

Coming Home to Rural America: Demographic Shifts in the Tenth District

By Jason Henderson and Maria Akers

Sweeping demographic shifts are challenging the growth of many rural communities in the Tenth District. The retirement of the baby boomers, coupled with the exodus of young adults, threatens to leave rural areas with a rapidly aging population and a shrinking local workforce. The strength of these demographic changes could hinder economic growth for many rural communities in the future.

Rural communities in the district, however, are quietly enjoying another demographic shift—a return of middle-aged residents to rural places. This shift may be a promising sign for economic growth and wealth generation. Rural areas, of course, must continue to face the challenges of an aging population and the loss of young adults. But the in-migration of middle-aged residents and their families could raise a new question for economic development. Instead of simply trying to stem the tide of young adult out-migration, should rural areas focus more on the recent trend of middle-aged families coming home to rural America?

This article discusses the economic implications of aging populations and migration patterns on rural Tenth District communities. The first section explores how aging populations are threatening the

Jason Henderson is vice president and Omaha branch executive at the Federal Reserve Bank of Kansas City. Maria Akers is assistant economist at the Omaha Branch. This article is on the bank's website at www.KansasCityFed.org.

economic growth potential of Tenth District states, especially in rural areas with high concentrations of retirement-age populations. The second section describes how the migration patterns of young adults leaving and eventually returning as middle-aged adults represent both challenges and opportunities for rural areas. The third section analyzes the economic implications of aging populations and these two migration patterns. While rural communities in the Tenth District will struggle with aging populations and the loss of young adults, enhancing quality-of-life amenities appear to be a way for rural communities to benefit from the return of middle-aged families.

I. AGING POPULATIONS SLOW ECONOMIC GROWTH

The Tenth District is undergoing a demographic sea change that threatens to diminish the capacity for economic growth of many rural areas.¹ The pending retirement of baby boomers (born from 1946 to 1964) will soon slow the growth of the working age population and reduce labor force participation rates. These changes will pose significant challenges for rural areas, which typically have high concentrations of older people.

A person's economic contribution changes over a lifetime. The young are net consumers. As they enter the workforce, they become net producers and help boost the production capacity of the economy. As they retire, they become net consumers again and reduce the production capacity of a region (Bloom and Canning).²

Thus, the district's economic growth potential emerges from three components: population growth, changing labor force participation rates, and productivity growth. Stronger gains in each segment boost economic development and vice versa (Kliessen 2007).

Slower *population growth* could clip the district's economic growth potential over the next two decades. With each decennial census, the Census Bureau provides state population projections based on past population trends and national projections.³ In 2005, the Census Bureau projected that the district's adult population growth, 16 years of age and older, was expected to decelerate, rising just 0.4 percent annually from 2008 to 2020. Adult population grew 1.1 annually from 1990 to 2008. Thus, slower growth in the adult population could trim the district's economic growth potential 0.7 percentage points.⁴

Lower *labor force participation rates* could further trim the economic growth potential of district states. The number of retirement age residents (65 and older) has increased substantially in the district since the 1970s (Figure 1). From 2000 to 2020, national labor force participation rates are projected to drop from 67.1 to 64.5 percent due to retiring baby boomers, with sharper declines after 2020.⁵

When national projections of labor force participation are applied to state population estimates, the district's labor force participation rate is projected to fall 0.27 percentage points annually from 2008 to 2020. Such shrinking of the labor force could trim the growth of potential gross domestic product (GDP) in district states by roughly 0.4 percentage point.

With both population growth and labor force participation rates weakening, the wildcard for district growth is *labor force productivity*. Labor force productivity is difficult to predict. As in the nation, the district's labor force productivity, measured by per capita gross state product, has been relatively stable after rising in the 1990s.⁶

Over the past decade, gains have been consistently strong and are expected to hold at current rates. If population growth and labor force participation continue to weaken, the district's annual economic growth potential could slow from roughly 3 percent prior to 2008 to less than 2 percent by 2020 (Chart 1). Slower economic gains could limit personal income growth and quality of life gains in the district.

Potential economic growth varies across district states. Based on Census projections, Colorado may enjoy the strongest economic growth due to relatively stronger gains in both its population and labor force participation. New Mexico and Wyoming could face the biggest declines in economic growth due to slower population growth and shrinking labor pools caused by high boomer concentrations. New Mexico might still enjoy strong economic gains, if their relatively high productivity growth can be maintained. Wyoming, on the other hand, has less growth potential due to lackluster productivity gains. The Plains states—Kansas, Missouri, Nebraska, and Oklahoma—all have slowing population growth and labor force participation rates, which are expected to trim economic growth potentials from 1.5 to 2.0 percent annually.

Figure 1
TENTH DISTRICT POPULATION 65 YEARS OF AGE OR OLDER
(PERCENT OF POPULATION)

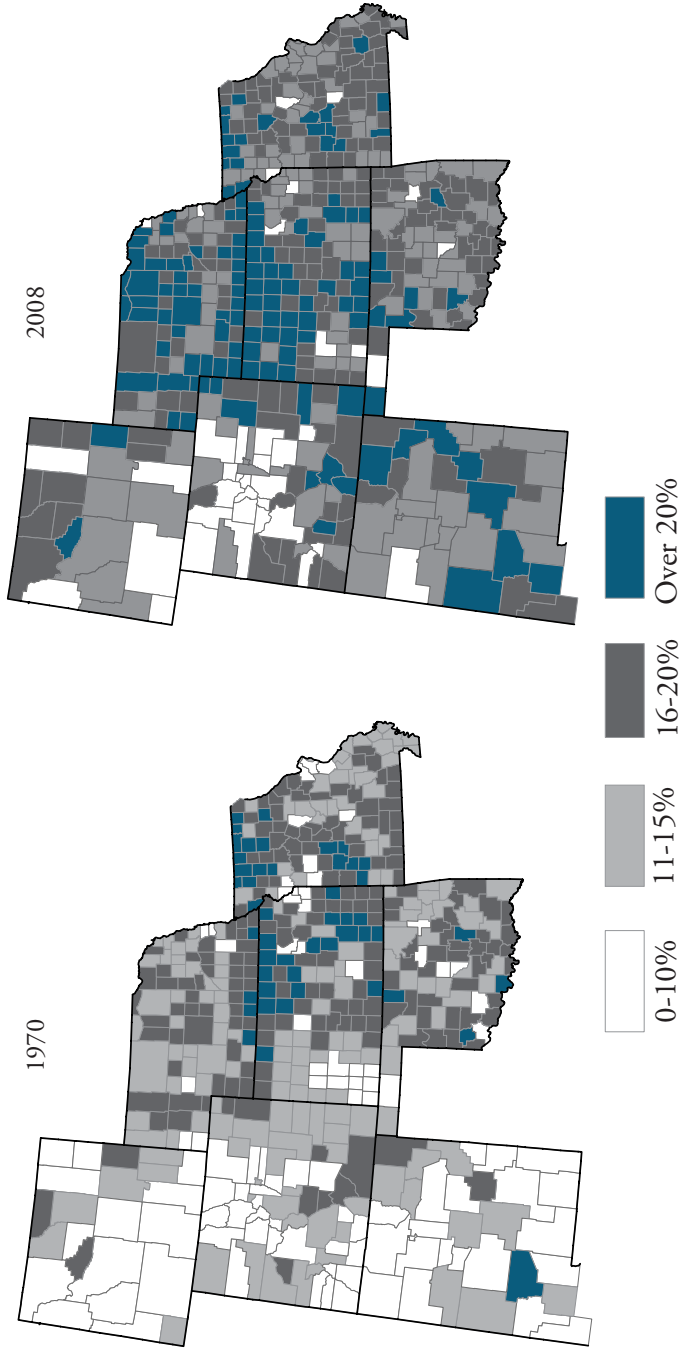
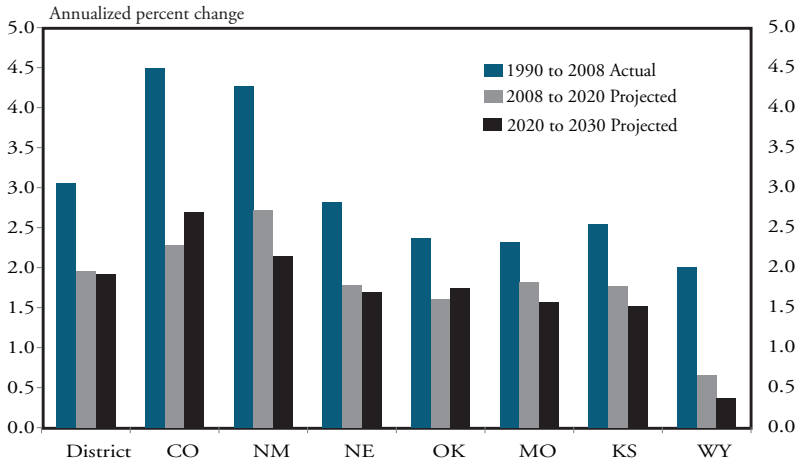


Chart 1

ECONOMIC GROWTH POTENTIAL BY DISTRICT STATE



Author's calculations based on Census Bureau data.

More detailed information on population, labor force participation, and labor force productivity growth is available in Appendix B.

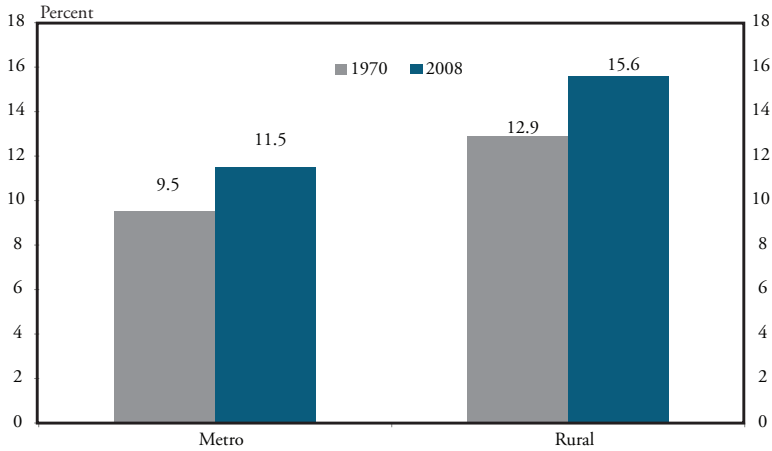
Rural areas in the district are at high risk due to their heavy concentrations of retirement age people. Over the past 40 years, retirement age populations have accounted for an increasing share of the district's rural population, rising from 12.9 percent in 1970 to 15.6 percent in 2008 (Chart 2). In contrast, retirement aged population in metro areas rose from 9.5 to 11.5 percent. The aging of rural communities could accelerate soon, as the first baby boomers reach the age of 65 in 2011.⁷

Rural communities in general face the challenges of aging populations. In 2008, regional economic centers, or micropolitan counties (counties with at least one city of more than 10,000 residents), had the lowest share of retirement age populations at 14 percent (Chart 3). Town counties (rural counties lacking a town of at least 10,000 people) had retirement age populations of 17.6 percent. Rural counties that depend on farming had the highest share of retirement age populations at 18.7 percent. This result is not surprising given that over half of U.S. farmers are 55 and older according to the 2007 Census of Agriculture.

It is important to recognize, however, that some rural communities in the district actively seek retirees. Over the past few decades, some rural communities have emerged as retirement destinations as

Chart 2

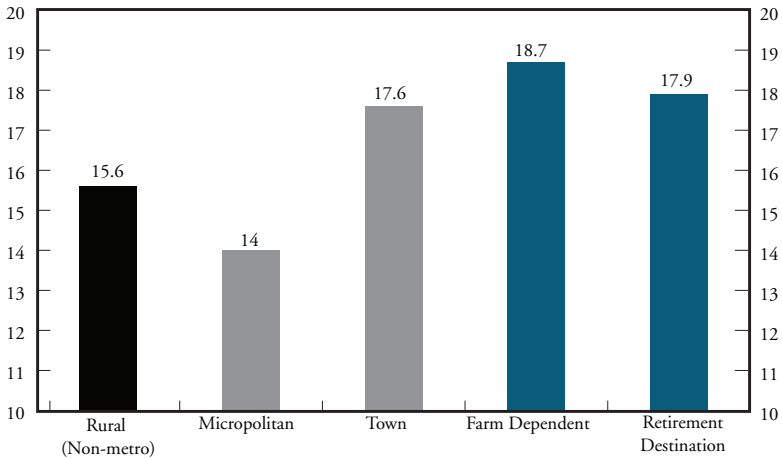
SHARE OF DISTRICT POPULATION 65 YEARS OF AGE OR OLDER BY METRO STATUS



Author's calculations based on Census Bureau data. Rural areas are defined as nonmetro counties.

Chart 3

SHARE OF POPULATION 65 YEARS OF AGE OR OLDER BY SELECTED COUNTY TYPE, 2008



Author's calculations based on Census Bureau data. Rural areas are defined as nonmetro counties. Additional information on retirement age populations by county type is provided in Table C1 in Appendix C.

retirees move to be closer to families, reduce costs, or simply enjoy life in high-amenity areas. Suburban boomers across the nation are just as likely to retire in a nonmetro community as an urban center (Engelhardt). In the Tenth District, retirement destinations are concentrated in the high-amenity and recreation areas of New Mexico, Colorado, and the Ozark mountain areas of southern Missouri.⁸

II. RURAL MIGRATION PATTERNS

While aging populations are expected to slow economic growth, rural migration patterns are both accelerating and mitigating this trend. Over the past few decades, many rural residents have left their hometowns after graduation from high school or college in search of job opportunities. However, some rural areas in the district have also experienced the return of middle-aged adults in their thirties. Middle-aged in-migrants are fewer than out-migrating young adults, but they help offset some of the population losses in some rural counties—even in smaller, farm-dependent communities.

Young adult migration

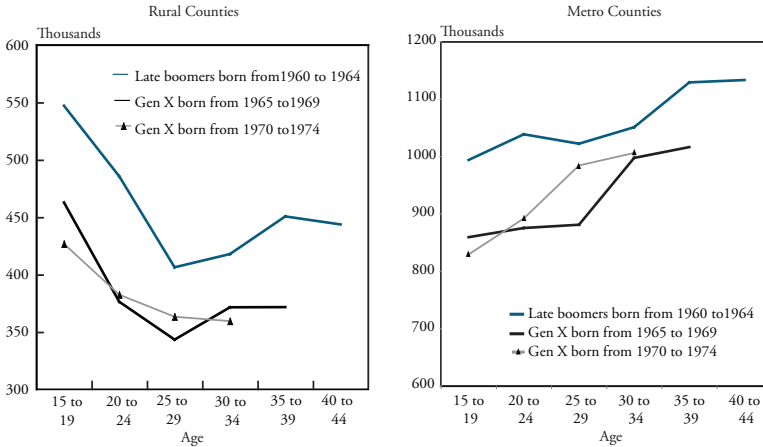
While the exodus of young adults remains large, the losses have eased over the past decade. Still, the pattern of young adult out-migration has contributed to the rising share of aged populations in small, remote communities, especially in those areas that rely economically on farm activity. And rural communities that serve as retail centers and provide recreation and natural amenities are enjoying a rise in young adult populations.

The Tenth District has struggled, not only to overcome the out-migration of young adults, but also to keep young workers with higher skills (Miller; Keeton and Newton). The largest out-migration occurred during the farm and energy busts of the 1980s, which accelerated the historical migration of farm populations to urban centers as farm productivity increased. For example, the number of late boomers (born from 1960 to 1964) fell 2.9 percent annually from 1980 to 1990.

Tracking the number of late boomers and early Gen Xers (born in the early 1970s) shows that young adults in rural areas continue to leave, but the trend might be slowing. The concentration of the 1960s birth cohort plunged 25 percent when they reached their twenties (Chart 4). While rural residents born in the early 1970s also left in

Chart 4

DISTRICT POPULATION BY BIRTH COHORT



Author's calculations based on Census Bureau data. Rural areas are based on nonmetro county definitions.

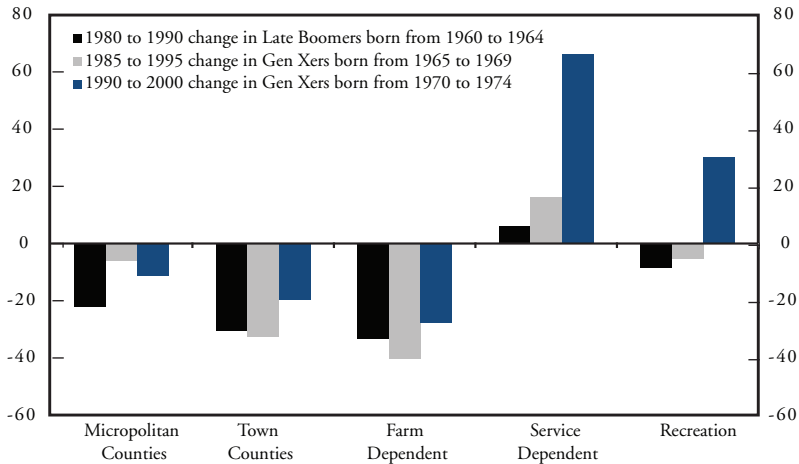
their twenties, the decline was less dramatic, roughly 15 percent. In contrast, the exodus of metro residents in their twenties was relatively flat for the 1960s birth cohort, while the early 1970s birth cohort actually rose sharply, due in part to the inflow of district residents from rural areas and in part to an economic rebound in the district's metro areas (Keeton and Newton).

The size and scope of these migration trends have varied across the rural landscape. The exodus of young adults is especially challenging for smaller, more remote rural communities and for rural counties dependent on farming or energy. Over the past two decades, smaller rural communities experienced the largest decline in young adult residents, but the declines have eased recently. From 1980 to 1995, the 1960s cohorts fell by almost a third in town counties (Chart 5). However, the early 1970s cohort of young adults leaving town counties eased to 20 percent.

The out-migration percentages for young adults, however, were greater in farm dependent communities with fewer amenities and recreational opportunities. From 1980 to 2000, farm dependent counties experienced dramatic declines in their young adult populations, with a 33 percent decline in the late boomer cohort. Still, the population

Chart 5

YOUNG ADULT POPULATIONS BY SELECTED RURAL COUNTY TYPES



Author's calculations based on Census Bureau data and USDA county typologies.

For each birth cohort, the percent change in young adults is based on the population change between the age groups of 15-19 years old and 25-29 years old.

Additional information on changing young adults populations by county type is provided in Table C2 in Appendix C.

losses have slowed as the Gen X cohort born in the early 1970s fell 27 percent in the 1990s.

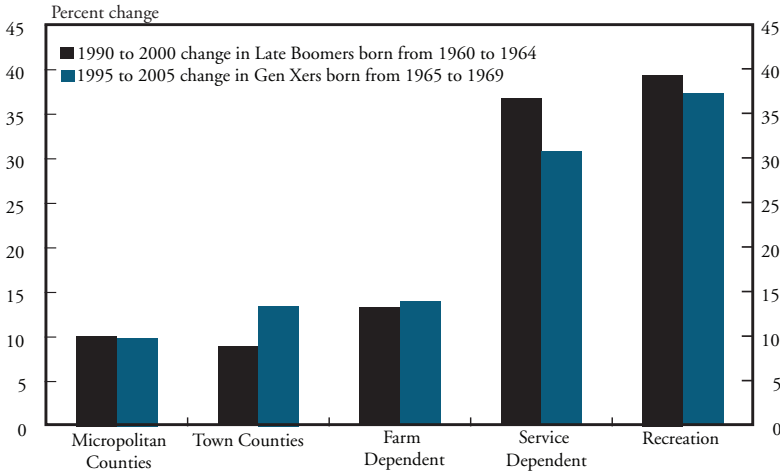
In contrast, young adult populations expanded in counties with high levels of recreation and natural amenities that serve as rural retail centers. Service dependent counties (those with high levels of activity in retail and personal or business services) also benefited from rising young adult populations, showing especially strong gains in the 1990s. Moreover, areas with high natural amenities experienced strong gains in young adult populations, as did recreation areas.

Middle-aged migration patterns

Tracking the 1960s and early 1970s cohorts also shows that rural areas in the district are gaining middle-aged residents (Chart 4). Similar to patterns for young adult migration, rural retail centers and high-amenity areas began to gain middle-aged people in the 1990s. In contrast to the young adult exodus, the middle-aged rebound of-

Chart 6

MIDDLE-AGED ADULT POPULATIONS BY SELECTED RURAL COUNTY TYPES



Author's calculations based on Census Bureau data and USDA county typologies.

For each birth cohort, the percent change in young adults is based on the population change between the age groups of 25-29 years old and 35-39 years old.

Additional information on changing young adults populations by county type is provided in Table C3 in Appendix C.

fers some opportunities for rural areas—even for some smaller, more remote farm-dependent areas.

Rural retail centers with high concentrations of recreation activity and natural amenities have benefited the most from in-migrating middle-aged adults. From 1990 to 2005, service dependent counties that provide access to retail and other personal and business service firms saw the share of late boomers in their population jump more than 30 percent (Chart 6). At the same time, the share of late boomers in recreation counties with a thriving tourism business soared almost 40 percent.

Town counties saw smaller, but noticeable, increases in middle-aged adults, which partly offset the out-migration of young people. During the 1990s, town counties enjoyed an 8.9 percent rebound in the number of late boomers and a 13.5 percent gain in early Gen Xers. While gains in the absolute number of in-migrants in town counties was smaller than in micropolitan counties, due to their size difference, the percentage gains were larger in town counties. Farm dependent counties have experienced some of the largest losses of young adults,

but have also enjoyed a rebound in middle-aged adults. Since 1990, their numbers of late boomers have risen roughly 14 percent.

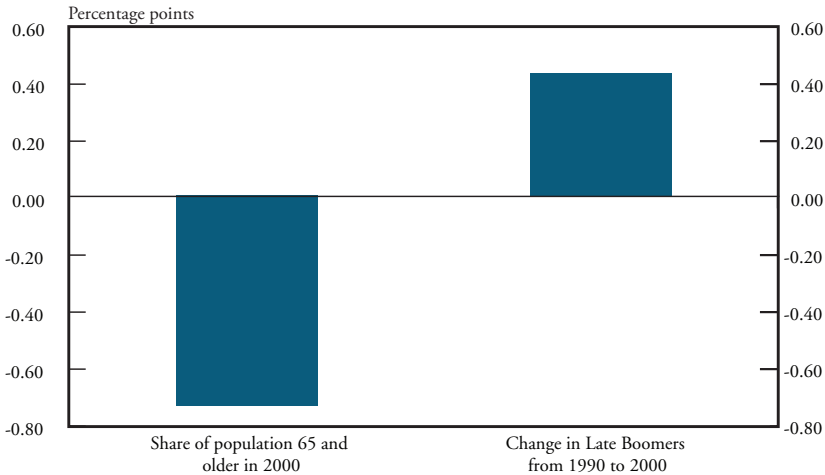
III. COUNTY LEVEL EFFECTS OF AGING POPULATIONS AND MIGRATION

Changing demographics will shape the economic growth potential in rural Tenth District counties in three ways. The pending retirement of the baby boomers could strain local labor force pools. The out-migration of young adults also challenges workforce levels, especially for high-skilled workers. At the same time, the return migration of middle-aged adults could mitigate some of these challenges. Empirical analysis reveals that counties with high shares of retirement age populations have experienced slow economic growth. Counties with strong in-migration of middle-aged adults have enjoyed stronger economic growth.

A standard economic growth model can help analyze the economic implications of aging populations and migration patterns on district counties. The growth model identifies the various county characteristics that relate to a county's income growth. The model also measures the relationships of aging populations, young adult migration, and middle-aged adult migration with county nonfarm income growth from 2000 to 2007. The analysis includes measures of the labor force, amenities, infrastructure, taxes, and the size and location of the county to control for other factors that also affect income growth. (Appendix A describes the regression model in more detail).

Retirement age populations

While people are expected to work longer in the future, the impending surge in the retirement age population is expected to shrink national labor force participation rates (Toossi). The toughest labor force challenges could emerge in middle and senior management positions. For example, a 2007 national survey of business managers revealed that almost two-thirds of retirements will cause a workforce talent gap, and 70 percent of those surveyed indicated that middle and senior management positions would be most affected (Ernst and Young). As a result, counties with higher concentrations of residents ready to retire are at risk of slower income growth.

*Chart 7***RURAL NONFARM INCOME GROWTH FROM 2000 TO 2007 ATTRIBUTED TO RETIREMENT AND MIDDLE-AGE POPULATIONS**

Author's calculations based on Census Bureau data and USDA county typologies.

For each birth cohort, the percent change in young adults is based on the population change between the age groups of 15-19 years old and 25-29 years old.

Additional information on changing young adults populations by county type is provided in Table C2 in Appendix C.

Regression analysis confirms that aging populations could limit growth in district counties. During the 2000-07 business cycle, district counties with larger concentrations of retirement age populations in 2000 experienced weaker nonfarm income gains than other counties. In particular, rural counties with a share of retirement age population that is one standard deviation, or 4.5 percentage points, higher than average experienced nonfarm personal income growth over the business cycle that was 0.74 percentage points below average (Chart 7).⁹

Migration patterns

The migration patterns of young and middle-aged adults could also shape district economic growth potentials. For example, the out-migration of young adults limits rural populations and thus hampers economic growth. These out-migrants tend to have higher levels of education (Keeton and Newton), which could also reduce productivity growth and further limit the economic growth potential in a community.

In contrast, the return migration of middle-aged adults could boost a region's economic growth potential. The return migration strengthens population growth directly by increasing the number of working age people and indirectly by increasing the number of children when they return with their families. Middle-aged populations could also boost a region's productivity if they bring skills, experiences, and connections to outside business networks.¹⁰ And middle-aged populations are returning in their prime working years, when they typically experience their largest lifetime wealth gains.

The regression analysis finds that a county's economic growth is influenced by migration patterns. While the out-migration of young adults is expected to limit economic gains, the empirical results do not support this claim. The growth in the number of Gen Xers in the 1990s was used to measure the migration of young adults. From 1990 to 2000, this birth cohort would be graduating from high school and college and potentially migrating out of rural areas. While Chart 4 shows the number of Gen Xers declined in rural areas of the district during the 1990s, the regression analysis did not find a strong relationship between Gen Xer out-migration and nonfarm income from 2000 to 2007.

On the other hand, the regression analysis found that counties with strong in-migration of middle-aged adults experienced higher income gains in the future, other things held equal. The growth in the numbers of late boomers in the 1990s was used to measure the migration of middle-aged adults. From 1990 to 2000, the late boomers were in their thirties. The number of late boomers increased in the district's rural and metro counties during the decade. Counties with a middle-aged population growth of one standard deviation, or 22 percentage points higher than average, experienced nonfarm income growth that was 0.43 percentage point higher than average over the business cycle (Chart 7).¹¹

IV. POLICY IMPLICATIONS AND CONCLUSIONS

Demographic change is a cornerstone of economic growth. At its very core, economic growth is driven by the number of people in a community, the proportion that work, and how productive they are when they work. The pending retirement of the baby boomers and out-migration of young people challenge the economic growth potential in the

district, especially in its rural regions. Still, the district has quietly enjoyed the return migration of older residents. Middle-aged people and their families have moved to the district and appear to have helped spur economic gains, even in rural communities. Older populations have also relocated to the district, sparking growth in retirement destinations.

The pending growth in aged populations presents many challenges to rural communities in the Tenth District. Despite the handful of retirement destinations in the district, high concentrations of an aged population will strain economic gains by slowing population growth and labor force participation. Moreover, aging populations could also lead to pending wealth losses as some inheritances are transferred to heirs living outside the district's rural communities. In Nebraska, approximately \$1.9 billion in rural wealth is expected to be transferred annually over the next five decades (Nebraska Community Foundation).

Still, rural communities are working hard to retain some of this wealth locally. For example, the Nebraska Community Foundation has developed a network of rural community foundations to help retain wealth in rural communities. By creating a funding network, the Nebraska Community Foundation allows rural communities to pool funds and leverage resources to lower the administrative costs associated with managing community funds. At the same time, it allows individual rural communities to retain local control of local funds. By retaining wealth, these foundations hope to provide funds for rural investments.

While rural communities often focus on the out-migration of young adults, few focus on the in-migration of middle-aged residents and the benefits they offer. Counties experiencing stronger population gains among middle-aged adults enjoyed stronger income gains. Middle-aged adults are in their prime working years and have traditionally experienced the largest increases in personal wealth (Bucks and others). Moreover, in contrast to the exodus of young adults, the in-migration of middle-aged residents raises the potential that baby boomer wealth could remain in, or be transferred to, rural communities.

A challenge for rural communities is that the in-migration of middle-aged adults has not been large enough to offset the out-migration of young-adults. Today, in rural district counties, the number of late boomers and early Gen Xers is still below their 1980s levels. Nevertheless, the return migration of middle-aged adults has a stronger relation-

ship with economic growth than their out-migration as young adults. Thus, it is natural to ask if rural communities can find greater benefits from welcoming and encouraging middle-aged adults and their families to return home, rather than trying to keep young adults from leaving.

To be sure, middle-aged adults appear to be relocating in greater numbers to metropolitan areas and rural communities serving as retail centers with high concentrations of recreation activity and natural amenities. Yet, the growth in middle-aged populations has strengthened even in the smallest of rural communities and in farm dependent communities that have traditionally suffered the out-migration of young adults.

What attracts people to a community? People still move to places in search of job opportunities. But research is also finding that people are increasingly moving to places that offer a higher quality of life (Rappaport 2008). Their location choices change over their lifetime. Young adults prefer places with robust business environments. As they age, they prefer living in metro and nonmetro areas that offer more consumer amenities (Yong and Rosenthal). While rural communities need to develop their business environments, their ability to offer personal consumption amenities, such as education and health services, personal services, and recreational amenities are becoming increasingly important.

The goal of economic growth is to enhance the quality of life for people of all ages. As people age, the resources and services needed to support a high quality of life change. Change challenges communities, but it also provides opportunities. While aging populations and the out-migration of young adults are daunting challenges for rural communities, the attraction of middle-aged adults presents a new opportunity for economic growth. Rural communities that enhance the quality of life of their residents by expanding personal consumption amenities may be in the best position to entice middle-aged residents to come home to rural America.

APPENDIX A

A standard reduced-form economic growth model was used to analyze relationship between population and migration trends and non-farm income growth in Tenth District counties. Economic growth was measured as the average annual nonfarm income growth from 2000 to 2007, covering the last business cycle. Income growth was regressed against various characteristics of counties that are related to economic growth, including population and migration measures.

Equation 1 represents this reduced form equation,

$$INC_{2000\text{ to }2007} = f(L, I, U, T, A, P, M), \quad (1)$$

where $INC_{2000\text{ to }2007}$ is annualized county non farm income growth from 2000 to 2007. P and M represent measures of aged populations and the migration of adults and L , I , U , T , and A represent measures of labor force, infrastructure, urbanization, taxes, and amenity characteristics in the county, which are used to control for other county characteristics that are expected to influence economic growth. Control variables include educational attainment, per capita income levels, natural amenities, interstate and railroad infrastructure, state and local taxes. Dummy variables identifying metropolitan and micropolitan areas and counties adjacent to metropolitan areas were also included to account for urbanization effects and distance to urban markets. All independent variables were based on 2000 or prior year data.

The regression model was used to test three different hypotheses.

- 1) *Counties with higher concentrations of people age 65 and older have lower economic growth.* Aged populations were measured as the share of population age 65 and older in 2000. A negative relationship with income growth is expected.
- 2) *Counties with less out-migration of young adults in their twenties have stronger economic growth.* The growth in the number of late boomers born between 1970 and 1974 in the 1990s was used to measure the migration of young adults. A higher growth rate indicates that a county enjoyed less out-migration of young adults. A positive relationship with income growth is expected.
- 3) *Counties with higher in-migration of middle-aged adults in their thirties have stronger economic growth.* The growth in the number of Gen Xers born between 1960 and 1964 in the 1990s

was used to measure the migration of middle-aged adults. A positive relationship with income growth is expected.

Empirical models were estimated with ordinary least squares on all counties and only rural (non metro) counties in the Tenth District. The models were estimated in STATA using a robust error estimator to control for heteroskedasticity. The potential for spatial autocorrelation was addressed following Rappaport (2007). The regression models fit the data fairly well. The adjusted R-square measures were roughly 0.60. Table A1 presents the regression results.

As hypothesized, the model results find that counties with higher concentrations of retirement age population in 2000 had slower income growth between 2000 and 2007. Thus, as the population ages, reducing population growth rates and labor force participation, district communities could experience slower economic growth rates, particularly county incomes. The change in late boomer populations born between 1960 and 1964 was also positively and significantly related to county income growth as posited. Counties with stronger in-migration of residents in their thirties during the 1990s experienced stronger income gains between 2000 and 2007. However, the change in Gen X residents born between 1970 and 1974 was found to be positively but not significantly related to income growth, indicating that the outmigration of young adults was not related to future income growth.

Table A1

EMPIRICAL RESULTS ANNUALIZED COUNTY INCOME GROWTH 2000-2007

Variable	All District Counties		Rural (Non-metro) District Counties	
	Coefficient	St. Error	Coefficient	St. Error
Population 65 and over, percent of population 2000	-0.157	0.020 *	-0.164	0.021 *
Percent change in late boomer residents born 1960 to 1964 between 1990 and 2000	0.011	0.003 *	0.019	0.005 *
Percent change in Gen X residents born 1970 to 1974 between 1990 and 2000	0.001	0.002	-0.001	0.002
Per capita income, thousand dollars, 2000	-0.012	0.008	-0.016	0.012
Educational attainment, percent with bachelors degree, 2000	0.014	0.011	0.023	0.017
Metropolitan county dummy variable	0.133	0.260		
Micropolitan county dummy variable	0.296	0.157 *	0.299	0.160 *
Adjacent county dummy variable	0.047	0.140	-0.007	0.149
Natural amenity vairable, amenity rank	0.219	0.114 *	0.332	0.111 *
Interstate density, miles per square mile	3.215	2.162	5.721	3.796
Railroad density, miles per square mile	-0.013	0.009	0.001	0.014
Per capita state and local taxes, thousand dollars, 1997	-0.126	0.145	-0.050	0.494
Constant	1.933	0.895	1.197	0.996
Number of observations	509		406	
Adjusted R-squared	0.598		0.616	

* Significant at the 0.05 level

State dummy variables are excluded from the table for ease of presentation. Full results are available from the author upon request.

APPENDIX B

Table B1

DISTRICT ECONOMIC GROWTH POTENTIAL BY STATE
(AVERAGE ANNUAL PERCENT CHANGE)

1990 to 2008 Actual	Working Age Population Growth (1)	Labor Force Partici- pation Rate Growth (2)	Productivity Growth (3)	Real Gross State Output Growth (1 + 2 + 3)
District	1.13	0.05	1.87	3.05
Colorado	2.23	0.15	2.11	4.49
Kansas	0.67	0.13	1.73	2.54
Missouri	0.80	-0.07	1.59	2.32
Nebraska	0.66	0.14	2.02	2.82
New Mexico	1.64	-0.05	2.67	4.26
Oklahoma	0.73	0.00	1.64	2.37
Wyoming	0.95	0.07	0.99	2.01
2008 to 2020 Projected	Working Age Population Growth (1)	Labor Force Partici- pation Rate Growth (2)	Productivity Growth (3)	Real Gross State Output Growth (1 + 2 + 3)
District	0.36	-0.27	1.87	1.96
Colorado	0.48	-0.30	2.11	2.29
Kansas	0.28	-0.23	1.73	1.77
Missouri	0.42	-0.19	1.59	1.82
Nebraska	0.04	-0.28	2.02	1.78
New Mexico	0.55	-0.50	2.67	2.71
Oklahoma	0.20	-0.23	1.64	1.61
Wyoming	0.23	-0.56	0.99	0.66
2020 to 2030 Projected	Working Age Population Growth (1)	Labor Force Partici- pation Rate Growth (2)	Productivity Growth (3)	Real Gross State Output Growth (1 + 2 + 3)
District	0.48	-0.43	1.87	1.92
Colorado	0.92	-0.33	2.11	2.70
Kansas	0.25	-0.46	1.73	1.52
Missouri	0.40	-0.42	1.59	1.57
Nebraska	0.14	-0.47	2.02	1.69
New Mexico	0.30	-0.82	2.67	2.15
Oklahoma	0.46	-0.35	1.64	1.75
Wyoming	0.09	-0.70	0.99	0.37

Authors calculations based on Census projections of state population growth, national labor force participation, and gross state product.

APPENDIX C

Population and Migration Trends by County Type

Table C1

DISTRICT POPULATION 65 AND OLDER

Share of Population	2000	2008	Difference
Tenth District	12.4	12.7	0.3
Metropolitan counties	11.1	11.5	0.4
Nonmetro counties	15.2	15.6	0.4
Micropolitan counties	13.5	14.0	0.5
Town counties	17.3	17.6	0.3
Nonmetro typologies			
Economic Typology			
Farm dependent	18.4	18.7	0.3
Mining dependent	13.7	13.6	-0.1
Manufacturing dependent	15.3	15.4	0.1
Government dependent	12.1	13.1	1.0
Service dependent	11.2	12.5	1.3
Amenity Rank			
7 (High)	5.3	6.8	1.5
6	12.4	13.5	1.1
5	12.2	13.7	1.5
4	15.7	16.0	0.3
3	16.1	16.1	0.0
2 (Low)	17.7	17.8	0.0
Recreation	13.7	14.9	1.3
Retirement desination	16.1	17.9	1.8

Author's calculations based on Census population estimates and USDA county typologies.

Table C2

DISTRICT OUT-MIGRATION OF ADULTS 20 TO 29 YEARS OF AGE

	Late Boom- ers- born from 1960 to 1964 (Percent change from 1980 to 1990)	Gen X- born from 1965 to 1969 (Percent change from 1985 to 1995)	Gen X- born from 1970 to 1974 (Percent change from 1990 to 2000)
Tenth District	-7.3	-3.6	7.1
Metropolitan counties	2.8	3.8	18.3
Nonmetro counties	-25.8	-17.4	-14.9
Micropolitan counties	-22.1	-6.0	-11.3
Town counties	-30.4	-32.5	-19.9
Nonmetro typologies			
Economic typology			
Farm dependent	-33.4	-40.5	-27.6
Mining dependent	-22.9	-32.2	-21.9
Manufacturing dependent	-22.5	-20.7	-14.1
Government dependent	-25.2	14.5	-18.1
Service dependent	6.1	16.2	66.1
Amenity rank			
7 (High)	61.3	58.3	224.4
6	-18.9	-0.3	7.4
5	-21.0	-19.5	-6.4
4	-27.0	-18.8	-16.2
3	-26.7	-17.5	-20.6
2 (Low)	-32.9	-25.9	-25.9
Recreation	-8.5	-5.5	30.2
Retirement destination	-19.1	-16.8	0.8

Author's calculations based on Census population estimates and USDA county typologies.

In 1980, Late Boomers born in 1960 to 1964 were between the ages of 15-19. In 1990 they were between the ages of 25 and 29.

In 1985 Gen X'ers born in 1965 to 1969 were between the ages of 15-19. In 1995 they were between the ages of 25 and 29.

In 1990, Gen X'ers born in 1970 to 1974 were between the ages of 15-19. In 2000, they were between the ages of 25 and 29.

Table C3

DISTRICT IN-MIGRATION OF ADULTS AGES 30 TO 40

Share of Population	Late Boomers- born 1960 to 1964 (Percent change from 1990 to 2000)	Gen X- born from 1965 to 1969 (Percent change from 1995 to 2005)
Tenth District	12.4	12.7
Metropolitan counties	11.1	11.5
Nonmetro counties	15.2	15.6
Micropolitan counties	13.5	14.0
Town counties	17.3	17.6
Nonmetro typologies		
Economic typology		
Farm dependent	18.4	18.7
Mining dependent	13.7	13.6
Manufacturing dependent	15.3	15.4
Government dependent	12.1	13.1
Service dependent	11.2	12.5
Amenity rank		
7 (High)	5.3	6.8
6	12.4	13.5
5	12.2	13.7
4	15.7	16.0
3	16.1	16.1
2 (Low)	17.7	17.8
Recreation	13.7	14.9
Retirement destination	16.1	17.9

Author's calculations based on Census population estimates and USDA county typologies.

In 1990, Late boomers were between the ages of 25-29. In 1990, they were between the ages of 35 and 39.

In 1995, Gen X'ers were between the ages of 25-29. In 2005, they were between the ages of 35-39.

ENDNOTES

¹The Tenth District includes the states of Colorado, Kansas, Nebraska, Oklahoma, Wyoming, western Missouri, and northern New Mexico.

²As a result, regions with larger retirement age populations are expected to have lower levels of economic growth. Cross-country analysis from 1965 to 1995 has revealed that nations with a workforce age population accounting for a high and rising share of the total population had higher levels of income per capita (Bloom and Canning)

³In 2005, the Census Bureau provided interim state level population projections by age and sex through 2030. The projections were produced to be consistent with interim projections of U.S. population assuming that recent fertility, mortality, and migration trends persist. When compared to the 2008 annual population estimates, the 2005 projections have underestimated District population growth. Between 2000 and 2008, District populations were projected to expand 0.7 percent annually, but actually rose 0.9 percent annually according to the 2008 estimates. If this trend continues, the economic growth potential of the District will be stronger than projected.

⁴After World War II, the entry of women in the workforce and the birth of the baby boomer generation between 1946 and 1964 have expanded labor force pools and contributed to stronger national economic growth (Daly and Regev). According to the Congressional Budget Office (CBO), as the baby boomer generation entered the workforce, labor force growth jumped, contributing 2.5 percentage points annually to the U.S. economy. Since then, labor force growth has steadily slowed and over the next decade, labor force growth is expected to contribute only 0.6 percent to national economic growth as baby boomers retire.

⁵With the retirement of the baby boomer generation, national labor force participation rates are projected to decline from 67.1 to 61.7 percent by 2030. These projections assume that participation rates of people aged 75 and older rise from 5.3 percent in 2000 to 10.6 percent by 2030 (Toossi). Improved health of older populations, less strenuous jobs, and changes in pensions and medical benefits have contributed to higher labor force participation of older adults (Daly and Regev). Declining wealth in the current recession is also expected to extend work years. Stronger than expected labor force participation rates would boost the District's economic growth potential.

⁶In recent decades, economic gains have been fueled by stronger productivity growth. The emergence of computer and information technology and the development of the Internet and e-commerce activity have spurred labor productivity gains (Jorgenson, Ho, and Stiroh; Willis; Willis and Wroblewski). After doubling in the 1980s, productivity growth has edged up over the past two decades and is projected to hold steady, contributing 1.6 percentage points to the U.S. economy over the next decade (Congressional Budget Office).

⁷While the Census Bureau provides annual state level population estimates for every age, county level population estimates are only available in 5 year age groups. As a result, boomer populations at the county level are approximated by combining the 50-54, 55-59, and 60 to 64 year old age groups. In 2008, people between the ages of 50 and 65 accounted for 18.6 percent of the rural population compared to 18.2 percent in metro areas.

⁸Due in part to the migration of retirees, some high amenity and recreation areas have also experienced a rise in retirement age populations (Reeder and Brown). High-amenity areas are those with warm, sunny winters and cooler summers, often with scenic views of mountains or waters. Recreation areas are those with tourism activity and seasonal housing. More complete definitions are available at the Economic Research Service, U.S. Dept. of Agriculture. www.ers.usda.gov/Briefing/Rurality/

⁹It is important to remember that rural retirement destination counties have enjoyed stronger employment gains than other rural communities, although per capita incomes tend to be lower than other rural regions (Beale).

¹⁰Malecki finds that hard and soft networks help bolster the competitiveness of regions. Rosenfeld discusses how networks and business clusters can support rural economic growth.

¹¹For all District counties, counties with a middle-aged population growth of one standard deviation, or 29 percentage points higher than average, experienced nonfarm income growth that was 0.33 percentage points higher than average over the 2000 to 2007.

REFERENCES

- Beale, Calvin. 2005. "Rural America as a Retirement Destination," *Amber Waves*, Economic Research Service, U.S. Department of Agriculture, July, www.ers.usda.gov/Amberwaves/June05/Findings/RetirementDestination.htm.
- Bloom, David E., and David Canning. 2004. "Global Demographic Change: Dimensions and Economic Significance," *Global Demographic Change: Economic Impacts and Policy Challenges*, a symposium sponsored by the Federal Reserve Bank of Kansas City, August 26-28, pp. 9-56.
- Bucks, Brian K., Arthur B. Kennickell, Traci L. Mach, and Kevin B. Moore. 2009. "Changes in U.S. Family Finances from 2004 to 2007: Evidence from the Survey of Consumer Finances," *Federal Reserve Bulletin*, vol. 95 pp. A1-A56, www.federalreserve.gov/pubs/bulletin/2009/pdf/scf09.pdf.
- Congressional Budget Office. 2009. *A Preliminary Analysis of the President's Budget and an Update of CBO's Budget and Economic Outlook*, March, www.cbo.gov/ftpdocs/100xx/doc10014/03-20-PresidentBudget.pdf.
- Daly, Mary, and Tali Regev. 2007. "Labor Force Participation and the Prospects for U.S. Growth," Federal Reserve Bank of San Francisco, *Economic Letter*, November 2, Issue 07-33, www.frbsf.org/publications/economics/letter/2007/el2007-33.pdf.
- Economic Research Service, U.S. Department of Agriculture, 1995, AIB-710, February, www.ers.usda.gov/publications/aib710/index.htm.
- Engelhardt, Gary V. 2006. "Housing Trends Among Baby Boomers," Research Institute for Housing America.
- Ernst & Young LLP Tax Practice. 2007. *Aging U.S. Workforce Survey: Challenges and Responses and Ongoing Review*.
- Jorgenson, Dale W., Mun S. Ho, and Kevin J. Strioph. 2003. "Lessons from the U.S. Growth Resurgence," *Journal of Policy Modeling*, vol. 25, pp. 453-70.
- Keeton, William R., and Geoffrey B. Newton. 2006. "Migration in the Tenth District: Long-Term Trends and Current Developments," *Economic Review*, Federal Reserve Bank of Kansas City, Third Quarter, pp. 33-74 www.kansascityfed.org/Publicat/ECONREV/PDF/3Q06keet.pdf.
- Kleisen, Kevin. 2007. "As Boomers Slow Down, So Might the Economy," *The Regional Economist*, Federal Reserve Bank of St. Louis, July, pp. 12-13, <http://research.stlouisfed.org/publications/regional/07/07/boomers.pdf>.
- Malecki, Edward. 2002. "Hard and Soft Networks for Urban Competitiveness," *Urban Studies*, vol. 39, nos. 5-6, pp. 929-45.
- Miller, Glenn. 1994. "People on the Move: Trends and Prospects in District Migration Flows," *Economic Review*, Federal Reserve Bank of Kansas City, Third Quarter, pp. 39-54, www.kansascityfed.org/PUBLICAT/ECONREV/PDF/3Q94MILL.pdf.
- Nebraska Community Foundation. "County-Based Transfer of Wealth Analysis," www.nebcommfound.org/wealthanalyses.htm.
- Rappaport, Jordan, 2008. "Consumption Amenities and City Population Density," *Regional Science and Urban Economics*, vol. 38, no. 6, pp. 533-52.
- _____. 2007. "Moving to Nice Weather," *Regional Science and Urban Economics*, vol. 37, no. 3, May, pp. 375-98.

- Reeder, Richard J., and Dennis M. Brown. 2005. *Recreation, Tourism, and Rural Well-Being*, Economic Research Service, U.S. Department of Agriculture, ERR-7, August, www.ers.usda.gov/publications/err7/.
- Rosenfeld, Stuart A. 2001. "Networks and Clusters: The Yin and Yang of Rural Development," conference proceedings *Exploring Policy Options for a New Rural America*, Federal Reserve Bank of Kansas City, pp. 103-20, www.kansascityfed.org/PUBLICAT/Exploring/RC01Rose.pdf.
- Toossi, Mitra. 2006. "A New Look at Long Term Labor Force Projections to 2050," *Monthly Labor Review*, November, pp. 19-39, www.bls.gov/opub/mlr/2006/11/art3full.pdf.
- Willis, Jonathan 2004. "What Impact Will E-Commerce Have on the U.S. Economy?" Federal Reserve Bank of Kansas City. *Economic Review*. Second Quarter, pp. 53-71, www.kansascityfed.org/PUBLICAT/ECONREV/PDF/2Q04Will.pdf.
- _____ and Julie Wroblewski. 2007. "What Happened to the Gains from Strong Productivity Growth?" Federal Reserve Bank of Kansas City. *Economic Review*. First Quarter, pp. 5-23, www.kansascityfed.org/PUBLICAT/ECONREV/PDF/1q07will.pdf.
- Yong, Chen, and Stuart Rosenthal. 2008. "Local Amenities and Life-Cycle Migration: Do People Move for Jobs or Fun?" *Journal of Urban Economics*, November, vol. 64, no. 3, pp.519-37.