Why the Collapse in U.S. Population Growth Matters

Declining birthrates and declining immigration are pushing the United States toward a future of much slower population growth and perhaps even population decline. As population growth slows, so too will economic growth. Domestically, living standards may stagnate, while internationally America’s stature may erode. In this Critical Issues, we examine the economic and geopolitical challenges posed by slowing population growth and consider a variety of policy responses that could improve America’s long-term demographic and economic outlook, from increasing labor-force participation to increasing immigration. Much is at stake, since a slow-growth America may be a less prosperous and less hopeful America, as well as a less safe America.
About Critical Issues

Critical Issues, jointly published by The Terry Group and the Global Aging Institute (GAI), is an occasional series of issue briefs on the demographic, economic, and social trends reshaping America and the world, and in particular the future environment for retirement and health care. Some of the issues in the series explore broad macro-level developments, while others focus on specific developments in the retirement and health-care space.

While the series is primarily U.S. focused, it often places U.S. experience in an international context and sometimes turns the spotlight on other countries. The Terry Group and GAI hope that the series will help inform policymakers, business leaders, and strategic planners as they prepare for a rapidly changing future.

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Why the Collapse in U.S. Population Growth Matters

Declining birthrates and declining immigration are pushing the United States toward a future of much slower population growth and perhaps even population decline. During the 2010s, the U.S. population grew by 0.6 percent per year, the slowest growth rate of any decade since the 1930s and barely half of its postwar average. Looking to the future, the CBO projects that the growth rate will sink even further to 0.4 percent per year over the next three decades, and this may be optimistic. The inevitable corollary is that the United States also faces a future of slower economic growth, since slower population growth translates into slower growth in employment, which in turn translates into slower growth in GDP.

Some economists would argue that slow growth is not a cause for concern, or at least not a serious one. From a social welfare perspective, after all, it is not absolute demographic or economic size that matters, but per capita living standards, and so long as these continue to grow at the same pace as before we would be no worse off even if the population and economy were to shrink. Some economists would also argue that slower growth could even be a positive development. From a quality-of-life perspective, for instance, it may mean less urban congestion, while from an environmental perspective it may mean less pollution and a smaller carbon footprint.

The reality is that there are good reasons to worry. To begin with, the notion that slower growth will not adversely affect living standards is almost certainly mistaken. The demographic forces that are now slowing population growth are also leading to greater population aging, and as populations age the economically productive share of the population declines, lowering the growth rate in per capita living standards. Beyond this simple arithmetic, the dynamics of a slowly growing and aging population could also pull down productivity growth, further lowering living standard growth. As the workforce grows more slowly, businesses will undertake less capital-broadening investment. As

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the average age of the workforce increases, it may become less mobile, less flexible, and less innovative. As the ratio of retirees to workers increases, so will fiscal burdens. As domestic markets grow more slowly or contract, businesses and workers may push for anticompetitive changes in the economy. As the population ages, the social and electoral mood may come to be characterized by shorter time horizons and greater risk aversion.

Moreover, while it is true that demographic and economic growth may entail quality-of-life and environmental costs, it is also true that absolute demographic and economic size confer considerable advantages. Internationally, they are what underpin both the hard power of national defense and the “soft power” of global influence. Domestically, they can create welfare-enhancing efficiencies of scale and may also foster innovation—including innovation in addressing the quality-of-life and environmental costs of growth.

In short, a slow-growth America may be a less prosperous and less hopeful America, as well as a less safe America. In this issue brief, we examine the economic and geopolitical challenges posed by slowing population and economic growth, as well as strategies which could help to mitigate the risks. But first we take a quick look at the demographic and economic outlook for the United States.

THE DEMOGRAPHIC AND ECONOMIC OUTLOOK

Until recently, the United States was a demographic outlier among its developed world peers. Yes, its population was projected to grow more slowly and age in decades to come. But America’s relatively high fertility rate, together with substantial net immigration, seemed to ensure that, despite all those aging Boomers, it would remain the youngest of the major developed countries for the foreseeable future. It also seemed to ensure that America would still have a growing population and a growing workforce, even as those in most other developed countries stagnated or declined.

No longer. From the beginning of the 1990s until the Great Recession, the U.S. fertility rate averaged 2.0, higher than the average for any other developed country except Iceland, Israel, and New Zealand. But the fertility rate began to decline in 2008 and, except for a minor uptick in 2014, has fallen every year since. By 2019 it had dropped to 1.7, an all-time historical low, and in 2020 the pandemic drove it even lower, to 1.6. At the same time, net immigration has also declined. After rising during the 1990s and early 2000s, it sank to near zero in 2008 during the depths of the Great Recession. Since then net immigration has followed a roller-coaster path. It experienced a partial recovery in the early 2010s, but began to decline again starting in 2015. The decline then became a
plunge in 2020 as immigration was dramatically curtailed amid the pandemic-related border closings.

Fewer births and fewer immigrants mean slower population growth. As recently as 2010, the CBO was projecting that the U.S. population would grow to 411 million by 2050. It now projects that it will grow to just 374 million. The difference of 37 million people, roughly equal to the current population of Canada, consists entirely of fewer children and fewer working-age adults. Without net immigration, the U.S. rate of natural increase (births minus deaths) is by itself already insufficient to keep the working-age population from shrinking. (See figure 1.) Because the number of elderly will be increasing faster than the number of children and working-age adults will be declining, the total population would continue to grow for a while. But without net immigration, it too would begin to shrink by the 2040s.

A more slowly growing population in turn means a more slowly growing economy. GDP growth consists of two components, employment growth and productivity growth, and all other things being equal slower growth in the working-age population translates directly into slower growth in employment. U.S. employment growth has already fallen steeply over the past decade as Boomers have begun to age out of the workforce and the relatively smaller generations which follow them take their place. By the 2030s and 2040s, the CBO projects that it will be averaging just 0.3 percent per year, down from roughly 2.0 percent per year in the 1960s through the 1980s and roughly 1.5 percent per year as recently as the 1990s and early 2000s. (See figure 2.)
To be sure, the long-term demographic and economic outlook for the United States, even taking into account developments since the Great Recession, is not as dire as that facing some developed countries. While U.S. employment growth is projected to fall toward zero by the 2030s and 2040s, employment in Japan, South Korea, and some low-fertility European countries may by then be contracting by between 0.5 and 1.5 percent per year. Even at full employment, real GDP could stagnate or decline, since the number of workers may be falling faster than output per worker is rising.

Still, the U.S. outlook is sobering enough. According to the CBO, real GDP growth will be averaging just 1.5 to 1.6 percent per year by the 2030s and 2040s, barely half of its postwar average. This projection, moreover, may be optimistic. It assumes that the fertility rate will climb back to 1.85, higher than it has been in any year since 2014. It assumes that net immigration will increase from its current nadir to roughly 1.1 million per year, significantly more than its post-Great Recession average. It assumes that the labor-force participation rates of workers in their sixties and seventies will rise substantially, partially offsetting declining employment in the traditional working ages. And it assumes that productivity growth will average 1.3 percent per year over the next thirty years, more than the 1.1 percent growth rate America managed over the last business cycle. Under less buoyant demographic and economic assumptions, real GDP growth could eventually sink to as low as 1.0 percent per year, or about one-third of its postwar average.

THE ECONOMICS OF SLOW GROWTH

Slower population growth will not only lead to slower economic growth, but is also likely to lead to slower living standard growth. In theory, if population growth were slowing
proportionally across all age groups there might be no adverse effect on living standards. In the real world, however, this is not what is happening. Population growth is slowing because birthrates and immigration are declining, and this hollows out the population pyramid from the bottom up, leaving it top heavy with elders. Over the next three decades, the CBO projects that the number of working-age adults aged 20 to 64 will grow by just 5 percent, even assuming substantial net immigration, while the number of elderly aged 65 and over will grow by 48 percent. Unless there is a large increase in labor-force participation, particularly at older ages, the economically active share of the population will decline, and as it does the growth rate in per capita GDP will slow.

To be sure, it is possible that higher productivity growth could offset the shift in the age structure of the population, allowing living standards to grow as fast or even faster than before. But this brings us to a second problem, and it is a big one. There are many reasons to think that productivity growth in aging, slow-growth societies is more likely to fall than to rise, exacerbating rather than ameliorating the demographic drag on living standards.

One reason is that such societies are likely to invest less. With employment growing more slowly, America will have less need for capital-broadening investment to equip new workers with the tools they require to do their jobs. In the standard neoclassical economic model, less investment would not necessarily lower productivity growth so long as investment remains sufficient to maintain a constant rate of growth in the per-worker capital stock. According to the competing endogenous growth model, however, the total amount of investment a society undertakes is in and of itself important. Economists who subscribe to this model believe that productivity growth depends critically on “learning by doing,” and that the more societies invest, the more opportunities for learning by doing there are. A higher rate of investment, and consequently a more rapid turnover in the capital stock, can thus spur technological progress, while a lower rate of investment and an aging capital stock can retard it.

The economies of the United States and other developed countries are also increasingly dominated by service industries that are resistant to productivity improvements, from financial and personal services to education and health care. This development, which

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is known as “Baumol’s Cost Disease” after the economist William Baumol who first identified it, may be accelerated by the aging of the population. Young people who are establishing independent households tend to consume more goods than services, while old people tend to consume more services than goods, and in some cases vastly more. Consider health care. Per capita, the U.S. elderly consume nearly three times more in acute-care services than the nonelderly and nearly twenty times more in long-term care services. As the population ages, these age-related spending differentials will continue to push up health-care spending as a share of GDP, and if ever there were an industry resistant to productivity improvements, it is health care.

The workforce, moreover, will not only be growing more slowly, but will also be aging, and an aging workforce may be less mobile, less flexible, and less innovative. A large literature in the social and behavioral sciences establishes that worker skills, or at least certain types of skills, typically decline past midlife—and that those skills which decline are the ones most closely associated with economic dynamism. While older workers do as well as younger workers on measures of “crystalized” ability (the mastery of accumulated knowledge and skills), younger workers do better on measures of “fluid” ability (the acquisition of new knowledge and skills). Younger and older workers are both valuable, and some studies have shown that the productivity of both tends to improve when they work together in teams. But they are not perfect substitutes for each other, especially in eras of rapid technological and market change.

Then there is the fiscal burden of rising expenditures on retirement and health care, which the CBO projects will add 6.4 percent of GDP to federal spending between 2019 and 2051. (See figure 3.) If this growth is financed by additional borrowing, it could crowd private investment out of capital markets, further lowering productivity. If it is financed by cutting other spending, it could crowd public investment


out of the federal budget, once again lowering productivity. And if it is financed by raising taxes, it could create disincentives to work or invest. Even if it does not, it would reduce after-tax incomes, which many if not most workers doubtless regard as the best measure of their living standard.

Figure 3

Projected Change in Federal Non-Interest Outlays as a Share of GDP, by Type, 2019 to 2051

THE PSYCHOLOGY OF SLOW GROWTH

Along with the economic dynamics of slow growth, there may also be important psychological dynamics that further erode the growth in living standards. With the size of domestic markets growing more slowly or even contracting, we may see more cartel behavior to protect market share and more restrictive rules on hiring and firing to protect jobs. We may also see increasing pressure on governments to block foreign competition. Historically, eras of stagnant population and market growth—think of the 1930s—have been characterized by rising tariff barriers, autarky, corporatism, and other anticompetitive policies that tend to shut the door on free trade and free markets.

To better appreciate how slow growth could generate anticompetitive and protectionist pressures, it may be helpful to consider how it may affect adjustment costs in labor markets. In a dynamic and efficient market economy, some firms and industries are always growing—and others are always shrinking—relative to total output. When total population and therefore total output are growing rapidly, those firms or industries that are shrinking relative to total output may be able to remain profitable simply by hiring less, without reducing the number of workers they employ. When total population and therefore total output are growing slowly or contracting, those firms or industries may
need to make outright reductions in the number of workers they employ, compelling them to look for jobs at other firms or in other industries.

The economist Benjamin Friedman has likened the problem of transferring current workers from one firm or industry to another (as opposed to simply hiring more new workers in one rather than the other) to the difficulty of reducing nominal wages in a firm or industry (as opposed to simply letting them rise more slowly than inflation). Just as a little bit of inflation is “good” because it helps to forestall job loss in a world of downwardly sticky wages, so too is a little bit of population growth “good” because it helps to do the same in a world where the workforce will be increasing dominated by older workers, who find it more difficult to change jobs and careers than younger ones.

Shifts in business and market psychology could be mirrored by broader shifts in the social mood. Slow-growth, aging societies may become more risk averse, have shorter time horizons, and be less willing to make investments with long-term payoffs. Domestically, elder-dominated electorates may attempt to lock in current public spending commitments at the expense of new priorities, such as improving education, reducing inequality, or addressing climate change. Internationally, they may be more prone to favor ad hoc settlements over decisive confrontations. A robust statistical literature establishes that extremely youthful societies are in some ways dysfunctional—prone to violence, instability, and state failure. As yet, social scientists do not have adequate historical data on extremely aged societies on which to run their regressions. But these societies may prove to be dysfunctional in some ways as well, favoring consumption over investment, the past over the future, and the old over the young.

THE ADVANTAGES OF SIZE
Population growth in and of itself is not a blessing—and may even become a curse if it overwhelms the capacity of countries to educate the young, invest in infrastructure, and

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create productive jobs. Rapid population growth has left many developing countries in sub-Saharan Africa mired in poverty. In parts of the Greater Middle East, the failure to create jobs for the burgeoning number of working-age adults has helped to trigger social revolution and played a role in fomenting extremism. In parts of Latin America, it has led to massive outmigration.

Yet it is also true that countries with large and growing populations and economies enjoy important advantages. There are many vital public or quasi-public undertakings, from irrigation systems to rail and highway systems, whose operating cost per unit of output (or per citizen) declines as the size of the population and economy increases. Many of the twentieth century’s most distinguished economists have stressed the contributions of such “increasing returns to scale” to economic growth. Some economists also believe that large and growing populations stimulate advances in technology and economic organization. Ester Boserup and Colin Clark have argued that growing population density encourages people to innovate, and thus gives rise to new and more efficient means of production. Simon Kuznets and Julian Simon have additionally concluded that large populations, because they have large pools of human ingenuity, are likely to produce more new ideas.

There is of course a dissenting tradition in modern economics which stresses that population growth and size also entail “decreasing returns to scale.” The most obvious examples involve natural resources, which if nonrenewable are finite, and the environment, which if degraded may not recover. Because the earth’s carrying capacity cannot grow without limit, the argument goes, neither can humanity’s numbers and appetites—which is why, as economist E. F. Schumacher famously put it, “Small is beautiful.”

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Although the case for no-growth or slow-growth has some merit, it must be qualified with serious caveats. The impact of slower growth in a nation’s population and economy on natural resource depletion is unclear, because the cost of food, oil, and most other commodities is determined internationally. Indeed, the slower growth of a particular population and economy may do nothing to save on natural resources or help the environment if other economies grow faster as a result—for instance, if lower energy prices caused by slower growth in the developed world encourage emerging markets to grow faster with less regard for the environment. Moreover, while there may well be a limit to the earth’s carrying capacity, that limit has been repeatedly pushed outward by advances in technology. In the late 1960s, Paul Ehrlich famously predicted in *The Population Bomb* that the world would face mass famine by the 1980s.\textsuperscript{11} That did not happen because, among other things, the Green Revolution vastly increased agricultural productivity.

Whatever one makes of these arguments and counterarguments, no one seriously disputes that there is at least one collective activity, national defense, where increasing returns to scale may be decisive. While population size alone does not confer geopolitical stature, population size and economic size together are potent twin engines of national power. They obviously underpin the hard power of military capabilities and the semi-hard power of foreign assistance. At least to some significant extent, they also underpin the soft power of global influence, which depends in part on such things as a country’s leverage in multilaterals, its global business presence, and its clout in the media and popular culture, all of which in turn depend in part on demographic and economic size. A United States of more modest demographic and economic size would not be capable of enforcing today’s rules-based world order. Nor would it enjoy the “exorbitant privilege” of printing the world’s reserve currency.

Yes, history has many examples of demographically small powers that exercised outsized geopolitical sway, from Athens and Venice to Portugal, the Netherlands, and Great Britain. But what is often forgotten is that, during their period of growing geopolitical influence, all of these powers were also growing demographically and economically relative to their neighbors and to the rest of the world. History has few if any examples of geopolitically rising powers that were at the same time demographically and economically stagnant or contracting powers.

Over the next few decades, the United States and its traditional developed world allies will be shrinking steadily in demographic size relative to a faster-growing emerging world.

They will also be shrinking steadily in relative economic size. (See figure 4.) As they do, their capacity to play a major geopolitical role may diminish, increasing the risks to global peace and prosperity. These risks could be further amplified if demographic and economic shifts alter the social mood in today’s developed countries in ways that also diminish their willingness to play a major geopolitical role.

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Figure 4

GDP by Country and Country Group as a Percent of World GDP, in PPP Dollars, 2016, 2030, and 2050

2016 | 2030 | 2050
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Canada | 2% | 1% |
France | 4% | 2% |
Germany | 5% | 3% |
Italy | 3% | 1% |
Japan | 7% | 3% |
UK | 4% | 3% |
US | 29% | 23% |

AN EFFECTIVE STRATEGY

Changing course will not be easy, since the dynamics of slow growth tend to reinforce each other. Slower population growth leads to slower economic growth, which may discourage families from having children and make America a less attractive destination for immigrants, thus further slowing population growth. Greater population aging leads to greater fiscal burdens, which, depending on how they are financed, can reduce investment and productivity growth, thus further slowing economic growth. The danger is that these negative feedbacks become a vicious circle.

Still, America is by no means powerless to respond to the challenge. An effective strategy would have two principal objectives, the first of which is to limit the extent of population aging itself. The surest way to do this is to increase net immigration above what the CBO projections already assume. There is considerable room for

The surest way to limit the extent of population aging is to increase net immigration.
principled disagreement on matters of immigration policy, from whether there should be a path to citizenship for unauthorized immigrants to whether our current system, which is primarily based on family reunification, should be replaced with a skills-based system similar to those in Australia or Canada. What is not in question is that a more slowly growing and aging America would benefit from increased immigration. In the past, when we had replacement-level fertility, immigrants were what kept the workforce growing. In the future, they will be all that keeps it from shrinking.

Policymakers should also do what they can to encourage higher birthrates. Although many factors have contributed to the decline in the U.S. fertility rate since the Great Recession, the most important is that it has become much more difficult for Millennials to launch careers and establish independent households than it was for Boomers or Xers at the same age. When surveyed, Millennial women say both that they would ideally want and that they expect to have more children than they are actually having.\(^{12}\) This gap between ideal and expected fertility and realized fertility suggests that initiatives which reduce the costs of childrearing and make it easier for young adults to balance work and family responsibilities, such as subsidizing daycare and mandating paid maternity and paternity leave, might help push birthrates back up again.

The second goal is to mitigate the demographic drag of any given level of population aging on economic growth. Here the surest way to make a difference is to increase labor-force participation. Boosting the so-called prime-age participation rate of adults aged 25 to 54, which has been falling since the Great Recession, is important. But the largest gains are to be had by increasing labor-force participation among older adults, who are not only America’s greatest underutilized human resource but also the fastest-growing segment of the population. Prior to the pandemic, labor-force participation rates were rising steadily at older ages. Once the pandemic is past, policymakers should do whatever they can to encourage this positive development. As we explained in a previous issue in this series (“Rethinking Retirement in an Aging America,” November 8, 2021), several relatively modest incentive changes in Social Security and Medicare could make it more attractive for those older workers who are able to do so to remain on the job longer, while at the same time protecting those who are not.

Along with encouraging higher labor-force participation, policymakers will have to reduce the rising fiscal burden of Social Security, Medicare, and other federal health benefit programs. Paying for the full projected growth in these programs by raising taxes would eventually require new revenues equivalent to an 80 percent increase in individual income taxes. Paying for it by cutting other spending would eventually require zeroing out all federal “discretionary spending” on everything from the national parks to national defense. The other alternative, of course, is to continue paying for the growth by borrowing, as we have now been doing for many years. But with interest rates rising, this may no longer be an option. And even if it were, the additional debt would amount to a massive deferred tax on the living standards of our children and grandchildren.

Mitigating the demographic drag of population aging on economic and living standard growth will also require resisting protectionist pressures. Open global capital markets can allow savings in older and more slowly growing developed countries to flow to investment opportunities in younger and faster-growing emerging markets. Open global labor markets can allow workers in countries where labor is abundant and capital is scarce to be matched with jobs in countries where just the opposite is true. Ensuring that the world remains interconnected, moreover, would not only reduce the economic costs of population aging, but could also reduce the geopolitical risks.

Much is at stake. In a growing economy, to paraphrase JFK, a rising tide can lift all boats. When economic and living standard growth slow, the success of one person or group increasingly comes at the expense of another. An affluent society with a slowly growing population and economy may of course remain an affluent society, at least for a while. But without sufficient growth, elites will tend to become entrenched, there will be little economic and social mobility, and politics will come to be all about redistribution. In fact, as U.S. living standard growth has slowed in recent decades one might argue that all of this has already begun to happen.
America faces a choice. It can continue on its current course or it can chart a new and more hopeful one. The policy and behavioral changes needed to confront the demographic and economic challenges ahead may test our ability to adapt and evolve. But thankfully, that ability has always been one of America’s defining characteristics.
About the Global Aging Institute

The Global Aging Institute (GAI) is a nonprofit research and educational organization dedicated to improving our understanding of global aging, to informing policymakers and the public about the challenges it poses, and to encouraging timely and constructive reform. GAI’s agenda is broad, encompassing everything from retirement security to national security, and its horizons are global, extending to aging societies worldwide.

Although GAI is relatively new, its mission is not. Before launching the institute in 2014, Richard Jackson, GAI’s president, directed a research program on global aging at the Center for Strategic and International Studies which, over a span of fifteen years, played a leading role in shaping the debate over what promises to be one of the defining challenges of the twenty-first century. GAI’s Board of Directors is chaired by Tom Terry, who is CEO of The Terry Group and past president of the International Actuarial Association and the American Academy of Actuaries. To learn more about GAI, visit us at www.GlobalAgingInstitute.org.

About The Terry Group

The Terry Group is a health and actuarial consulting firm whose consultants and researchers help organizations navigate the complexities of health care, pensions, investments, and employee benefits. We are actuaries, clinicians, and experts in capital markets. We build models, analyze data, and provide expert testimony, working in partnership with our clients to help solve challenging problems and achieve their goals. Our deep experience, superior technical expertise, and passion for continuous learning are central to who we are. To learn more about The Terry Group, visit us at www.terrygroup.com.