a return. Thus, as the phaseout progresses, more estates will be exempted from the administrative costs as well as the tax obligation associated with the Federal estate tax. **RA**

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Nonmetro Earnings Continue Upward

Robert M. Gibbs
Timothy S. Parker

The average weekly earnings of nonmetro wage and salary workers continued to rise through 2001, according to data from the Current Population Survey (CPS). Although the increase from 2000 was slightly smaller than in preceding years, nonmetro earnings climbed to \$527 a week, an 11-percent gain since 1996 after adjusting for inflation. Metro earnings show a similar increase (11.6 percent).

Earnings have grown steadily among all major demographic groups since 1996, although less-educated workers experienced smaller gains than college graduates. Despite earlier concerns about the effect of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) on the labor market for less-skilled workers, the groups most likely to be affected by welfare reform experienced average or above-average earnings growth and a reduction in low-wage employment.

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Nonmetro Earnings Growth Slower in 2001

The pace of earnings growth for nonmetro workers has ebbed slightly since 2000. Between 1996 and 2000 (the period immediately following the latest CPS redesign), earnings grew at an annualized rate of 2.4 percent after adjusting for inflation (table 1). Growth slowed to 1.3 percent between 2000 and 2001, largely in response to macroeconomic conditions marked by rising unemployment and sluggish growth in output. Nonmetro average weekly earnings were 21 percent lower than metro earnings in both 1996 and 2001.

Blacks and Women Make Disproportionate Earnings Gains

Earnings rose among nonmetro workers in all major education, sex, and race/ethnic categories between 1996 and 2001 (fig. 1). Earnings growth was faster for nonmetro Blacks (15.7 percent) than for Hispanics (8 percent) or Whites (10.9 percent), and faster for women (13.6 percent) than for men (10.3 percent). Meanwhile, the earnings gap between nonmetro workers with the highest and lowest educational attainment continued to widen. Inflation-adjusted earnings increased 13.5 percent (1996-2001) for college graduates and only 7.1 percent for those

Table 1
Average weekly earnings by metro status
Nonmetro and metro earnings growth was lower in 2001

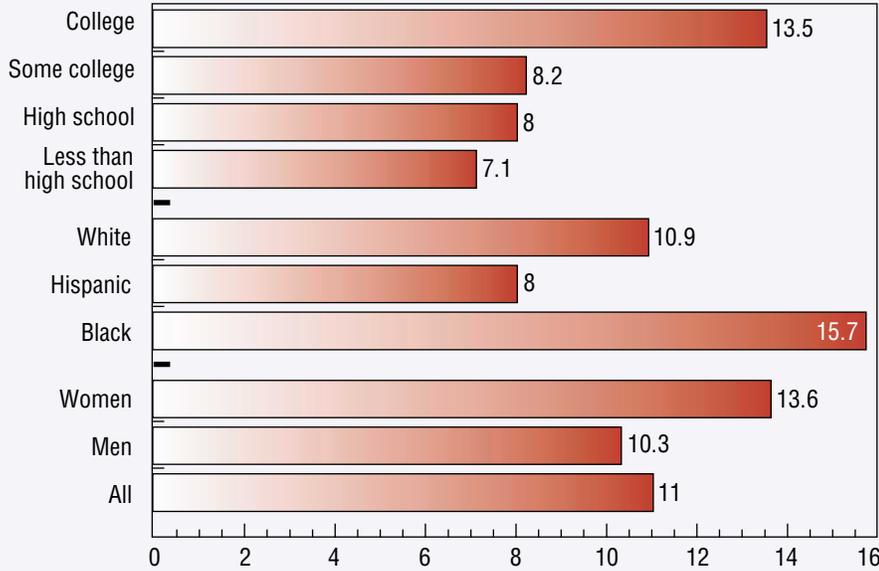
	Nonmetro	Metro	U.S.
<i>Dollars (2001)</i>			
Earnings:			
1996	474	599	576
2000	520	659	635
2001	527	668	644
<i>Percent</i>			
Annualized change:			
1996-2000	2.4	2.4	2.5
2000-2001	1.3	1.3	1.4
1996-2001	2.2	2.3	2.3
Total change:			
1996-2001	11.0	11.6	11.7

Source: 1996, 2000, and 2001 Current Population Surveys.

Figure 1

Nonmetro average weekly earnings change by sex, race/ethnicity, and education, 1996-2001

Earnings grew faster than average for nonmetro Blacks, women, and college graduates



Note: "Black" and "White" categories exclude Hispanics.
Source: 1996 and 2001 Current Population Survey.

without a high school diploma. The average college-educated nonmetro worker now earns 2.55 times as much as a worker who did not complete high school. Nonetheless, returns to education remain higher in metro areas, where the ratio is 3.05.

Nonmetro workers who did not complete high school have suffered below-average earnings growth since ERS began tracking earnings disparities using 1979 CPS data. The prospects for these workers improved in the 1990s as a robust national economy fueled demand for less-skilled workers and the supply of such workers grew slowly. The 7.1-percent rise in average weekly earnings between 1996 and 2001 represents a marked departure from earlier inflation-adjusted declines.

Such gains for less-educated nonmetro workers are consistent with other findings that welfare reform has not had the deleterious effects on their employment and earnings that many feared. (The possibility of depressed earnings or higher unemployment as a result of

welfare reform may be higher in economically distressed areas.) This holds true even for demographic groups most likely to be affected by welfare reform. Less-educated nonmetro women, for example, saw an 8.9-percent earnings increase during 1996-2001, compared with a 6.3-percent increase for less-educated nonmetro men (table 2).

Recent trends in the share of workers earning low wages both confirm improved labor market outcomes for less educated workers and highlight the limitations they face. The share of nonmetro workers age 25 and older earning low wages—wages that, on a full-time, full-year basis, are less than the poverty threshold for a family of four—fell from 32 percent in 1996 to 24.9 percent in 2001 (fig. 2). Similar declines were observed across all major demographic and education groups. Labor force participation rates rose or held steady during these years, indicating that the decline in low-wage employment represents real improvement rather than selective labor force withdrawal of the lowest-paid workers.

Table 2
Average weekly earnings by sex and education for nonmetro workers
Earnings grew more slowly for less-educated nonmetro workers in 1996-2001

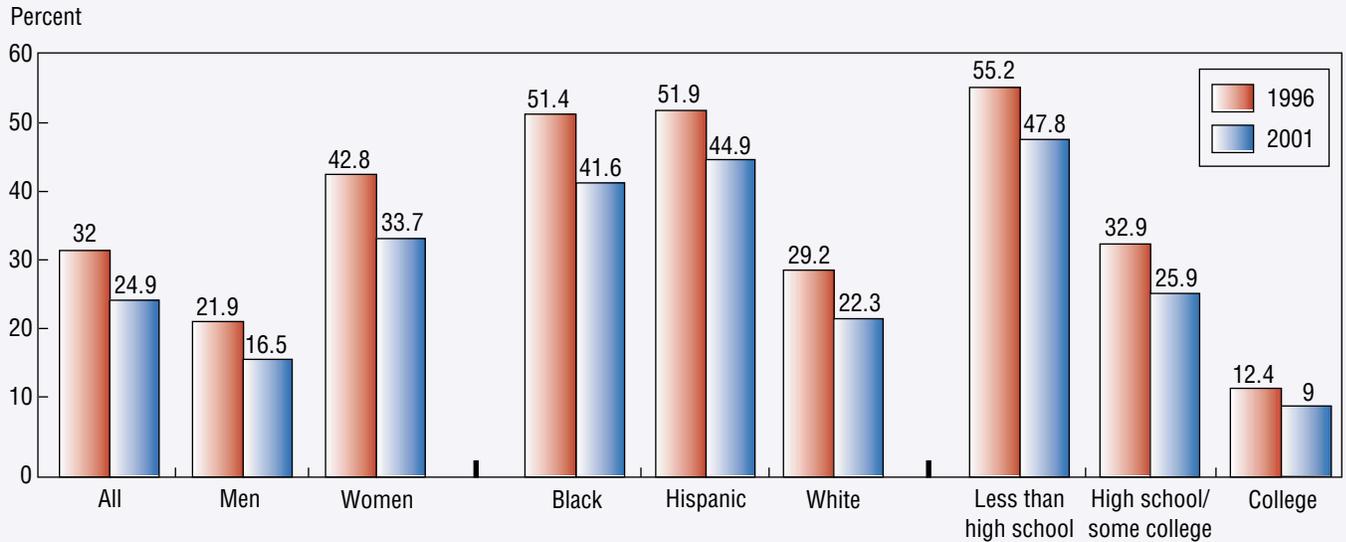
Education	Weekly earnings, 2001			Earnings increase, 1996-2001		
	Men	Women	All	Men	Women	All
	<i>Dollars</i>			<i>Percent</i>		
All	621	428	527	10.3	13.6	11.0
Less than high school	376	235	320	6.3	8.9	7.1
High school	579	370	481	6.7	11.5	8.0
Some college	632	416	517	8.4	10.2	8.2
College	948	687	814	13.6	13.9	13.5

Source: 1996 and 2001 Current Population Surveys.

Figure 2

Share of nonmetro workers in low-wage employment by sex, race/ethnicity, and education

Low-wage employment has fallen for all groups since 1996, but remains quite high for minorities and workers without a high school diploma



Note: "Black" and "White" categories exclude Hispanics.
Source: 1996 and 2001 Current Population Survey.

Despite a sustained drop in the low-wage employment share between 1996 and 2001, nearly half of nonmetro workers without high school diplomas work in low-wage jobs (compared with one in four who completed high school or

attended college without graduating). This suggests that even a limited amount of additional formal schooling would help many less-educated workers attain a family-sustaining income. ^{RA}



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