

A 60-Year Perspective on Pennsylvania's Rural Population

March 2009

How has Pennsylvania's rural population changed over the past 30 years and what kind of changes might it expect in the future? A 60-year analysis of population data and population projections by the Center for Rural Pennsylvania revealed that Pennsylvania's rural population is likely to grow slowly and unevenly, and that the average age of its residents will increase.

Methods

To conduct the analysis on Pennsylvania's rural population, the Center looked at two, 30-year time periods – 1970 to 2000 and 2000 to 2030 – and used the following data sources:

U.S. Census Bureau: State- and county-level population data from 1970 to 2000; state-level population projections for 2000 to 2030; and county-level data on housing units and population by race from 1970 to 2000.

Pennsylvania State Data Center: County-level population and age cohort projections from 2010 to 2030, which are based on a cohort-component, demographic-projection model that accounts for the components of population change. It includes natural increase (births minus deaths) and net migration (in-migration minus out-migration). More information on this model and its limitations is available on the Pennsylvania State Data Center's website at <http://pasdc.hbg.psu.edu/>.

Pennsylvania Department of Health: County-level data on the number of live births and deaths from 1970 to 2000.

U.S. Bureau of Economic Analysis: County-level data on employment and personal per capita income from 1970 to 2000. The personal income data were adjusted for inflation using the CPI-U with 2000=100.

Findings

Rural Pennsylvania Population Change 1970 to 2000

- In 1970, Pennsylvania's 48 rural counties were home to 3.05 million residents. By 2000, that number increased to 3.39 million, an increase of 11 percent.
- Rural Pennsylvania experienced uneven population growth over this period. Adams, Butler, Centre, Monroe and Pike counties accounted for 73 percent of this growth and 14 counties lost population.
- Rural population change was significantly correlated with changes in the number of minorities, employment, and housing units. This suggests that, as population increased, so did the number of minorities, employment and the number of new homes.
- The population increase was driven by a combination of births and in-migration. During this period, there were 227,900 more births than deaths. Rural Pennsylvania also experienced three migration waves over the 30-year period. During the first wave, from 1970 to 1980, rural counties gained about 92,200 new residents; during the second, from 1980 to 1990, rural counties lost about 110,300 residents because of out-migration; and during the third, from 1990 to 2000, rural counties gained nearly 101,500 people. The net result of these three waves was a gain of more than 83,000 residents.
- During the last rural migration wave (1990-2000),

Definitions

Rural and Urban

A county was considered rural when its population density (number of persons per square mile) was below the statewide average. A county with a population density at or above the statewide average was considered urban. In 2000, the statewide population density was 274 persons per square land mile. From 1970 to 2000, the number of rural and urban counties did not change (48 and 19, respectively). From 2000 to 2030, only one county, Monroe, is projected to change from rural to urban. For this analysis, Monroe is classified as a rural county. No county is projected to change from urban to rural during this period.

Natural Population Change and Migration

Natural population change is calculated by subtracting the number of live births from the number of deaths. It is possible to have either positive or negative natural population change. Migration is determined by subtracting the total population change from the natural population change. If the resulting number is positive, in-migration occurred. If the number is negative, out-migration occurred.

Data Limitations

Population projections are just that—projections. Economic shifts, changes in immigration law, and many other factors could fundamentally change these projections. At the county level, these projections become even less reliable due to changes in housing development, and business growth and decline. Despite these limitations, the projections provide a useful window for examining Pennsylvania's future population changes.

the distribution of new residents was not widespread. Adams, Butler, Monroe, Pike and Wayne counties became home to nearly 70 percent of new residents.

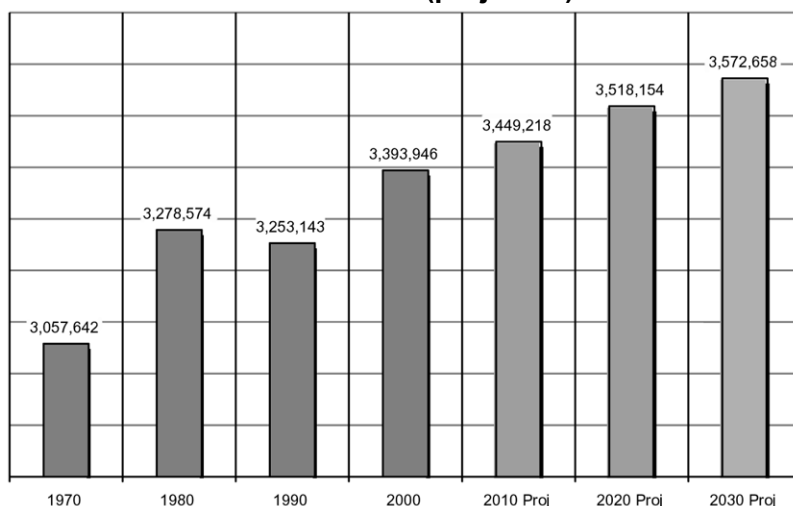
2000 to 2030

- In 2030, rural counties are projected to have a total population of 3.57 million, an increase of 5 percent from 2000.

- The population growth will again be uneven, as 20 rural counties are projected to have a population gain and 28 counties are projected to have a population loss. The counties that are projected to gain population – Butler, Monroe, and Pike – will account for 52 percent of the growth.

- There is no significant correlation between population change and the natural rate of population change (births minus deaths). This suggests that most of the future population growth will be driven by in-migration rather than increasing births.

Figure 1: Rural Pennsylvania Population 1970 to 2030 (projected)



Data sources: U.S. Census Bureau and Pennsylvania State Data Center

Urban Pennsylvania Population Change 1970 to 2000

- In 1970, 8.73 million people lived in Pennsylvania's 19 urban counties. In 2000, the population increased 2 percent to 8.88 million.

- The slow growth among urban counties was largely the result of population losses in Allegheny and Philadelphia counties. Excluding these two counties, the remaining 17 urban counties had a combined population increase of 17 percent.

- Urban population change was significantly correlated with changes in housing units and employment. This suggests that, as population changed, so did the number of new homes and employment.

2000 to 2030

- Projections show that, by 2030, 9.62 million people will live in urban Pennsylvania, an increase of 730,000 residents, or 8 percent, from 2000.

- Thirteen of Pennsylvania's 19 urban counties are projected to see a population increase from 2000 to 2030. The fastest growing county is Chester, with a 60 percent increase. Seven urban counties are projected to lose population. The largest declines are expected in Allegheny and Beaver counties, each with a loss of 11 percent or more.

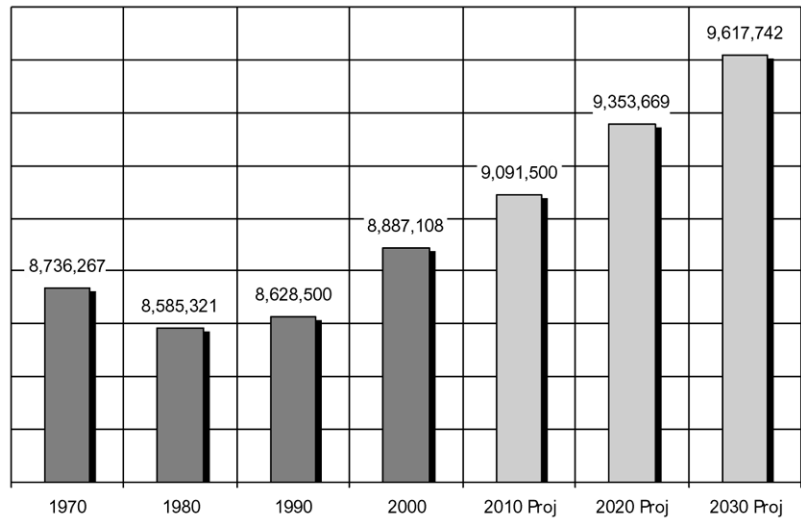
United States Population Change 1970 to 2000

- In 1970, there were 203.3 million people living in the U.S. In 2000, this number increased to 281.4 million, a gain of 78.1 million people or 38 percent.
- Five states doubled their population: Alaska, Arizona, Florida, Nevada and Utah. Pennsylvania had a 4 percent increase and was the nation's 46th fastest growing state. The four states that grew slower than Pennsylvania were Iowa, New York, North Dakota and West Virginia.

2000 to 2030

- Projections show that, by 2030, 363.6 million people will live in the U.S., a 29 percent increase from 2000, or 82.2 million residents.
- The fastest growing states are projected to be Arizona, Florida, Nevada and Texas. Each is expected to see a 60 percent or more increase in population. Pennsylvania is projected to have a 4 percent population gain and will be the nation's 45th fastest growing state. Three of Pennsylvania's neighboring states are expected to have a slower population growth: New York (3 percent), Ohio (2 percent) and West Virginia (-5 percent).

Figure 2: Urban Pennsylvania Population 1970 to 2030 (projected)



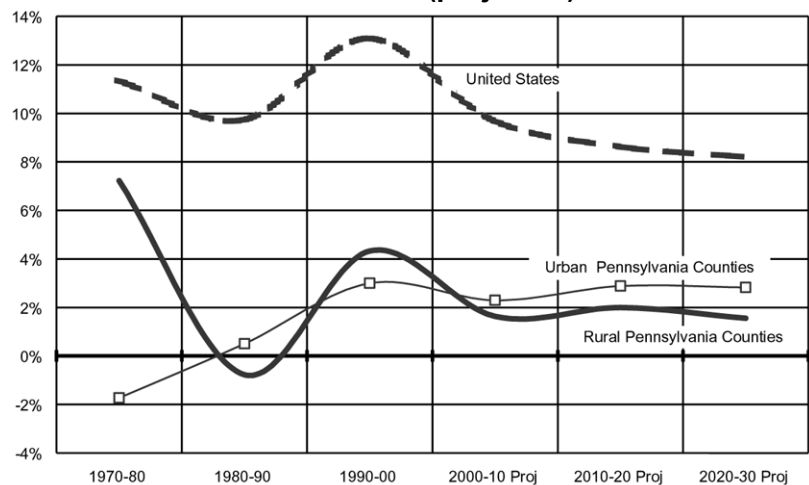
Data sources: U.S. Census Bureau and Pennsylvania State Data Center

Elements of Population Change

Children and Youth (Under 20 Years Old)

- In 1970, 37 percent of rural Pennsylvanians, or 1.1 million people, were under 20 years old. In 2000, 26 percent of rural Pennsylvanians, or nearly 884,500 people, were under 20 years old.
- From 1970 to 2000, there was a 21 percent decline in the number of people under 20 years old. This decline was driven, in part, by a declining birth rate and by baby boomers (those born between 1946 and 1964) moving from their teenage to adult years.
- From 2000 to 2030, the number of children and

Figure 3: Percent Change in Population in the U.S., and in Rural and Urban Pennsylvania Counties 1970 to 2030 (projected)



Data sources: U.S. Census Bureau and Pennsylvania State Data Center

youth is projected to decline. In 2030, 22 percent of the rural population is projected to be younger than 20 years old. From 2000 to 2030, the number of people in this age cohort is projected to decline 9 percent. In urban counties, the number of children and youth is projected to increase 2 percent.

Working Age Adults (20 to 64 Years Old)

- In 1970, 52 percent of rural Pennsylvanians, or 1.59 million people, were between 20 and 64 years old. In 2000, 57 percent of rural Pennsylvanians, or nearly 1.95 million people, were working age.
- From 1970 to 2000, there was a 23 percent increase in working age adults in rural Pennsylvania. According to data from the Pennsylvania Department of Labor and Industry, the number of people in the rural labor force during this period increased 38 percent. The difference is partly a result of out-of-state and urban commuters working in rural counties.
- The number of working age adults in urban counties grew slower (10 percent) from 1970 to 2000 than in rural counties (23 percent). The urban county labor force also grew slower than the rural labor force (22 percent and 38 percent, respectively).
- From 2000 to 2030, the number of working age rural adults is projected to decline 3 percent. In urban counties, the number is projected to decline 1 percent.

Senior Citizens (65+ Years Old)

- In 1970, there were 346,100 senior citizens (65+ years old), or 11 percent of the population, in rural Pennsylvania. In 2000, there were 556,400 senior citizens, or 16 percent of the population, in rural Pennsylvania.
- From 1970 to 2000, there was a 61 percent increase in the number of rural senior citizens. Some rural counties, however, had a much larger increase. In Adams, Butler, Centre, Monroe, Pike and Union counties, the number of senior citizens more than doubled.
- In urban counties, there was a 47 percent increase in senior citizens between 1970 and 2000.
- The number of rural senior citizens is projected to increase 58 percent from 2000 to 2030. This increase will be driven by baby boomers, who, in 2030, will be 66 to 84 years old. In 2030, 25 percent of rural Pennsylvania's population will be 65 years old and older.
- In urban counties, the number of senior citizens is projected to increase 47 percent from 2000 to 2030. In 2030, 22 percent of Pennsylvania's urban population will be 65 years old and older.

Summary

This analysis identified three significant patterns in rural Pennsylvania's population over the next 30 years: slow growth, uneven growth, and an aging population.

Slow Growth

In the 60-year span of 1970 to 2030, rural Pennsylvania's population is projected to experience a gain of 17 percent, or 515,000 new residents. In comparison, the U.S. population is expected to grow 79 percent, for a gain of 160.2 million residents.

Low birth rates and low in-migration rates are two factors affecting rural Pennsylvania's population. Together, these two factors have created a downward trend where, each year, there are fewer and fewer young women in their childbearing years.

Uneven Growth

While rural Pennsylvania, as a whole, is projected to have slow growth from 2000 to 2030, some counties will experience faster growth rates and others may experience population losses. For example, 10 rural counties are projected to have an increase of more than 20 percent (10 will have a population increase of 0 percent to 19 percent) while 28 rural counties are projected to have a decline.

With some exceptions, rural counties in eastern Pennsylvania will likely see an average increase of about 19 percent from 2000 to 2030, while rural counties in the west will see a 3 percent decline. This east/west population split is not a new pattern. From 1970 to 2000, rural counties in the east had an average population increase of 28 percent while those in the west had a 2 percent increase.

This uneven population growth could affect the types of issues rural counties face in each region. For some counties, issues such as land use, housing and farmland preservation will continue to be important. For others, economic development, improved social services, and health care for an aging population may require more attention.

Aging Population

Pennsylvania is, and will continue to be, an "aging" state. This is especially true in rural counties. By 2030, rural Pennsylvania is projected to have more senior citizens than children and youth.

From 2000 to 2030, the number of people under 20 years old is projected to decrease 9 percent, while the number of people 65 years old and older is projected to

increase 58 percent. These changes have a distinct regional pattern. Rural counties in eastern Pennsylvania are projected to have a 4 percent increase in children and youth and a 72 percent increase in senior citizens; rural counties in western Pennsylvania are projected to have an 18 percent decline in children and youth and a 49 percent increase in senior citizens.

The aging population will likely affect rural schools, volunteer organizations, and employers.

Discussion

What do these population projections mean for rural Pennsylvania? Below are eight areas in which population changes may affect rural Pennsylvania.

Economic Development

With a declining number of working age adults, some businesses may face labor shortages as there will be a smaller labor pool from which to draw. In turn, some businesses may relocate or invest in more automation.

To address the needs of an older population, the mix of rural businesses may change. For example, businesses that cater to children and young families may find fewer and fewer customers, while those that address the needs of the elderly may see an increase in clientele.

Education

The projected decline in the number of rural children and youth will be most keenly felt by school districts. With fewer students, school districts will need to make difficult decisions on whether to keep school buildings open. In addition, some districts will see their fixed costs (transporta-

Figure 4: Pennsylvania Population by County, 1970 to 2030 (projected)

	POPULATION			% CHANGE	
	1970	2000	2030 (Proj.)	1970-2000	2000-2030 (Proj.)
Pennsylvania	11,793,909	12,281,054	13,190,400	4.1%	7.4%
Adams	56,937	91,292	114,689	60.3%	25.6%
Allegheny	1,605,016	1,281,666	1,132,736	-20.1%	-11.6%
Armstrong	75,590	72,392	63,736	-4.2%	-12.0%
Beaver	208,418	181,412	147,744	-13.0%	-18.6%
Bedford	42,353	49,984	51,926	18.0%	3.9%
Berks	296,382	373,638	491,914	26.1%	31.7%
Blair	135,356	129,144	107,272	-4.6%	-16.9%
Bradford	57,962	62,761	58,680	8.3%	-6.5%
Bucks	415,056	597,635	697,961	44.0%	16.8%
Butler	127,941	174,083	220,496	36.1%	26.7%
Cambria	186,785	152,598	124,101	-18.3%	-18.7%
Cameron	7,096	5,974	5,612	-15.8%	-6.1%
Carbon	50,573	58,802	69,098	16.3%	17.5%
Centre	99,267	135,758	166,148	36.8%	22.4%
Chester	278,311	433,501	692,054	55.8%	59.6%
Clarion	38,414	41,765	37,895	8.7%	-9.3%
Clearfield	74,619	83,382	79,890	11.7%	-4.2%
Clinton	37,721	37,914	32,263	0.5%	-14.9%
Columbia	55,114	64,151	69,765	16.4%	8.8%
Crawford	81,342	90,366	90,088	11.1%	-0.3%
Cumberland	158,177	213,674	282,921	35.1%	32.4%
Dauphin	223,834	251,798	269,855	12.5%	7.2%
Delaware	600,035	550,864	583,942	-8.2%	6.0%
Elk	37,770	35,112	26,269	-7.0%	-25.2%
Erie	263,654	280,843	267,538	6.5%	-4.7%
Fayette	154,667	148,644	131,874	-3.9%	-11.3%
Forest	4,926	4,946	7,999	0.4%	61.7%
Franklin	100,833	129,313	148,596	28.2%	14.9%
Fulton	10,776	14,261	17,506	32.3%	22.8%
Greene	36,090	40,672	38,857	12.7%	-4.5%
Huntingdon	39,108	45,586	47,564	16.6%	4.3%
Indiana	79,451	89,605	66,095	12.8%	-26.2%
Jefferson	43,695	45,932	42,529	5.1%	-7.4%
Juniata	16,712	22,821	25,696	36.6%	12.6%
Lackawanna	234,107	213,295	194,835	-8.9%	-8.7%
Lancaster	319,693	470,658	553,293	47.2%	17.6%
Lawrence	107,374	94,643	83,348	-11.9%	-11.9%
Lebanon	99,665	120,327	131,118	20.7%	9.0%
Lehigh	255,304	312,090	381,738	22.2%	22.3%
Luzerne	342,301	319,250	287,943	-6.7%	-9.8%
Lycoming	113,296	120,044	109,969	6.0%	-8.4%
McKean	51,915	45,936	39,716	-11.5%	-13.5%
Mercer	127,175	120,293	122,967	-5.4%	2.2%
Mifflin	45,268	46,486	45,599	2.7%	-1.9%
Monroe	45,422	138,687	239,824	205.3%	72.9%
Montgomery	623,799	750,097	888,265	20.2%	18.4%
Montour	16,508	18,236	17,038	10.5%	-6.6%
Northampton	214,368	267,066	342,081	24.6%	28.1%
Northumberland	99,190	94,556	92,182	-4.7%	-2.5%
Perry	28,615	43,602	45,638	52.4%	4.7%
Philadelphia	1,948,609	1,517,550	1,408,232	-22.1%	-7.2%
Pike	11,818	46,302	94,374	291.8%	103.8%
Potter	16,395	18,080	17,153	10.3%	-5.1%
Schuylkill	160,089	150,336	146,078	-6.1%	-2.8%
Snyder	29,269	37,546	38,955	28.3%	3.8%
Somerset	76,037	80,023	76,298	5.2%	-4.7%
Sullivan	5,961	6,556	6,287	10.0%	-4.1%
Susquehanna	34,344	42,238	77,530	23.0%	83.6%
Tioga	39,691	41,373	39,680	4.2%	-4.1%
Union	28,603	41,624	52,280	45.5%	25.6%
Venango	62,353	57,565	50,205	-7.7%	-12.8%
Warren	47,682	43,863	32,145	-8.0%	-26.7%
Washington	210,876	202,897	212,986	-3.8%	5.0%
Wayne	29,581	47,722	67,197	61.3%	40.8%
Westmoreland	376,935	369,993	380,588	-1.8%	2.9%
Wyoming	19,082	28,080	20,565	47.2%	-26.8%
York	272,603	381,751	482,984	40.0%	26.5%

Data sources: U.S. Census Bureau and Pennsylvania State Data Center

tion, teachers, etc.) remain the same or increase even though they have fewer and fewer students each year.

The decline in children and youth will also affect colleges and universities. Although the impact will not be as immediate as it is on school districts, colleges and universities will likely find their pool of traditional student applicants becoming smaller. As a result, some higher educational institutions will need to be more aggressive in reaching out to non-traditional and out-of-state students.

Health Care

In the future, maternity wards may be far less busy than geriatric wards. This will likely cause a shift in the types of medical professionals needed. In rural counties, recruiting these professionals may be more difficult as the demands for their services increase across the entire state and nation.

Home health care may become increasingly important as families try to keep elderly relatives in their homes as long as possible.

Social Services

As rural Pennsylvania's population ages, many older residents may increase their dependency on public transportation and other shared transportation services to complete daily errands and keep appointments. In rural counties, these shared services may need to be increased to meet these demands.

Housing

The demand for large homes, suitable for families with children, may decline as the population ages. In some counties, this shift could cause a short-term decline in housing prices as well as shortages in housing that is suitable for smaller families.

Taxes

With fewer working age adults (20 to 64 year olds), school districts and municipalities that rely on earned income taxes may experience revenue declines. It is unclear whether property taxes can make up the difference.

Recreation

With an aging population, recreational needs will likely change. Playgrounds and skateboard parks will likely see less use, while walking trails and horseshoe courts may become more popular.

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Community Organizations

Youth organizations, such as baseball leagues, soccer clubs, and scouts, may find it difficult to recruit members. The same is true for volunteer fire companies and other community service organizations.