Introduction

Advocates for high immigration often argue that it can reverse or at least greatly slow the aging trends in U.S. society. Wattenberg (2004) is one of the most prominent thinkers espousing this point of view. Krauthammer (1998) makes the case that immigrants have saved the United States from the kind of aging taking place in other first-world countries. U.S. immigrants do tend to arrive relatively young and tend to have more children than native-born Americans, so the argument that immigration makes the United States dramatically younger makes intuitive sense. But, as I will show in this article, the actual impact of immigration on the nation’s age structure is small.

Methodology

Examining the impact of immigration on the age structure of the United States can be done in two ways. The first might be described as retrospective—that is, removing immigrants from U.S. Census Bureau data to see what their impact has been in recent years. Analysis of this kind is relatively easy: The Bureau asks immigrants in its surveys what year they came to the United States, so estimating the age structure of U.S. society without immigrants is a straightforward matter.

Another way to assess the effect of immigration is by using Census Bureau projections as a way to see how much immigration changes the nation’s age structure. The primary advantage of this approach is that it can address the long-term impact of immigration. In this article, I use both approaches to examine how much immigration solves or offsets the decline in U.S. workers due to aging.
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inaction—not unlike the proverbial frog in a pot of boiling water. What is new and shocking—and thus calling for action—is immigration. A plethora of legislation has emerged in U.S. states, such as Alabama and South Carolina, which are newly experiencing immigration, or Arizona, which has received immigrants diverted from California. Thus, the political reaction against rapid immigration may be undermining a more sober response to the much slower, more massive problem of an aging society.

This brief essay proposes a new metric for communicating about and estimating the progress of societal aging, as well as for assessing the contributions of immigration to U.S. society. The proposed senior ratio is compared with alternative measures that are both similar and divergent. This metric has potential to help achieve much more clear-cut and urgent public awareness, as demonstrated in the case of immigration.

Measurement of Societal Aging

A host of different measures are used to describe the aging of the U.S. population. The median age of the population has steadily advanced from 32.9 in 1990 to 35.3 in 2000 and 37.2 in 2010. Among the most common measures of aging is the percentage of residents ages 65 and older, a share that has increased from 12.6 percent to 13.0 percent in the same time period.

By comparison, this aging percentage currently stands at 23.1 percent in Japan, and the Japanese government projects that it will reach 39.6 percent in 2050, a date when the United States is expected to have only 20.2 percent elders. The fact that many European and east Asian countries will likely grow older sooner than the United States gives America a relative advantage in the future world economy, and it certainly does not increase the sense that aging is an urgent U.S. problem. Instead, greater salience for U.S. decision making may be found in projections that focus on the practical, domestic impacts of aging.

Demographers often use an alternative measure termed the old-age dependency ratio, the ratio between the number of residents ages 65 and older per 100 working-age residents, variously measured as starting at age 15, 16, 18, or 20. Using the age-18 definition most often employed by the U.S. Census Bureau, this ratio has changed very little in recent decades, hovering at 20.2 in 1990, 20.1 in 2000, and 20.7 in 2010. However, this measure is projected to rise substantially in coming years, due to the entry of the large baby boom generation into their elderhood. Another version of this measure, which the Bureau of Labor Statistics has termed the economic dependency ratio, is based on actual or projected labor force rather than presumed working age, and is derived by dividing the number of seniors who are not in the workforce by the total labor force ages 16 and older. All of the alternative dependency ratios yield similar results of a flat trend until 2011, when members of the baby boom generation begin to cross age 65 or retire.

What might be confusing to some observers is simultaneous use of an opposite kind of measure, the elderly support ratio, which is basically the inverse of the dependency ratio, reversing the numerator and the denominator. The support ratio divides the number who are working age, typically defined as 18 to 64, by the number who are ages 65 and older (Jacobsen, Kent, Lee, & Mather, 2011). Similarly, the Social Security Administration adopts a specialized version of this index, defined as the ratio of working contributors to beneficiaries. For example, the annual trustees’ report for 2011 shows that the number of covered workers supporting each Old-Age, Survivors, and Disability Insurance beneficiary has declined slowly since 1990, falling from 3.37 to 2.94 in 2010 (Board of Trustees, 2011). By 2030, this support ratio is expected to decline further to 2.12 and, as this ratio falls, the per-worker cost rate (percent of taxable payroll) is projected to rise in order to maintain a fiscal balance—an expected increase from 10.4 percent in 2000 to 16.7 percent in 2030 (Board of Trustees).
What most of these measures of aging have in common is a depiction of gradual increases in aging, something long known. This slow rise does not inspire concerted action in the same way as more rapid and unexpected changes. An additional hindrance to public perception may be that the different measures detract from one another with, for example, the dependency ratio moving in the opposite direction from the support ratio, so that the public does not have a unified metric for thinking about the growing crisis.

**Political Salience of a Rising Senior Ratio**

Proposed here is a modified index of aging, termed simply the senior ratio, that builds on others but has refined qualities that make it more useful in a political, policymaking context. The senior ratio is closely related to the old-age dependency ratio so familiar to demographers, but it has different age properties and, in addition, its name might encourage a friendlier reception by older Americans. Technical terms used by demographers might be off-putting and counterproductive in a democracy where older people dominate the electorate. Consider that so-called dependency is not a state welcomed by most people as they grow old. The majority of seniors pride themselves on living independent lifestyles, residing in separate housing units, driving their own cars, and enjoying other such freedoms. Even though they do expect to receive their pension and health care entitlements, seniors may not embrace the appellation of old-age dependents. In particular, many seniors feel they are financially independent and resist efforts to term them as dependents. Accordingly, any collaborative decisions involving seniors might be facilitated by use of the more neutral term senior ratio.

Technical details of what ages are involved in such calculations have substantive importance for policymaking. The traditional old-age dependency ratio—which is between adults ages 65-plus and working-age adults, with a lower limit of 15, 16, 18, or 20 in various alternatives—has major faults in its age determinations. In contrast, the proposed senior ratio is formed relative to a prime working-age group of people ages 25 to 64. Although the teenagers certainly could be working, and those young ages might be appropriate for defining able-bodied help, such as in farm labor or other manual occupations, this guideline seems less appropriate in modern, postindustrial nations. Young people ages 15 to 24 are more often engaged in education, apprenticeships, or part-time employment than fully immersed in the workforce. A great many in this so-called training age are every bit as dependent as those ages 65 to 74. In fact, the Bureau of Labor Statistics (2011) reports that only 24.6 percent of men ages 16 to 19 were employed in 2011, an employment level exceeded by men ages 65 to 69, of whom 34.8 percent were employed. Even though some people are economically engaged under age 25—as are some over age 65—the senior ratio captures the main relationship between those with old-age entitlements and those who are the principal workers and taxpayers.

A particular advantage to the senior ratio is that it is upward trending—unlike the support ratio, which is downward trending. Given that people tend to think of problems as growing, including the upward movements in expenditures or growing burdens of health care costs, a more direct correspondence is desired between measures and problems. Support ratios still have their technical use, but their declining trend makes them less valuable for public communication about a growing problem.

A major, final advantage of the senior ratio is that it avoids the appearance of slow, gradual change. This result is due in part to a more concentrated measure of prime working age, without dilution by the training-age population, as well as the fact that its construction emphasizes the threshold effect of entitlements at ages 65 and older. Consequently, the senior ratio better
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captures the concentrated effect of the large baby boom cohort, which began crossing that line in 2011 (a bipartisan movement led, coincidentally, by former presidents Bill Clinton and George W. Bush, both born in 1946).

The visual impact of the rising senior ratio is arresting. From 1970 to 2010, the ratio remained relatively constant in the United States as a whole, with about 24 seniors per 100 working-age (25 to 64) adults. In this long period of quiet stability, the ratio of seniors disappeared from public consciousness, breeding a sustained complacency. After 2011, however, everything is expected to change abruptly. In the latest U.S. Census Bureau projections, the senior ratio jumps to 31.5 in 2020 and 40.2 in 2030, thereafter growing more slowly but maintaining a sustained high plateau that reaches 42.3 in 2050 (U.S. Census Bureau, 2008). After decades of virtually no change, the United States can expect two consecutive decades of extraordinary increase under these projections, which assume continued immigration at the rate prevailing in the early 2000s. By 2030, the senior ratio will have expanded by nearly two thirds (64.1%) and, by 2050, by nearly three fourths (72.7%). Of considerable importance in Congress, this enormous increase will be felt in every state, with the smallest rise being expected in Oregon, where the ratio in 2030 will be 54 percent higher than in 2010.

This simple exposition of a soaring senior ratio can go a long way toward communicating the aging crisis to the public. The key is to prepare the public for the need to make difficult choices that cannot be avoided. No one is to be blamed. The baby boom happened through no fault of the boomers, and now their aging is inexorable. All U.S. citizens together must face this shared problem.

Five broad options offer possibilities for accommodating the soaring senior ratio. None of these options are likely to be welcomed, but some combination of the following will be required if the 64 percent increase in the senior ratio is to be sustained:

- Entitlements for seniors can be delayed or reduced.
- A higher share of federal revenue can be shifted into old-age programs.
- Taxes can be increased for some or all income groups.
- Greater borrowing can finance current programs while adding to the federal deficit.
- Immigration can be relied upon to bring in more workers to help carry the load.
A choice to reduce reliance on any one of these options necessarily implies greater reliance on the other solutions. The current strong resistance to all five options will require political leaders and taxpayer-voters to work out a difficult trade-off.

**Contributions of Immigration**

The remainder of this essay focuses on how much the increase in aging, measured through the senior ratio, really can be reduced by immigration. The bottom-line answer is that immigration contributes only a small—though essential—portion to the resolution required. Debates over this matter have tended to be framed as whether immigration by itself can solve the problems of an aging society. The more realistic question is, To what degree can immigration contribute a part of the solution?

In 2001, the Population Division of the United Nations issued a lengthy report, *Replacement Migration: Is It a Solution to Declining and Ageing Populations?*, and precipitated substantial debate among demographers. The study found that support ratios of working-age population to elders were destined to continue to decline because low fertility was not increasing the working-age population as quickly as the numbers of seniors were increasing. Even if fertility were to increase, the workforce would not see the benefits within the next 20 years. One option that could immediately help preserve support ratios at their current level in most countries would be to extend the working age to 75. Increased immigration was the only other possible option that the United Nations identified for immediately stabilizing the decline in the working-age population. However, the volume of newcomers required for this stabilization would be unprecedented in many countries and the change in social composition might not be politically acceptable.

Controversy over the report arose from certain ambiguities in phraseology or goals. To stop population aging is far more difficult than to slow it down or to stabilize the workforce ages. Moreover, fertility is a nonfactor only if the time horizon remains 20 to 30 years. One study of the European Union demonstrated that immigration indeed can offset the depressed working-age numbers caused by very low fertility (Lutz & Scherbov, 2006). Over a 50-year time period, the combination of very low fertility (total fertility rate of 1.0 babies per woman) and high immigration (1.2 million per year) yields the same old-age dependency ratio as does a combination of zero migration and high fertility (total fertility rate of 2.2). Of course, note that adoption of an older age threshold for working age—that is, 25 rather than 15—would delay the benefits of fertility by another 10 years and push out the time horizon for achieving balance.

Immigration critics in the United States were quick to disallow any benefits for reduced aging and lowered old-age dependency, declaring that immigrants grow older, too (Camarota, 2005). A more recent review by a leading pro-immigration group recognized the limited role of immigration in reduced aging but then focused more pragmatically on the growing employment roles carried out by immigrants, placing those in the context of the retiring baby boomer generation (Ewing, 2012).

The most recent population projections by the U.S. Census Bureau, issued in 2008 and summarized previously, enable a direct calculation of the effects of immigration, because these were accompanied in 2009 by supplementary projections that increased the population under different assumed levels of immigration. These alternative projections compute the population as it grows over time in all the age groups. For present purposes, the senior ratio can be calculated from the main 2008 projections, which the U.S. Census Bureau still earmarked as the preferred data in March 2012 (see Figure 1). In addition, the figure compares those data with the senior ratio based on the projections issued from the alternative that had zero immigration. Figure 1 also shows the senior ratios from previous census years.

Under both alternatives, the senior ratio rises abruptly after decades of stability. With zero immigration contribution, the ratio rises from 24.6 seniors per 100 working-age adults in the 2010 census to 45.2 in 2030,
and then to 50.0 in 2050. The senior ratio literally doubles in the next 40 years, but the most acute period of change is through 2030. Under the U.S. Census Bureau’s preferred projections, which were considered the most likely outcome at the time of their issue in 2008, the senior ratio rises more moderately, reaching 40.2 in 2030 and 42.3 in 2050. These 2008 projections assumed annual net foreign migration (legal and illegal combined) rising from 1.34 million in 2010 to 1.66 million in 2030 and 2.05 million in 2050.

Compared with the zero-immigration alternative, growth of the senior ratio under these projections is substantially slowed. The rise from the census 2010 benchmark is lessened by one quarter (24.3%) in just the coming 20 years, with an even greater reduction (30.3%) expected over 40 years. Aging still occurs and the senior ratio still rises under both projections, but the increase is one quarter less when the expected volume of immigration is added to the U.S. population. The clear finding is that without immigration, the U.S. aging problem is very much worse.

Conclusions

Immigrants are people who grow older too, but not all at once. Given the imbalances in the age structure of the United States, featuring most prominently the large baby boom generation and the baby bust that followed, it would be helpful to add working-age adults to the U.S. population when the ratio of seniors is growing out of proportion relative to past years. In the long run, immigrants will also become seniors, and the baby boom generation will have passed on, but the nation’s greatest challenge is how to survive the sharp changes that precede the year 2030.

Immigrants can help in this time of need. Adding 1.5 to 2 million immigrants per year would require sustaining historically high rates of new arrivals, but U.S. society would benefit: The rise in the senior ratio would be one quarter less than otherwise expected. The remaining three quarters of the increase would need to be accommodated through other broad policy options, such as reduced senior entitlements, greater borrowing, or increased taxes. Without immigration, those other options would become all the more burdensome.

The proposed senior ratio helps to focus attention more urgently on the aging trend and the coming surge in old-age burdens in the United States. Use of this ratio could prove more helpful in public discussions than the other alternatives. The utility of the proposed new metric is well demonstrated here by its clear delineation of the contribution immigration makes to reducing the impacts of the aging trend in the United States.

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References


