Education as a Rural Development Strategy

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Educational attainment in rural America reached a historic high in 2000, with nearly one in six rural adults holding a 4-year college degree, and more than three in four completing high school. As the demand for workers with higher educational qualifications rises, many rural policymakers have come to view local educational levels as a critical determinant of job and income growth in their communities. Attracting employers who provide higher skill jobs and encouraging educational gains are seen as complementary components of a high-skill, high-wage development strategy.

Dave Reede, AgStockUSA

But policymakers are faced with two key questions. First, does a better educated population lead to greater economic growth? According to a recent study, rural counties with high educational levels saw more rapid earnings and income growth over the past two decades than counties with lower educational levels. However, economic returns to education for rural areas continue to lag those for urban areas.

Second, are there ways to improve local educational attainment, particularly through improvements in elementary and high schools, that can enhance the economic well-being of rural residents and communities? In fact, preliminary research demonstrates a connection between better schools and positive outcomes in terms of earnings and income growth for rural workers and rural communities.

Ultimately, the strength of the tie between education and economic outcomes is influenced in part by the extent to which small rural counties lose young adults through outmigration. The loss of potential workers from rural areas, as young adults leave for college and work opportunities in urban areas, has concerned rural observers for many decades.

Does a better educated population lead to greater economic growth?

This rural "brain drain" not only deprives rural employers of an educated workforce, but also depletes local resources because communities that have invested in these workers' education reap little return on that investment.

Rural Adults Post Major But Uneven Educational Gains

The rise in educational attainment since the end of World War II has been a remarkable success story in rural America. In 1970, 7 percent of rural adults had graduated from college, while 56 percent of the rural adult population did not have a high school diploma. By 2000, 16 percent of rural adults age 25 and older had completed college and more than 75 percent had finished high school.

Though rapid, these gains understate the educational attainment of the younger working population, ages 25-44. Nearly one-fourth of rural younger adults have at least a 4-year college degree, and over 80 percent have completed high school. Gains in educational attainment in rural areas were particularly pronounced during the 1960s, dividing the generation that viewed college as an option for the relatively few from the generation for whom college attendance became "ordinary."

A similar divide can be seen in the steady increase in job skill requirements of rural firms, as employment shifted over time from farm to factory to services. Between 1980 and 2000, for instance, the share of rural workers in low-skill jobs fell from 47 to 42 percent.

The relationship between high educational levels and high-skill jobs has prompted many communities to pay closer attention to the role of workforce education and training in their economic development plans. But the benefit of raising educational levels will vary widely from place to place because of the sharp disparity in educational attainment across rural America. In nonmetro counties where at least one-fourth of the population age 25 and older lacks a high school diploma, job growth has been steady, yet income levels typically fall well below the national average. In other nonmetro counties where the great majority of adults have completed high school, the need to improve workforce education levels is likely to be less urgent.

Workforce Education Affects Economic Growth

Higher educational levels contribute to local economic development in several ways. First, a well-educated workforce facilitates the adoption of new ways of producing goods or providing services among local businesses. Second, prospective employers may view a well-educated local labor force as an asset when choosing among alternative locations for new establishments. Both factors could help

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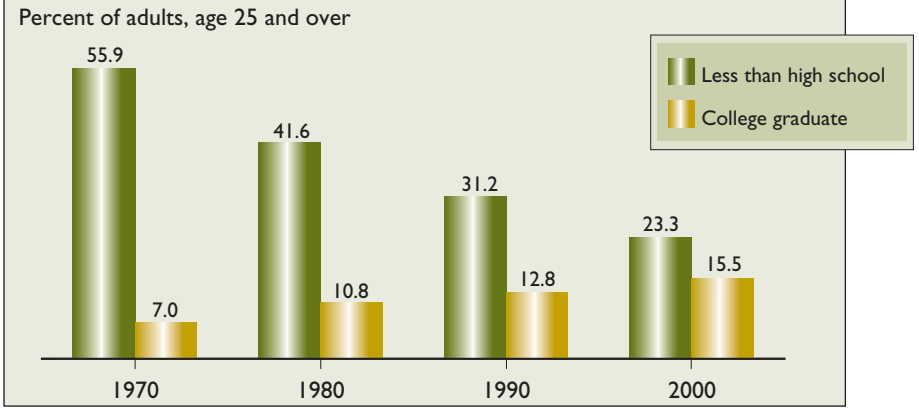
More rural adults have finished high school and college



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

improve a community's chances of attracting new businesses, particularly those businesses that require highly skilled employees. Finally, higher educational levels are almost always tied to geographic clusters of certain key industries, which in some cases have generated major economic growth in rural areas.

According to research presented at a 2003 conference on rural education cosponsored by ERS, the higher the level of educational attainment, the faster the growth rates in both per capita income and employment (see box, "The Role of Education in Rural America"). Researchers at Clemson University found that counties in the rural South with a 5-percentage-point higher share of adults attending college in 1980 reported, on average, 3.5 percent faster growth per year in per capita income over the next 20 years and 5.5 percent faster growth in employment. For a typical county in 2000, this translates into $325 more in per capita income and 150 additional workers. Given an average population of 24,700 in the study counties, the average increase in total annual county income would be approximately $8 million, or about 4 percent above actual 2000 income levels. In urban areas, annual income growth after 1980 rose 9 percent for each 5-point gain in college-educated adults, and annual employment grew 7 percent.

Another study conducted by researchers at Penn State University found that rural counties with a 1-percentage-point higher share of adults with a high school diploma reported $128 more per capita income, even after adjusting for other characteristics that affect income, such as infrastructure, industry structure, and degree of urbanization. But the same 1-percentage-point increase in urban counties raised per capita income by $413.

These studies qualify the role of education in rural economic prosperity in two ways. First, urban areas benefit disproportionately from a well-educated workforce. Second, benefits from higher educational levels depend on other local factors, but primarily for urban areas. Within rural areas, population density, access to interstate highways, social capital, and school characteristics have little power to enhance or inhibit the influence of educational levels on income and employment. As a result, there is little evidence that economic development strategies based on raising workforce education levels will be equally successful regardless of a community's other characteristics. Areas with high educational levels also have high-skill employment bases that have adapted to the particular features of the area. Thus, infrastructure and urbanization enhance the effect of education primarily by influencing the kinds of jobs found in the local economy.

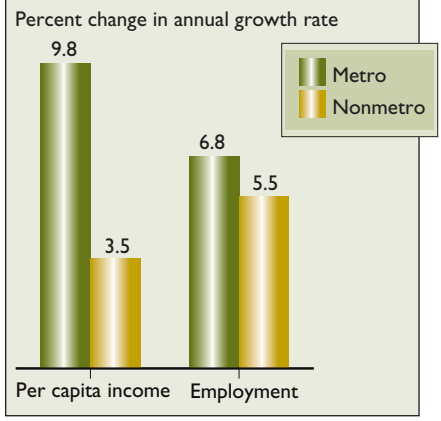
Better Schools Promote Higher Achievement and Earnings

If higher levels of education boost local economic performance, how might localities pursue a development strategy that incorporates improvements in education? In the past, rural areas seeking to stem the brain drain emphasized strategies to retain well-educated youth and adults and attract new residents by encouraging higher skill employment growth. "Workforce development" most

The Role of Education in Rural America

In April 2003, ERS cosponsored a 2-day conference with the Southern Rural Development Center (SRDC) and the Rural School and Community Trust that brought together researchers, policymakers, and educators from around the country to examine the issues surrounding rural education and local economic development. Findings from conference presentations were published in December 2004 as a major SRDC policy report, *The Role of Education: Promoting the Social and Economic Vitality of Rural America*, and in 2005 as special issues of two peer-reviewed journals, the *Review of Regional Studies* and the *Journal of Research in Rural Education.* The research of Stephan Goetz and Anil Rupasingha, Penn State University, and David Barkley, Mark Henry, and Haizhen Li, Clemson University, have been key resources for this *Amber Waves* article.

Income and employment gains due to higher educational levels in the rural South



Annual percentage change resulting from a 5-percentage-point increase in the share of persons age 25 or older with at least some college education.

Source: David Barkley, Mark Henry, and Haizhen Li, "Does Human Capital Affect Rural Growth? Evidence from the South," in *The Role of Education: Promoting the Economic and Social Vitality of Rural America*, Lionel J. Beaulieu and Robert Gibbs, eds., January 2005.

often meant investing in job training programs, both by States and local jurisdictions. More recently, attention has turned to improving the quality of local schools in order to raise the level of performance and well-being of the local workforce. Rural areas may also view good schools as an amenity for prospective employers and workers who must move families to the area.

Improvement of rural schools, however, faces special challenges, especially in balancing resources and outcomes. As is often the case with service provision in rural areas, costs per pupil may exceed the national average because rural schools often cannot take advantage of economies of scale provided by a large population base. Moreover, rural counties often lose a large portion of their youth to places with better job and educational opportunities. Thus, the future income and tax revenues that rural students could generate—the "social returns" on school investments—may be lost to other, often urban, places, and investments designed to improve schools may not pay off for the local community in the long run.

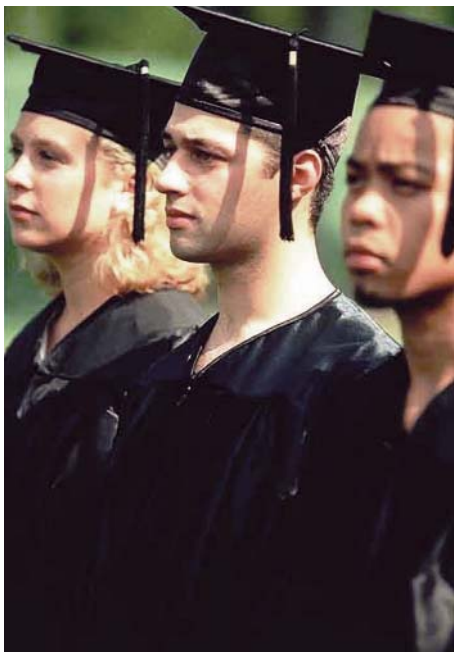
The financial challenges and geographic isolation facing rural schools often contribute to educational disadvantages. Standardized test data show that rural students tend to score below suburban students in math and reading, but on par with central city students. Rural teachers earn less, on average, than urban teachers and are less likely to hold an advanced degree or be certified in the subject they teach. Rural schools are less likely to offer advanced classes in science and math. But rural schools are also smaller and have teacher-pupil ratios similar to urban schools.

Students in rural schools that offer advanced coursework and have more qualified and better paid teachers score higher on standardized math and reading tests. Once scores are adjusted for characteristics related to school quality, the rural disadvantage disappears. These factors are often closely related to the socioeconomic profile of the students' families. ERS found that characteristics of rural families—race, sex of family head, English as a native language, and family structure—actually gave rural students a slight advantage over both suburban and central city students. While family and personal characteristics contribute to the special challenges of rural school systems, especially those in persistently poor and low-education areas, they do not explain the rural disadvantage as a whole.

The effect of school characteristics on student achievement shows that schools have at least *indirect* influence over workforce quality. Rural schools can also influence the economy *directly* by their effect on workers' earnings. By age 26, workers who graduated from rural high schools earned about 3 percent less than workers who graduated from suburban high schools, after adjusting for educational attainment, type of job, and current residence. When earnings are further adjusted for rural school disadvantages, the rural-suburban gap disappears. Rural students who graduate from better schools will thus perform better in the labor market whether or not they remain in rural areas. Because students who do better in school are more likely to attend college and leave their home communities, there is a trade-off between improvements in local workforce quality and the loss of young adults due to outmigration.

Outmigration May Diminish School Effects

Recent research shows that improvements in rural schools boost local economic development prospects. Higher adult educational levels lead to faster income and employment growth, and better schools can produce higher academic achievements and improve longrun economic prospects for students. According to a study of rural South Carolina in the 1990s by researchers at Clemson University, a small but significant link occurs between school quality (measured by student-teacher ratios) and employment growth in the local community.



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Continued movement of young adults from rural to urban areas for college or higher paying jobs means that much of the potential benefit to earnings from improving schools will be lost to the local community. This effect weakens the rationale for supporting good schools, especially if these improvements are perceived to encourage outmigration. Fifty-five percent of rural young adults who attended college no longer resided in their home county. Young adults who had not completed high school were about half as likely to reside in a different county, with high school graduates falling in the middle. Despite rural gains, the rural-urban educational attainment gap remains high, and high-skill jobs in large and medium-size cities continue to attract young adults. Jurisdictions with significant economic or social distress may find it especially difficult to leverage improvements in school quality without concurrent changes in the local economy.

Although rural America continues to lose a disproportionate share of its college-bound youth, the long-term loss is often substantially less than the initial outflow, as many outmigrants return to raise children, assist aging relatives, or use social networks to find jobs. Communities may find good schools to be a particularly effective way to capture a larger share of these potential returnees. Better schools, for example, can make a difference to parents who want to raise their children in the home environment they once enjoyed, but who also seek the best possible education for their children.

Current Federal policy supports raising academic standards and workforce educational levels regardless of a community's economic and social profile. Such an approach holds great potential for helping individuals. The benefit to rural communities, particularly in distressed areas, could be greatest where human capital improvements are but one of several parallel strategies (such as small business development) aimed at building a local economy with greater job opportunities and higher earnings.

This article is drawn from . . .

"Does Human Capital Affect Rural Growth? Evidence from the South," by David Barkley, Mark Henry, and Haizhen Li, in *The Role of Education: Promoting the Economic and Social Vitality of Rural America*, Lionel J. Beaulieu and Robert Gibbs, eds., January 2005: 10-15, available at: www.srdc.msstate.edu/publications/ruraleducation.pdf

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The ERS Briefing Room on Rural Labor and Education: www.ers.usda.gov/briefing/laborandeducation/