



The Aging of Rural Indiana's Population

Introduction

In a recent news briefing, the U.S. Census Bureau reported that one in seven persons in the U.S. is 65 or older, totaling 43.1 million (U.S. Census Bureau 2012). Over the last decades, both the number and share of those 65 and older have steadily increased, and they will grow even further in the decades ahead. The increase in the number and share of the older population is referred to as the aging of a population. In this publication, we explore whether rural Indiana is experiencing an aging of its population similar to that of the U.S. population as a whole. We begin, however, by first explaining the causes and consequences of the aging of a population.

Causes and Consequences of Population Aging

Population aging is made up of two dimensions: (1) the increase in the absolute number of the elderly and (2) the increase in the share or percentage of the elderly. It is important to make this distinction because the two components have different causes as well as different consequences (Figure 1).

The rise in the absolute number of the elderly is caused by rising life expectancies. Today, due to a variety of reasons such as medical advances and improved food security, people can expect to live much longer than in the past. In the U.S., the life expectancy is 81 years for women and 76 years for men (Hoyert and Xu, 2012). In comparison, half a century ago, women could only expect to live 73 years and men 67 years (Arias, 2012).

Today's increase in the absolute number of the population 65+ is also caused by the large baby boom generation. The baby boom generation is defined as persons born between 1946 and 1964. This generation is much larger than earlier and later generations. It is quite noticeable in the so-called population pyramids of the United States, shown in Figures 2 and 3. (See Haub (2013) for an excellent explanation of population pyramids and how drastically they can change within just a few decades [<http://www.prb.org/Articles/2013/population-pyramids.aspx>]).

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The Rural Indiana Issues Series

Audience: Local and state leaders who work with rural communities.

Purpose: To find data about issues of concern in rural communities and to interpret that data in meaningful ways to aid in decision-making.

Method: U.S. Census data analyzed across the county groupings—rural, rural/mixed, urban.

Potential Topics: Demographic changes, business development, health, health care, local government, taxes, education, agriculture, natural resources, leadership development, etc.

Outcome: Better, more informed decisions by rural decision-makers.

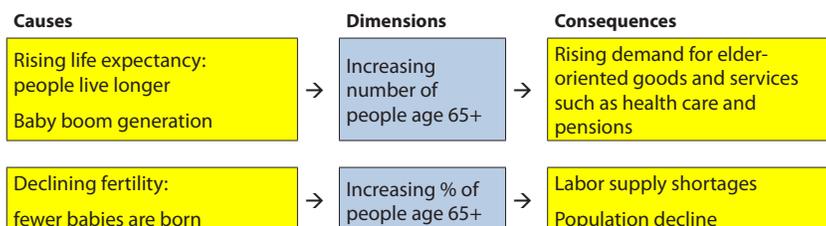


Figure 1. Causes and Consequences of Population Aging

Figure 2 shows the population pyramid of the U.S. population in 1980: men on the left side, women on the right, and five-year age groups on the vertical. The baby boomers are marked in yellow. In 1980, the youngest baby boomers had not yet finished high school, whereas the oldest baby boomers were approaching their 35th birthday. At the very top of the pyramid, marked in grey color, is the population age 65 and older. In total, there were 25.7 million belonging to this group, or 11.3% of the total population. Because women live, on average, longer than men, the older age group is heavily dominated by women. Among persons 65 and older, 60 % were women; among persons 80 years and older, 70% were women.

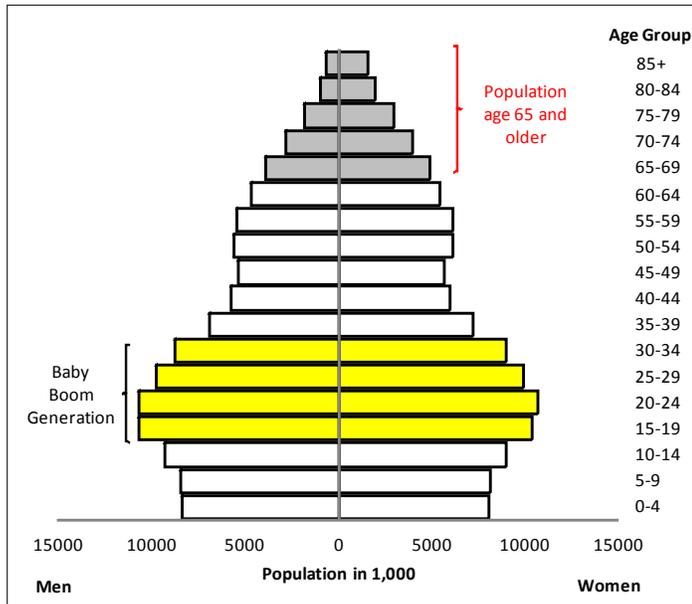


Figure 2. Population Pyramid of the U.S. Population, 1980
 Source: U.S. Census Bureau, <http://www.census.gov/population/international/index.html>

Figure 3 shows the succession of population pyramids from 1980 to 2030. They show quite distinctly the aging of the baby boomers. By 2010, the youngest baby boomers were in their late forties, and the oldest were approaching their 65th birthday. By 2030, all baby boomers will be 65 or older and will in fact make up the majority of 65+ers. In total, there will be almost three times as many elderly as in 1980. As the number of the elderly is rising, so is the demand for elder-oriented goods and services, most notably, social security and health care services.

Meeting the demand for elder-oriented goods and services becomes an issue if the younger generations are too small to provide for such services. Here, the second dimension of aging comes into play. Since the mid 1960s, fertility rates have been much lower than during the two decades following World War II. As a result, the share of the older population grew and is expected to grow even further over the next 50 years. In fact, by 2060, the population age 65+ will have reached 92 million and will account for one in five, or 20 percent, of the entire U.S. population (U.S. Census Bureau 2012). As the share of the elderly grows, the share of the younger and working-age population declines, thereby creating a bottleneck for the provision of the elder-oriented

services. If fertility rates continue to drop or stay low, then the population will eventually decline as well. This is the case in some European countries. In the U.S., such a scenario is unlikely to occur, at least not within the next 50 years. Compared to many European countries, the U.S. is protected against the extreme form of population aging because of three factors: fertility is higher, life expectancy is somewhat shorter, and more and steady immigration serves as an important buffer moderating the negative consequences of population aging.

Population Aging in Rural Indiana

Although population aging and its consequences are relatively mild for the U.S. as a whole, they can be quite challenging for smaller regions within the country. In fact, compared to the nation as a whole, aging is more pronounced in Indiana and especially in rural Indiana.

Figure 4 (page 4) depicts the population pyramids for rural Indiana in 2000 and in 2010. As was the case for the U.S. as a whole, the baby boom generation (in yellow) is quite distinct and will be responsible for a huge increase in the number of elderly residents in rural Indiana over the next two decades. As they enter retirement, they will take with them a wealth of work experience. Another similarity with the nation as a whole is that older women outnumber men by quite a margin; among those 80 years and older, two thirds are female.

The most remarkable aspect of rural Indiana's population pyramid is its hourglass shape. This hourglass shape symbolizes that the old and the young generations are overrepresented, whereas the young adult population is comparatively small in size. This is the result of the working-age population leaving rural Indiana for education and employment opportunities elsewhere. The rising number of immigrants can dampen or even reverse such losses (Baldos et al. 2009).

Take for example the group of people who were 15 to 19 years old in 2000; by 2010, this group had aged by 10 years (follow the red arrow in Figure 4). Over the 10 years, the group shrank by 16,023 people, from 64,091 in 2000 to only 48,068 people in 2010. Given the low mortality rates for the young (Hoyert and Xu 2012), it can be estimated that fewer than 500 deaths contributed to the loss. Instead, the bulk of the decline is the result of more people moving out of rural Indiana than moving into rural Indiana.

Inside Rural Indiana

Not all rural counties share the pattern described above. To get an understanding of the variation, look at the number of baby boomers (age 46 to 64 in 2010) relative to the number of younger adults (age 25 to 44 in 2010) who will have to take their places once the baby boomers retire. In 2010, the baby boomers in rural Indiana outnumbered their successors by a factor of 1.2. That means that the successors can only replace about 82 percent of the baby boomers. Mixed rural Indiana does only slightly better, with 88 percent replacement. Urban Indiana, in contrast, can more than replace its baby boom generation with a replacement percentage of 105 percent.

Table 1 (page 5) shows the replacement percentages across rural counties. They vary from 57.6 percent to almost 104 percent. LaGrange County tops the list and is capable of fully replacing the

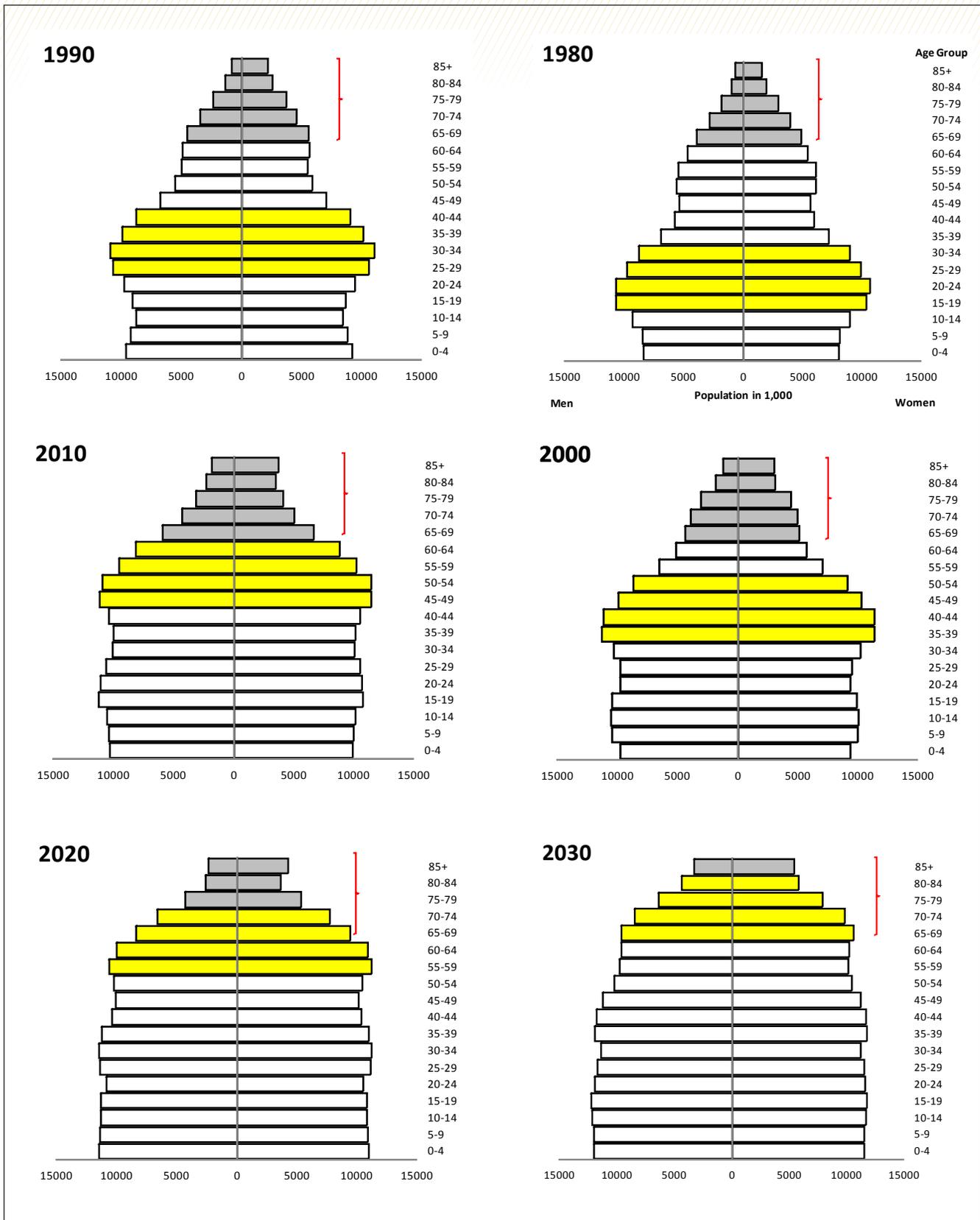


Figure 3. The Aging of the U.S. Population, 1980 to 2030

Source: U.S. Census Bureau, <http://www.census.gov/population/international/index.html>

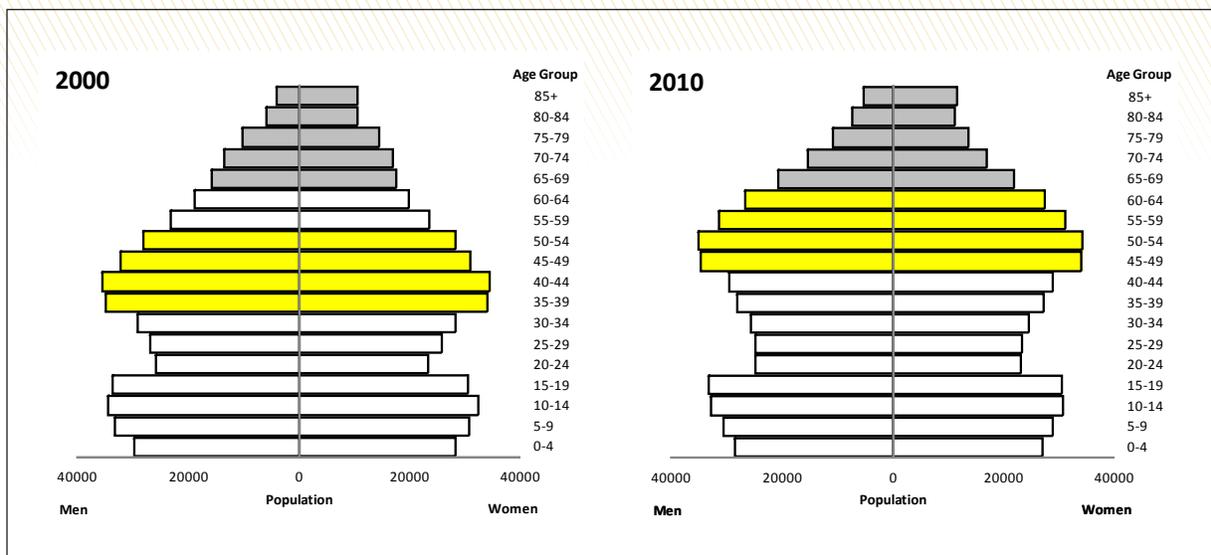


Figure 4. Rural Indiana's Population Pyramids, 2000 and 2010

Source: American FactFinder, U.S. Census Bureau

baby boom generation. Its youthfulness is an exception in Indiana and is attributable to the high fertility of its Amish population. LaGrange County's youthfulness is also symbolized by its remarkably low median age of only 30 years.

All other counties in rural Indiana have a replacement percentage below 100. Sullivan, Jennings, Putnam, Perry, and Ripley counties are in a relatively favorable position, with a replacement level of about 90 percent or higher. At the other end are Crawford, Ohio, Owen, Posey, and Brown counties, which will only replace fewer than a quarter of the baby boomers. Particularly drastic is the situation for Brown County. It is at the bottom of the list, with a replacement percentage of only 58 percent and a median age of 46.7 years.

Future Challenges

While population aging in the U.S. is not as severe as in many other developed countries, most notably Europe, it is already in a quite advanced stage in many regions, including rural Indiana. Comparatively low birth rates since the baby boom period, increasing life expectancy, and, most important, young adults leaving for employment and education are the three main forces that come together to create the hourglass-shaped population pyramid of rural Indiana. In the years ahead, as the baby boomers retire en masse and as young people continue to leave, rural Indiana's older population will grow rapidly, both in absolute numbers and as a percentage of the total population.

The baby boomers are starting to retire. In Indiana in 2011, only 20.6 percent of the men over 65 and 11.8 percent of the women over 65 were still in the labor force, although the vast majority of them did not work full time anymore (Kromer and Howard 2013). Because the successive age cohorts are so much smaller, the retired baby boomers cannot be entirely replaced. This will eventually create a labor shortage and may not be conducive to economic growth in rural Indiana.

The insufficient replacement is also quite challenging because the aging baby boomers will be in need of care and services.

While some assistance for older people can and often is provided by family members, it is not sufficient for the growing demand. As rural Indiana plans ahead to meet the growing demand, one option is to shift some economic activities towards services for the elderly and attract additional labor, including labor from abroad. Moreover, for services that cannot be offered locally, rural Indiana also needs to pay attention to the mobility needs of the older population. Providing and extending specialized public transport such as community bus services and demand-responsive services (for example, dial-a-ride) will be essential assistance to the elderly, especially in relatively remote areas. Ultimately, facilitating access to hospitals, doctors' offices, and social events will enhance the quality of life for rural Indiana's growing elderly population.

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Table 1. Aging in Indiana's Rural Counties

Benchmark of Comparison for Replacement Percentage	County	Replacement Percentage *	Median Age **
<i>Average urban Indiana: 104.8%</i>			
	LaGrange	103.6%	30.4
<i>Average US: 100.5 %</i>			
	Sullivan	96.8%	39.8
	Jennings	91.7%	38.4
	Putnam	91.2%	37.9
	Perry	90.2%	40.4
	Ripley	89.9%	39.2
	Jasper	88.5%	38.0
	Jay	88.3%	39.0
	Switzerland	88.1%	39.1
	Clay	88.1%	39.9
	Washington	87.7%	39.2
<i>Average mixed rural Indiana: 87.7%</i>			
	Benton	85.9%	40.1
	Gibson	85.6%	39.9
	Parke	85.3%	41.3
	Randolph	84.7%	40.8
	Greene	84.3%	41.1
	Harrison	83.8%	40.2
	Orange	83.2%	40.8
	Franklin	82.9%	40.0
	Fulton	82.7%	40.3
	Rush	82.6%	40.6
	Fountain	82.5%	41.6
	Union	82.3%	40.3
<i>Average rural Indiana: 82.0%</i>			
	Whitley	81.0%	40.1
	Starke	80.9%	40.4
	Wells	80.8%	40.2
	Vermillion	79.8%	41.9
	Carroll	79.6%	40.9
	Pulaski	79.5%	41.7
	Blackford	78.0%	42.4
	Tipton	77.7%	42.6
	Martin	77.7%	41.8
	White	77.5%	41.9
	Warren	77.1%	42.4
	Pike	76.7%	42.8
	Newton	76.5%	42.4
	Spencer	75.6%	41.9
	Crawford	73.7%	41.8
	Ohio	72.8%	43.7
	Owen	72.7%	42.4
	Posey	72.4%	41.6
	Brown	57.6%	46.7

* The replacement percentage is defined as the number of the 25 to 45-year olds (successor generation) expressed as a percentage of the 45 to 64-year olds (baby boom generation).

** The median age is the midpoint of an age distribution. That is, half the population is older; the other half is younger than the median age.

Source: Base on data from the American FactFinder, U.S. Census Bureau

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Brigitte Waldorf is a professor in the Department of Agricultural Economics at Purdue University. Her expertise is in demography, and she has written about a variety of population issues in Indiana, including immigrants, educational attainment, and poverty. Melissa McKendree is a graduate research assistant in Agricultural Economics.

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May 2013

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