


Farm Programs, Natural Amenities, and Rural Development

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Do farm program payments boost the vitality of rural communities? We might suppose that, by maintaining farm incomes, these payments allow participating farms and their households to remain viable and to continue purchasing local goods and services. Thus, these payments may help sustain the local economy and its population base, even though they were not designed for that purpose (see box, "Farm Programs Provide Different Types of Support"). Yet, despite decades of farm program payments, economic researchers have been unable to establish that these payments help sustain farm-based communities. Many areas that have consistently garnered high payments from farm programs have lost population decade after decade, even during periods when most other rural areas were gaining population.



Lynn Betts, USDA/NRCS

Recent ERS research on the differences in population change between counties receiving high government payments and other rural counties found that these differences were associated with several nonagricultural factors. In particular, natural amenities—temperate climate, a mix of forest and open space, lakes—are highly correlated with population and employment growth, and these amenities are relatively scarce in agricultural areas with substantial farm program payments. Other factors, such as remoteness from major cities and sparseness of settlement, also limit the ability of these areas to attract new residents and nonfarm businesses. In short, the constraints on economic growth in these areas are less related to agricultural jobs and income than to geography and landscape. Farm programs, as they are currently structured, do not address the causes of long-term population decline experienced by many farming communities.



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Farm Programs Provide Different Types of Support

America's farmers receive government assistance through a number of different programs and policies, including direct farm program payments, indirect support through programs that enhance domestic and international demand for U.S. commodities or constrain domestic supplies and imports, crop insurance premium subsidies, farm loan subsidies, and Federal tax provisions. This article examines the impact of direct farm program payments—those that are delivered directly to participating farm operators and/or farmland owners—which totaled over \$44 billion in 1999-2000.

Direct government payments take several forms:

- Fixed income transfers (sometimes referred to as "decoupled payments") do not depend on the farmer's production choices, output levels, or market conditions. These include production flexibility contract and fixed direct payments (23 percent of total direct government payments in 1999-2000).
- Marketing loan and other miscellaneous program benefits augment market receipts when commodity prices are low and, thus, depend on the farmer's production and market conditions. These include countercyclical and loan deficiency payments (33 percent).
- Ad hoc emergency payments compensate eligible farmers for economic or natural disasters. These include crop disaster payments, dairy indemnity and market loss pay-

ments, livestock compensation and emergency assistance payments, among others (37 percent).

- Conservation payments reimburse participating farmers for all or part of the cost of implementing conservation practices. These include Conservation Reserve Program (CRP), Wetland Reserve Program, and Environmental Quality Incentive Program payments, among others (7 percent).

Farm programs are not designed to support rural economic development. Even the CRP, with its beneficial effects on the rural landscape and environment, is not aimed at rural development. Potential scenic value is not an eligibility criterion, there is no provision that CRP land be accessible to the public, and there are no incentives to create larger conservation areas by having farmers with contiguous properties apply as a unit.

Indeed, farm program payments have had some unintended consequences from a rural development perspective. For instance, higher payments can increase farmland prices, making it more difficult for beginning farmers and land-intensive nonfarm businesses to get started. To the extent that land is owned by absentees, farm program payments may benefit absentee owners more than local farm operators and farming communities. Finally, with most payments going to the largest farms, higher program payments may have encouraged farm consolidation and fewer farms over the long run.

High Farm Payments No Cure for Population Loss

Adjusted for inflation, farm program payments in 1999 and 2000 were the highest in 30 years, with the exception of 1987 when the farm sector was going through a major financial crisis. While the payments were not explicitly targeted toward rural development (over 20 percent of payments in 1999 and 2000 went to farmers in metropolitan counties), over a third of payments went to 387 rural (nonmetro) counties where the ratio of payments to total county household income exceeded 10 percent. On average, each of these counties received \$18 million per year in

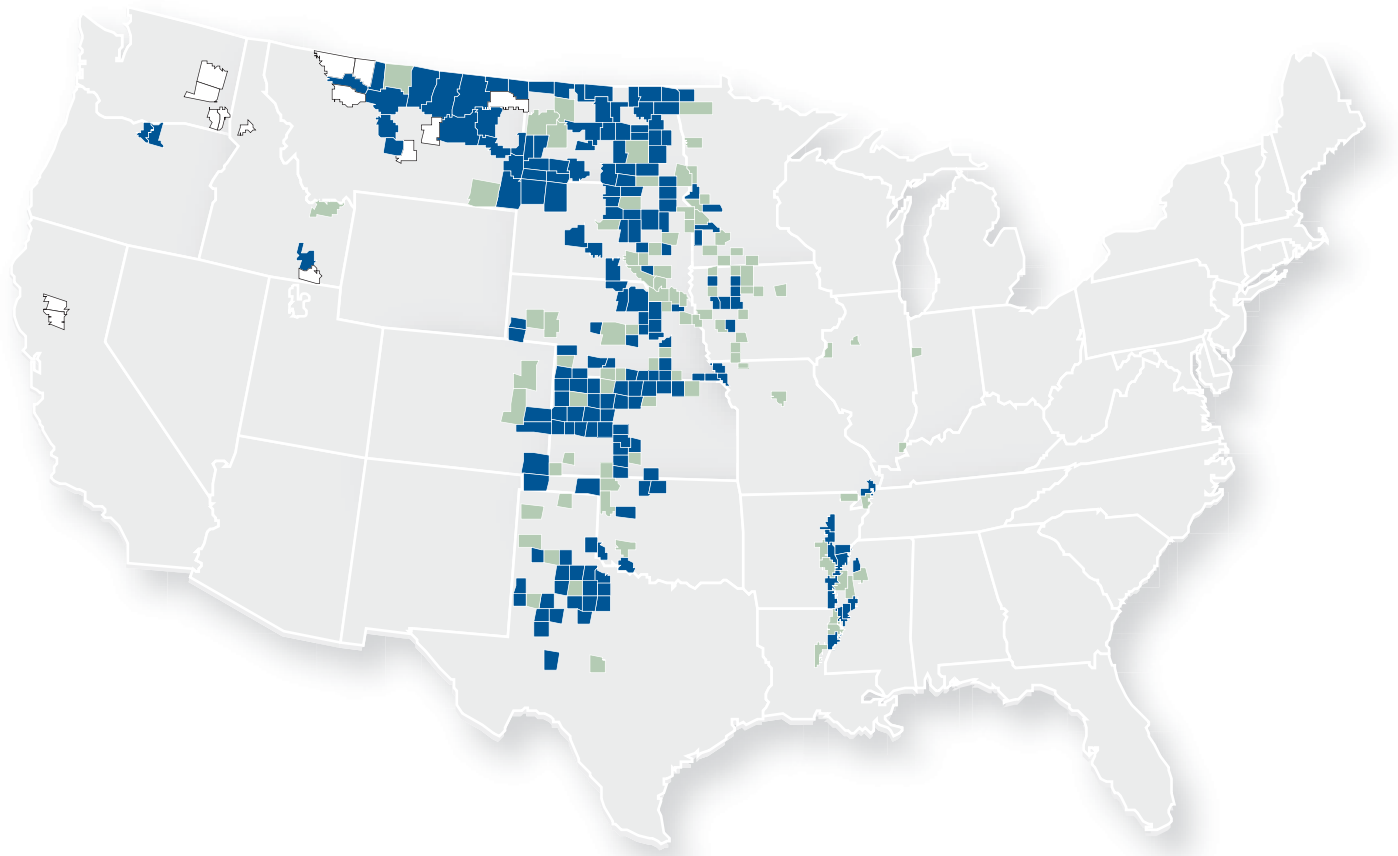
1999 and 2000. If farm payments help sustain local communities, it should be most apparent in these "high-payment" counties, which are concentrated in the Great Plains.

As a rough test of whether recent farm payments may have helped sustain rural communities, we compared population changes between the high-payment counties and other rural counties during different periods. These high-payment counties had also received about a third of total farm payments in the late 1980s, when payments were at record-high levels. But, the timing of the rise in farm payments was different in the 1980s. In the

1980s, program payments spiked only *after* farm incomes had fallen and a crisis was underway. In the late 1990s, by contrast, farm program payments rose as other income from farm operations fell, possibly averting a crisis. If the recent high payments contributed to rural vitality, then the difference in population change (our measure of vitality) between high-payment and other rural counties should be smaller in recent years than it was in the 1980s. Recent differences should be more like the early 1990s, when farm incomes were relatively high.

Despite their near-record levels in the late 1990s, farm program payments were

Population loss widespread in rural high-farm-payment counties*



Population change, 1998-2003 (10-year rate)

■ Loss over 10%	■ Loss 5% to 10%	■ Loss under 5% or gain
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*Ratio of farm payments to county household income over 10 percent in 1999-2000. Source: Census of Population, 2000; Census Bureau estimates.

not associated with reduced population loss in high-payment counties compared with other rural counties. Instead, population change in high-payment counties has been consistently 12-15 percentage points lower than in other rural counties. And, high-payment counties sustained high rates of population loss (9-10 percent) in both 1981-88 and 1998-2003. This was true even though the high rate of farm foreclosures of the 1980s was not repeated in the late 1990s.

A similar analysis of the number of farm proprietors over the same periods shows a different pattern. ERS researchers identified 344 counties where the ratio of average farm program payments (1999-2000) to farm market receipts exceeded 30 percent. These counties lost farmers at a rate of 19 percent per decade in 1981-88, but in 1998-2003, their rate of loss was much lower (6 percent), about the same as in other rural counties. In fact, the rates of loss were about the same as in 1988-98.

The persistence of the gap in population change between high-farm-payment and other rural counties should not be taken as evidence that farm program payments have *no* long-term bearing on rural

economic development. Owners of farms and farm-related businesses base their business and migration decisions on future prospects as well as present opportunities. Given the long history of Federal support for agriculture in some areas, these decisions are likely to be based on the assumption that farm program payments will continue in some form. Thus, during the 1980s, the expectation that payments or prices would rise may have kept people and businesses in high-payment counties who might otherwise have left. We have not been able to gauge the importance of farm support payments as a relatively permanent system. Nonetheless, the size and persistence of the population gap does suggest that farm programs, at least as currently structured, are not guaranteeing the long-term survival of local economies dependent on farming.

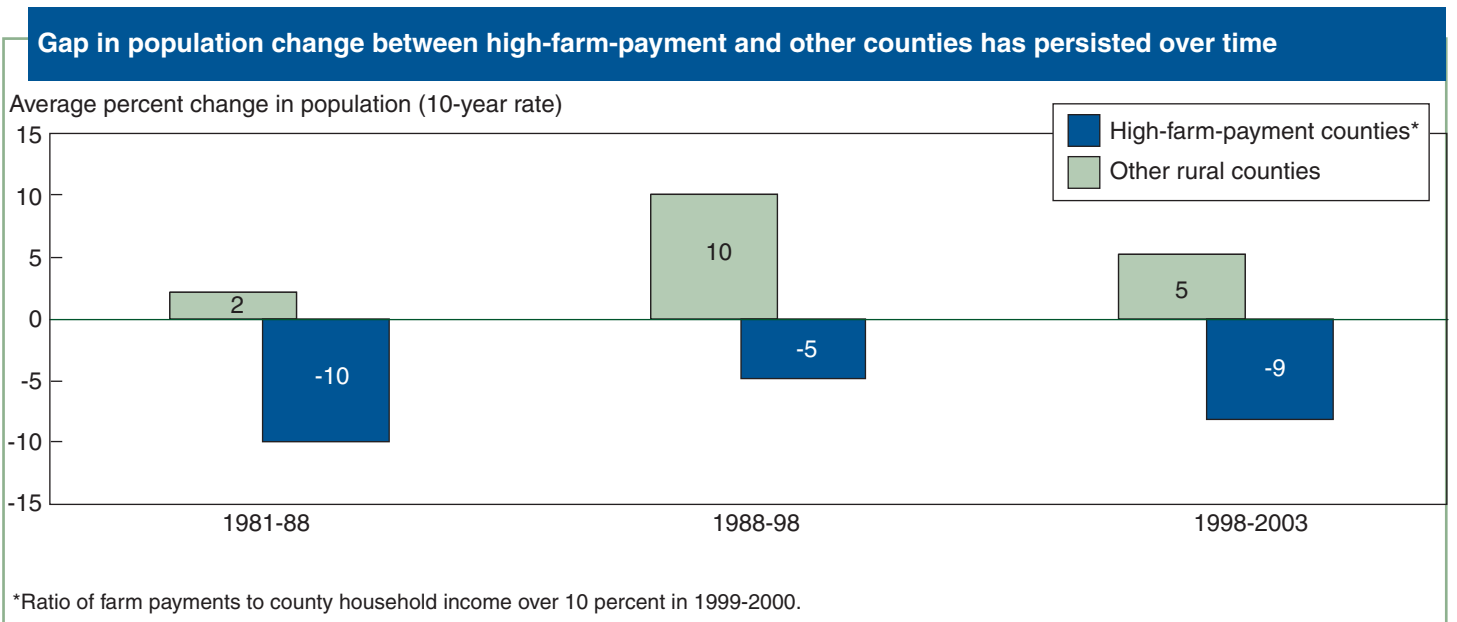
Explaining the Gap

To identify sources of the gap in population growth between high-payment and other rural counties, a statistical model developed at ERS was used to account for county differences

in population change between 1990 and 2000. The model suggests that four factors account for most of the observed differences:

- Natural amenities
- Population density
- Economic characteristics
- Demographic attributes

Natural amenities. The first and perhaps most basic factor pertains to a region's climate, landscape, and other features that attract not only tourists, but retirees, entrepreneurs, and others whose arrival generates new jobs. Natural amenities are highly correlated with population and employment growth—they even shape agriculture. Over the past 25 years, the number of farms has declined in counties with few amenities—counties with cold, wet winters and hot, humid summers, flat land, and few, if any, lakes. On the other hand, the number of farms has increased in counties with high levels of natural amenities. While these amenities are not the only factor affecting farm numbers, it is clear that many beginning farmers want to farm—and live—in a pleasant outdoor setting.





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According to studies of landscape preferences, people rate landscapes with open space and trees higher than those with either few trees or complete forestation. Except for farmers, people tend to rate landscapes dominated by farmland relatively low in appeal.

Studies of landscape preferences have found that people rate landscapes with open vistas and groves of trees more highly than those with either few trees or complete forestation. Except for farmers, who have a professional interest, people tend to rank landscapes dominated by farmland relatively low in appeal (although above developed land). Cropland in particular tends to have relatively little variation and to be inaccessible to the public. Consistent with landscape preferences, rural county population growth has been highest in counties that are 40-60 percent forested. Counties with little or no forest have lost population; those more than 80 percent forested have had relatively low rates of growth. Even among counties lacking natural amenities like lakes and temperate climate, those with some but not complete forestation have tended to gain substantial numbers of new residents over time.

Population density. Thinly settled areas that are far from large urban centers are unattractive to both employers,

because of their small labor markets, and householders, because of poor access to services and employers. Rural areas near cities gain residents who commute to as well as shop in the larger centers.

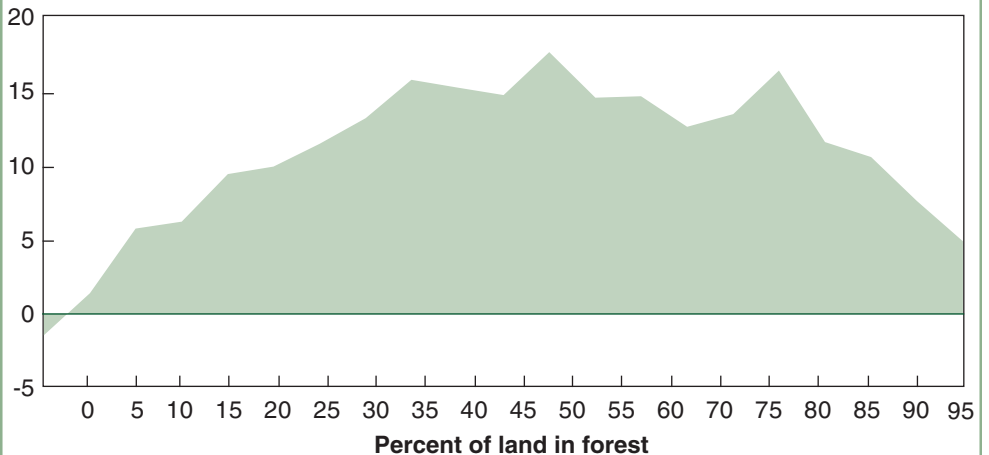
Economic characteristics. Counties with considerable mining and/or agricultural employment gain residents more slowly than those with developed recre-

ation industries. Also, areas with full employment attract more new residents than those where the job market is weaker.

Demographic attributes. Population growth in counties with a high proportion of the population ages 8-17 slows as this age group leaves to attend college, join the armed forces, or search for jobs.

The more forest in a rural county, the greater the population growth, but only up to a point

Percent change in population, 1990-2000*



*Averages calculated at intervals of 5 percentage points.

Quantifying Influences on County Growth

During 1990-2000, high-payment counties lost an average of 3 percent of their population, while other rural counties gained an average of 11 percent, a gap of 14 percentage points. The ERS population change model accounts for all but 1-2 percentage points of the 14-point gap in population change.

According to the model, differences in landscape and, to a lesser extent, climate account for about half of this gap. High-payment counties tend to have cold winters, flat land, few trees, and about twice as much farmland and cropland as other rural counties.

In addition, high-payment counties tend to be more remote from urban centers than other rural counties and to have very low population density. The very rural nature of high-payment counties as a group accounts for an additional 3-4 percentage points of the gap in population change between these and other rural counties.

Differences in local economic bases, however, were relatively unimportant in

1990-2000 according to this model, accounting for only 2-3 percentage points in the gap. Moreover, the model indicates that high-payment counties were less disadvantaged by specialization in agriculture in the 1990s than by their lack of recreational industry (which in turn depends somewhat on amenities).

The most important demographic difference was in the proportion of the population over age 64 in 1990, which was much higher, on average, in counties with high farm payments, and was associated with a 2-percentage-point lag in population growth for high-payment counties. With long histories of outmigration, many of these counties have more deaths than births.

In sum, there is little evidence that the farm sector itself had a substantial bearing on the population losses experienced by high-payment counties in the 1990s. The large difference in population trends between the high-payment and other rural counties appears to have stemmed instead from the less appealing climate and landscape, greater remote-

ness, and sparser settlement of the high-payment counties.

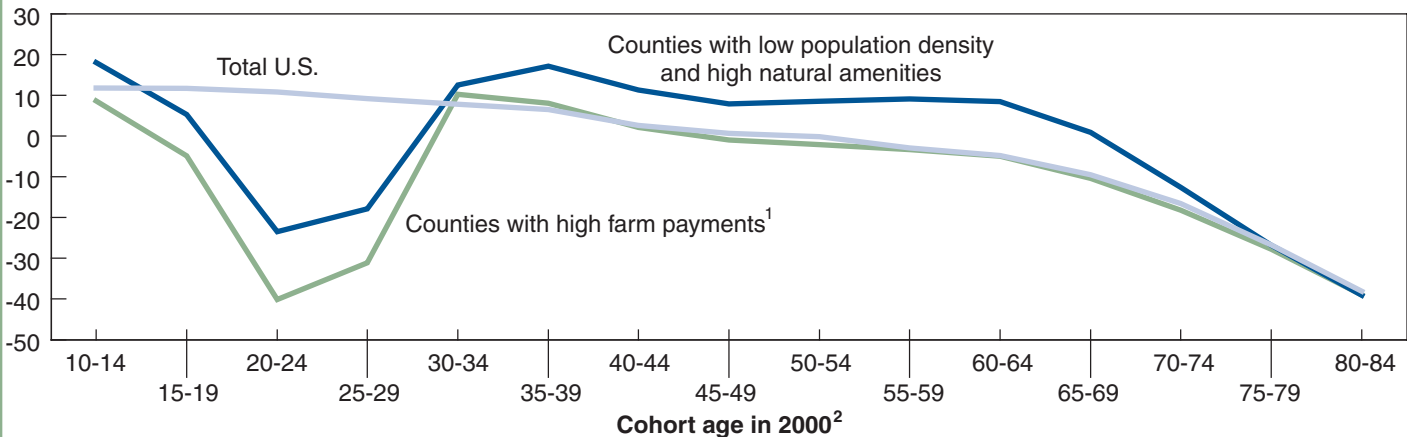
Young Adults Leave, But Few Return

In classic cases of population loss, plants or mines close, unemployment rises, and workers and their families start moving out. In high-farm-payment counties, however, unemployment rates have generally been among the lowest in the country. In 2003, for instance, the average annual unemployment rate was 4.7 percent among these counties but 6.7 percent among other rural counties. While low unemployment is consistent with the finding that noneconomic factors, rather than job losses, underlie much of the gap in population change between high-payment and other rural counties, it does not fully explain the mechanism through which population loss occurs. It seems unlikely, for instance, that people are simply closing up shop, packing up their families, and moving on.

One way to analyze the issue is to relate rural migration to the life cycle. Many young adults leave rural areas upon

High-farm-payment counties do not attract enough young families and retirees to replace young adults who leave

Percent change in cohort size, 1990-2000



¹Ratio of farm payments to county household income over 10 percent in 1999-2000.

²In this article, a cohort is defined as a group born within the same 5-year period.

Source: U.S. Census Bureau, Census of Population 1990, 2000.

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high school graduation. They enter college, join the armed forces, or find a job somewhere new. This outmigration is especially evident in highly rural areas, but occurs in most rural counties without major colleges or ski slopes. When people have graduated or finished their military service, gotten married, and begun to have children, rural areas become attractive as places to settle. Later, a second round of rural immigration occurs as people retire and can choose an area to live without having to consider employment prospects.

High-farm-payment counties had an influx of young families in the 1990s. The cohort of children ages 10-14 in 2000 was 10 percent higher than it had been in 1990 (when the cohort was ages 0-4). And the cohorts ages 30-39 were larger than they had been in 1990. But this immigration was small relative to the tremendous loss of the cohorts in their 20s in 2000. Moreover, there was no immigration of retirement-aged population as there was in the very rural but higher amenity counties. Unlike their higher amenity counterparts, the high-farm-payment counties did not attract enough young families and retirees to balance the exodus of young adults. Thus, unemployment appears to

be low in these counties with outmigration because young adults leave without looking for jobs, and families are not drawn to these counties without assurance of employment.

Rural Amenities Attract Residents

Assessments of program impacts in rural areas tend to focus directly on jobs, or, as above, presume that programs, such as farm programs, affect population change largely by affecting local economic opportunities. The analysis of the gap in population change between high-farm-payment and other rural counties suggests, however, that rural amenities, such as climate, landscape, and access to services, are major explanations for why high-payment counties have tended to lose population decade after decade, even as other rural areas have grown. Other research also indicates that, while new rural jobs bring people, it is equally true that new rural people bring jobs. Rural counties, particularly high-farm-payment counties, lose a substantial proportion of their young people after they finish high school. Young adults with children or older adults in retirement will not flock to

rural areas for high income. Instead, they will do so to seek a high quality of life, which encompasses schools, community life, pleasant landscapes, and opportunities for outdoor recreation, all of which will contribute to the economic vitality of the area. **W**

This article is drawn from . . .

The Conservation Reserve Program: Economic Implications for Rural America, by Patrick Sullivan, Daniel Hellerstein, LeRoy Hansen, Robert Johansson, Steven Koenig, Ruben Lubowski, William McBride, David McGranahan, Michael Roberts, Stephen Vogel, and Shawn Bucholtz, AER-834, USDA/ERS, September 2004, available at: www.ers.usda.gov/publications/aer834/ "Understanding Rural Population Loss," by David A. McGranahan and Calvin L. Beale, in *Rural America*, Vol. 17, No. 4, USDA/ERS, Winter 2002, available at: www.ers.usda.gov/publications/ruralamerica/ra174/ra174a.pdf

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