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Demographic Influences on U.S. Economic Prospects¹

David E. Bloom² and Jay W. Lorsch³

The United States has experienced dramatic demographic and economic changes in the post-World War Two era. The overall population doubled, from 158 million in 1950 to 319 million in 2014—with the United Nations Population Division projecting a further sizable increase to 363 million by 2030. The ratio of the working-age population (ages 15-64) to the non-working-age population (ages 14 and under or 65 and over) rose from a low of 1.5 in the early 1960s to a high of 2.05 in 2006, and then down slightly to just under 2.0 in 2014—with a projected further drop to below 1.6 in 2030.

These trends matter because they influence the level and growth rate of income per capita and the relative position of America in the world economy. The higher worker to non-worker ratio, which began when the baby boomer generation (i.e., the 1946-1964 birth cohort) entered the workforce, led to a surge in savings, investment, and the supply of labor, and was accompanied by unprecedented prosperity. Since 1960, GDP has nearly quintupled in real terms, while GDP per capita has almost tripled.

But what is ahead for America? New demographics are clearly in the offing, most notably a dramatic rise in the share of elderly people and major changes in racial and ethnic composition. The median age of the U.S. population increased from 30 to 38 between 1950 and today and is projected to reach 40 by 2030. And the year from April 2010-April 2011 was the first time that there were more non-white babies born than white babies. Further, non-Hispanic whites are expected to make up less than half of the U.S. population by 2043.

This chapter assesses how future demographic changes may shape economic prospects for the United States. We aim to dispel myths about the inevitability of negative economic consequences associated with key demographic changes such as declines in the ratio of the working-age to the non-working-age population, population aging, continued immigration, and changes in the U.S. population's racial and ethnic composition.

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Evolving views on population growth and economic growth

For over two centuries, it has been commonly believed that rapid population growth stood in the way of improvements in standards of living. During most of the 1980s and 1990s, new evidence led most economists to think that population growth *per se* has no effect on economic growth. In the past 15 years, however, studies have found that, at least in some countries, rapid population growth does tend to impede economic growth and poverty alleviation, largely by elevating the burden of youth dependency. By contrast, declining fertility makes this burden more manageable by increasing the ratio of the working-age to the non-working-age populations. This ratio invariably rises as populations make the transition from high to low rates of fertility and mortality (mainly because the changes are asynchronous, with death rates declining first) and in the period following a baby boom. When that happens, there is considerable potential for increasing economic output on a per capita basis. The potential is due to the swelling of the labor force and of levels of savings per capita. These accounting effects are typically magnified by the rise in women's participation in the workforce that naturally comes with a decline in fertility, the boost to savings that occurs because the incentive to save for longer periods of retirement increases as people live longer, and society's ability to comfortably reallocate resources from investments in children to investments in physical capital, job training, technological progress, and strengthening other institutions.

The combined effect, known as the "demographic dividend," is estimated to have accounted for one-third of the rapid economic growth in the East Asian "miracle" countries between 1965 and 1990 (i.e., about two of the six percentage points in the annual growth of income per capita). Similarly, the near-absence of this change in the age structure of Africa, where high fertility remained the norm, is likely a decisive factor underlying that continent's slow economic growth. That being said, it is important to note that a demographic dividend does not take place automatically. It requires policies and practices that promote the efficient use of labor and capital, including policies related to education, governance, business, labor legislation, trade, macroeconomic management, and relations with neighboring countries.

Where do some of the world's biggest economies stand now in terms of this demographic trend? As

Figure 1 shows, the United States is now descending from an all-time high in the ratio of its working-age to non-working-age population, and in the coming decades will see a large decline in this ratio, back to the level of the 1960s. Both Germany and Japan (not pictured) have already begun to experience a long projected decline in this indicator. China and Russia have also recently peaked with very high ratios, and will soon see rapid declines as well; Brazil is on a similar trend, although at a lower level. And India still has a ways to go before it peaks.

Major U.S. demographic changes underway

With these facts in mind, we can look at the economic challenges and opportunities associated with demographic change in the United States now and over the coming decades. Several of them—immigration, population aging, and the changing racial and ethnic composition of the country—have set off alarms about the future of the U.S. economy. But are these alarms justified? Let's start with the trends themselves.

Immigration. The United States has long been a magnet for immigrants. The number of people obtaining legal permanent residence status first surpassed 1 million in 1905. At the onset of World War I, immigration plunged to about 300,000 per year, and it declined even further during the Great Depression. After World War II, immigration increased rapidly, reaching 640,000 in 1988 and then jumping to 1.1 million the next year and an all-time high of 1.8 million in 1991. The number fell again in the 1990s, but rose again and has exceeded 1 million in every year since 2005. Although the number of new legal immigrants was roughly equal in 1905 and 2012, the ratio of these new immigrants to the total population is much smaller today.

The distribution of immigration by country of origin has changed considerably over time. In the decade beginning 1900, Europeans made up more than 90 percent of all legal immigrants, but their share fell to 56 percent in the 1950s, with most of the rest from Canada, Mexico, Asia, and the Caribbean. However, in 2012, roughly 80 percent of legal permanent residents were from Asia or the Americas. Among this population, about 45 percent are between the ages of 20 and 39 (the corresponding figure for U.S. natives is 25 percent) and over half are female. Although immigrants distribute themselves very unevenly among U.S. states, the top

destinations have been remarkably stable over time: California, New York, Texas, Florida, Illinois, and New Jersey.

As for the total number of immigrants living in the United States, this is unknown because of the difficulty accounting for undocumented immigrants. Estimates suggest that the total has reached approximately 40.7 million, which would represent a similar share of the total population compared with the beginning of the 20th century—although a much higher share than in the intervening years. For the undocumented immigrants, estimates range widely, from as low as 7 million to as high as 20 million. The Pew Research Center estimates that as of 2012, the number of unauthorized Mexican immigrants registered at 5.8 million (or 52% of the unauthorized immigrant population) – a share that has decreased slowly in recent years. Meanwhile, the numbers of undocumented individuals from other world regions including Asia, the Caribbean, the Middle East, and Africa are increasing gradually in the U.S.

Changing racial and ethnic composition. Non-Hispanic whites account for 63 percent of the U.S. population, a figure that has been, and is projected to continue, falling over time. The median age of this demographic group is 42, well above the median ages of 32 and 28 among the black population and the Hispanic population, respectively. Although Hispanics only make up one-sixth of the U.S. population, they will account for more than half of U.S. population growth from 2000-2015. An important contributor to the declining share of non-Hispanic whites is the relatively low share of individuals in their prime reproductive ages, and their relatively low rates of fertility during those years. Hispanic immigration is also a powerful contributor to the changing racial and ethnic makeup of the U.S. population.

As is well known, the average income of blacks and Hispanics in the United States is far below that of whites. The gaps in wealth tend to receive less attention, but they, too, are enormous. In 2011, the median net worth of white households was \$110,500. The figures for Hispanic and black households were \$7,683 and \$6,314, respectively. These differences in economic circumstances reflect many underlying factors, among them education and training.

Population aging. The share of the elderly is rising worldwide, with the highest levels occurring in developed

countries (especially in Japan and Europe). However, some of the sharpest increases will take place in countries in the developing world, most prominently Brazil and China. In the United States, those aged 65 and older have shot up from 13 million in 1950 (8 percent of the population) to 46 million (about 15 percent) in 2014—and this figure is projected to grow to 20 percent by 2030. Also notable is the growing share of the “oldest old”—those 85 and older—whose needs and capacities are substantially different from those aged 65-84. The 85+ crowd in the U.S. has also grown rapidly, from 1.2 percent of total population in 1990 to about 2.0 percent in 2014, with projections of 2.4 percent in 2030. Rising elder shares reflect the aging of large baby boom cohorts and increased longevity, as well as changes in fertility and net immigration.

Economic salience of these demographic shifts

So what are the economic and political worries associated with these demographic trends?

First, U.S. productivity might fall. In general and for a variety of reasons, blacks and Hispanics have lower levels of education and skill than non-Hispanic whites. As a result, these populations are generally less prepared than non-Hispanic whites (whom they will increasingly be replacing in the labor force) to enter occupations with relatively high levels of compensation. In turn, a lack of appropriate action—such as increasing educational attainment and skills training of minority populations--could potentially translate into slower productivity and income growth for the United States.

Second, skill shortages may impede competitiveness. Some have argued that certain pockets of the U.S. workforce suffer from unemployment, which may be due, in part, to the perceived “skills gap” identified by many employers. Others, on the contrary, find no evidence at all that such a skills deficiency exists and argue that unemployment is due primarily to lack of aggregate demand.

Third, population aging might create numerous financial problems. Concerns center on the large portion of the population that will be, to varying extents, dependent on the working-age population for financial support, physical care, and companionship. For most of the elderly, financial support comes from a combination of sources, including personal savings, family members, Social Security, private pensions, and continued work.

The long-term viability of some of these sources largely depends on the overall economy and (in some instances) the productive output of younger generations. The elderly may also legitimately worry about companionship, as smaller families, larger generation gaps, geographic mobility, and in some cases changing expectations lessen younger people's connections to their parents and grandparents.

Health care. Rising health care costs have the potential to hobble the U.S. economy. In 2012, the United States spent 18 percent of GDP on health care (the highest by far from both a historical and comparative perspective). A rising share of the elderly in the population has led to fears that health care costs will inevitably continue to increase, as the elderly are more prone to experience one or more costly-to-treat chronic conditions such as cardiovascular disease, diabetes, cancer, and chronic respiratory disease. Evidence on the “compression of morbidity” into a (relatively or absolutely) smaller part of a longer life cycle is thin and is doing little to silence alarms that have been sounding in various quarters about the fiscal implications of population aging.

Social Security. The rapid rise in the elderly share of the population has, appropriately, focused attention on the financial unsustainability of our pay-as-you-go Social Security system. This public finance challenge creates huge risks to the economic well-being of the elderly, especially those who traditionally rely more heavily on Social Security benefits for support: the less educated, less skilled, and less wealthy. Although politically contentious, there are a number of reforms to contribution and benefit schedules that could address this issue.

Fourth, social welfare dependency is poised to rise. Many Americans benefit from social welfare programs. Unemployment benefits, food stamps, Medicaid, and Social Security payments to the disabled and to survivors of Social Security recipients are prominent among these. Increasing shares of elderly and black and Hispanic populations suggest greater demands on these programs, which may crowd out investments in myriad forms of physical and human capital, and technological progress—all classic drivers of economic growth.

Countervailing demographics

Some of the demographic trends discussed above imply potential economic difficulties for the United States in the years ahead. However, there are two countervailing trends involving fertility and immigration.

Fertility. Unlike in many other developed countries, the fertility rate in the United States has not fallen well below its long-run replacement level (roughly 2.1 children per woman). Indeed, as shown in Figure 2, fertility has actually increased since 1980 and is now just below replacement level. By contrast, many other countries, including Germany and Japan (both at 1.5 children per woman) have fertility rates that are far below the long-run replacement level. As for the BRIC countries also in Figure 2, fertility has decreased dramatically over the last few decades, while India's fertility rate (at 2.5 children per woman) remains above the replacement rate.

Relatively high fertility in the United States means that there will be a correspondingly robust rate of new entrants to the labor force in the coming years, a trend that will likely be reinforced by continuing immigration. Income per capita in the U.S. could stand to benefit from having large numbers of potential workers and savers; the fiscal integrity of Social Security and health care financing stand to benefit as well.

Immigration. Immigrants are often self-selected for their work ethic, ambition, and willingness to take risks. Moreover, as noted earlier, a large portion of immigrants are of working age. The influx of working-age immigrants is a factor that pushes the working-age share of the population in the United States to decline more slowly than in many other developed countries that have more restrictive immigration policies. Liberalizing immigration policy, especially for skilled migrants, could provide a further boost to the size and quality of the U.S. workforce.

Countervailing public policies and business practices

Public and private policymakers in the United States can also adopt policies that will adapt to the demographic changes that lay ahead.

Human capital policy. Whether or not there is any skills gap right now, it is clear that the fortunes of the U.S. are tied closely to the education, training, and health of its future workforce. Investing in school and health can offset the projected decline in the share of the working-age in the population. Such investments have the potential to magnify the size of the effective labor force insofar as more and better education and better health results in more productive adults. Investments can also be disproportionately directed toward minority

populations to promote their employment, productivity, and earnings and stem the tide of further increases in income inequality.

Retirement policy. Life expectancy in the U.S. has increased much faster than the normal age of eligibility for full Social Security benefits. This disparity suggests that raising the retirement age is a natural approach to addressing the tightening of the labor market that may be expected to accompany population aging. Indeed, expectations of greater longevity are plausibly associated with the desire to work to later ages, which may account for recent increases in the legal age of retirement in a number of wealthy industrial countries—including the scheduled increase in the U.S. from 65 (for people born prior to 1938) to 67 (for people born after 1959). On the other hand, life expectancy at age 65 for male Social Security-covered workers in the upper half of earners rose from 15.5 years for the cohort born in 1912 to 21.5 years for the cohort born in 1941, a gain of 6.0 years. By contrast, the corresponding gain for earners in the lower half of the distribution was less than 1.5 years. These data suggest that raising the retirement age beyond the two-year increase that has already occurred would impose a greater relative burden on low than high earners.

Human resource practices. Business has been slow to plan for population aging, but delay won't be an option for much longer. Unemployment is high now, but as the recovery proceeds, labor markets will tighten and companies will have little choice but to welcome older employees. Indeed, prompt action to harness—and enhance—the contributions of older workers will be seen as a key competitive advantage.

Older employees who wish to keep working may demand flexible roles and schedules. Allowing more part-time work and telecommuting will entice older workers to stay on, extending their careers by placing lighter burdens on them. Allocating demanding physical tasks to younger employees will produce a similar benefit.

Ongoing training, meanwhile, will help older workers master new skills as the economy changes. And employees' longer working lives give companies the benefit of greater productivity gains from their training investments.

Wellness programs produce healthier employees at all ages; on-site clinics save workers time and tend to lead to more prevention and early detection of illness and disease, which also lowers costs.

Last, moving from pay systems that are seniority-based to ones that give increased weight to performance will likely lead to a relaxation of corporate norms surrounding age at retirement.

Conclusion

The U.S. population will continue to grow at a robust pace in the decades ahead, ensuring a steady flow of new entrants to the workforce. But the combination of population aging and the fact that low-education and low-skill racial and ethnic minorities will make up an ever-larger portion of the workforce is raising worries about future worker and skill shortages and about the macroeconomic performance of the U.S. economy, especially when compared to the BRICs (Brazil, Russia, India, and China).

But demography need not be destiny. As ongoing political debates highlight, there are wide-ranging views of the public and private policy options that offer the most potent means of adapting to the new demographic contours of U.S. society. These include finding the means and will to control health costs for the aging population. They also must consist of educational policies at the federal and local levels that encourage learning that meets the needs of our changing workforce and the technological demands they will confront at work, whether in manufacturing or service jobs.

In this regard, now is the moment to confront the character of American education—to make elementary and secondary education appropriate to the development of skill and learning that the multicultural youth of America will require. It is also time to make a serious assessment of the state of American public and private higher education. Colleges and universities have been the pride of America since the creation of land grant colleges and the GI Bill after World War II. But now we need to reassess how these institutions might change to serve the country's needs in light of its changing population and the technological changes to come.

There is a need to rethink the role of older Americans in society. It is not only a matter of reinforcing the Social Security System to ensure its viability and providing quality health care at a sustainable cost. It is also

rethinking how older Americans can contribute to society both through paid work and as volunteers for as long as they are willing and able.

Finally, this is the moment to consider immigration policies that both sustain the openness of the United States and ensure that newcomers can be assimilated as citizens who make needed social and economic contributions.

The predictability of demographic trends is a powerful tool in policymakers' arsenal. Being able to peer into the crystal ball improves our capacity to plan and devise both proactive and reactive strategies for heading off problems and taking advantage of potential opportunities. In that way, the demographic lens can help guide us to the economic future to which we aspire.

Figure 1. Ratio of working-age to non-working-age population in select countries, 1950-2050

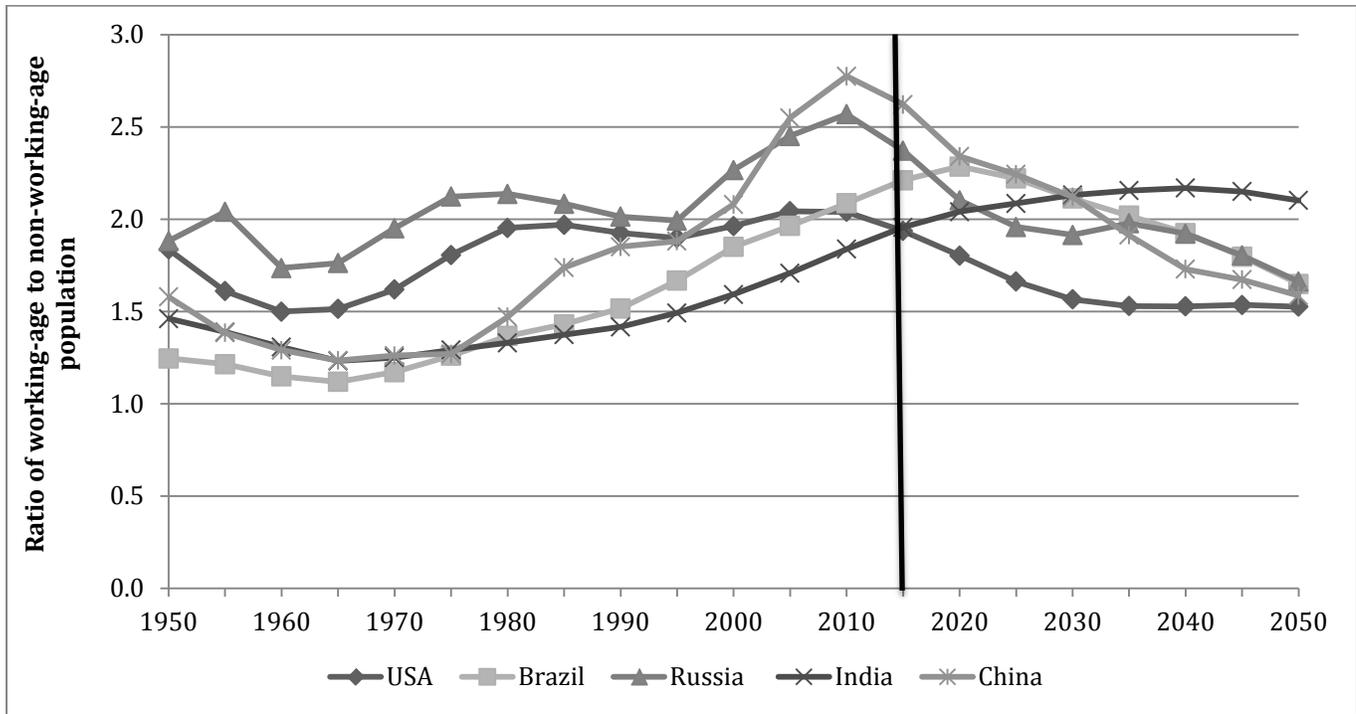
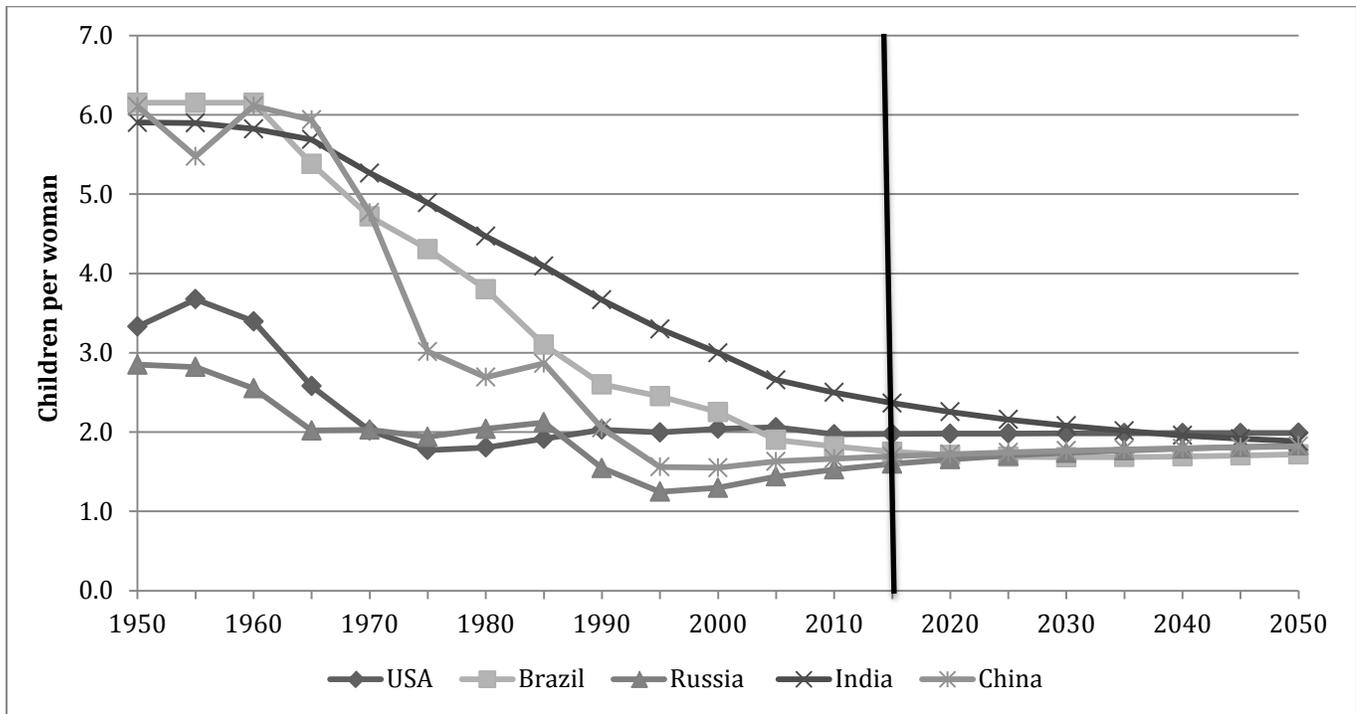


Figure 2. Fertility rates in select countries, 1950-2050



Source: UN World Population Prospects, the 2012 Revision