Demographic Headwinds

The Economic Consequences of Lower Birth Rates and Longer Lives

ASPEN ECONOMIC STRATEGY GROUP

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CHAPTER

Introduction

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The United States is in the midst of a consequential demographic transition, marked by the dual trends of a sustained decline in the country's birth rate and a rise in life expectancy.

As shown in figure 1, following the mid-twentieth-century Baby Boom and its subsequent reversal, the US general fertility rate held roughly steady for several decades at around 65 to 71 births per 1,000 women of childbearing age. But that stability abruptly came to an end around 2007, and births have been on a downward trend since, falling to a historic low of 54.6 in 2023. The associated US total fertility rate, which approximates the average number of children a woman will have over her lifetime given the current age profile of childbearing, declined from 2.12 in 2007 to 1.63 in 2024, well below 2.1—the level at which a population replaces itself across generations.[1] At the same time, average lifespan in the US has consistently risen.

As figure 2 displays, a person born in the US in 1960 was expected to live to 70 years old, on average. By 2023, the average life expectancy had risen to 78.4 years. Amid low birth rates and rising life expectancies, the share of the US population 65 or older has grown substantially, especially in recent decades. Over the 20-year period from 1985 to 2005, the share increased from 11.7 to 12.1; in the 20 years since, it has shot up to 17.9 percent (World Bank 2025b).

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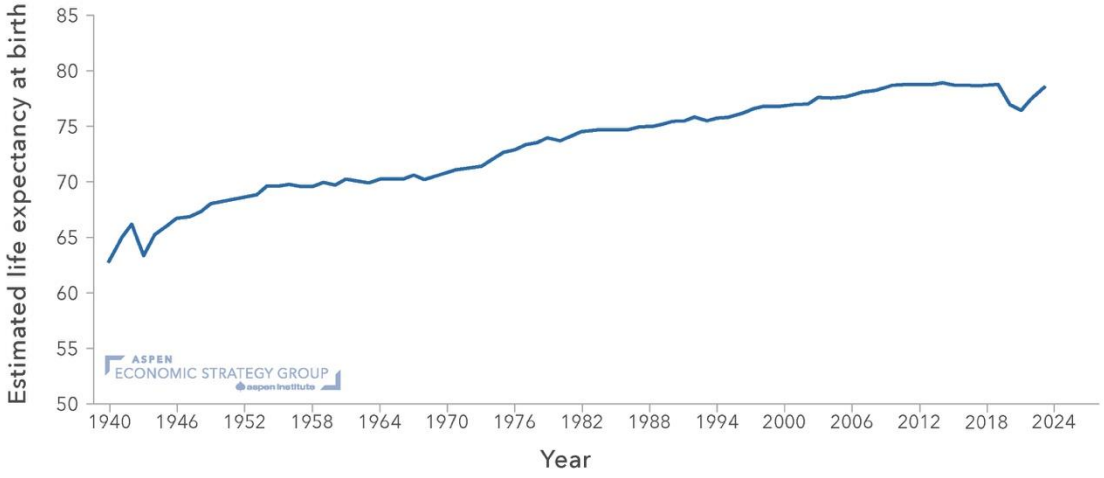
[1] The *general fertility rate* is a point-in-time measure of births, offering a picture of fertility trends in a given year. The *total fertility rate*, on the other hand, is a calculated estimate, constructed by summing the fertility rates across five-year age groups and multiplying by five. It reflects the number of children a woman might expect to have over the course of her life, assuming she follows current fertility patterns of women across these age groups.

Figure 1: US general fertility rate, 1940–2024

Note: 2024 data is provisional.
Sources: Hamilton et al. 2012 and 2025; Osterman et al 2024

Figure 2: Estimated life expectancy at birth (years), 1940–2023



Sources: Arias et al. 2025; Tejada et al. 2020

An immediate demographic consequence of an inverted population pyramid—that is, one where there are fewer young people and more old people—means that the share of the population of traditional working age (20 to 64 years old) is declining. This decline puts more pressure on a smaller share of the population to contribute to economic activity and to care for an aging population. The share of the US population of working age was 60 percent in 2016; it fell to 58 percent in 2024 and is expected to continue falling (Congressional Budget Office 2025a). Over the 20-year period from 1985 to 2005, the age dependency ratio—the number of older dependents per hundred members of the working-age population—rose from 17.6 to 17.9; in the 20 years since, it has skyrocketed to 27.2 (World Bank 2025a).

This decline in the birth rate, along with stalled and declining immigration, has resulted in a marked slowing in US population growth: Growth in the decade from 2010 to 2020 was the second-lowest in US recorded history, barely higher than the population growth the US experienced in the 1930s during the Great Depression (US Census Bureau 2021; Gibson and Jung 2002). The Congressional Budget Office projects that the US population will stop growing in 2056 (CBO 2026).

These developments raise important questions about the prospects of US labor market and business dynamism; about national, state, and local public finances; and about the environmental impact of population decline. In what ways does this demographic transition represent a *challenge* to maintaining current living standards—and in what ways does it not? This volume considers four aspects of these questions.

1. *The Environmental Benefits (or Not) of Low Fertility and Population Decline*

One common, sanguine reaction to impending population decline is a suggestion that this trend will help address US environmental and climate challenges. In ***The Environmental Benefits of Low Fertility and Population Decline Are Overstated***, Kevin Kuruc provides a careful assessment of this notion, concluding that current population trends are unlikely to lead to any meaningful environmental benefits in the twenty-first century. He explains the core issue of timing mismatch—demographic change unfolds over many generations, while effective responses to emissions and environmental harm require immediate action. Simply put, it is too late for declining fertility to make a large difference in population size this century, and by the end of this century, it will be too late for population changes to make a large difference to eventual warming.

Kuruc further emphasizes that effective climate strategies, such as carbon capture, require high fixed capital and labor costs. The smaller the economy, the larger the share of national income required to achieve climate goals. He additionally examines—and rejects—claims that a smaller population will relax demands on natural resources. Kuruc argues that evidence reveals that modern natural-resource constraints are weak and of declining importance. Hence, increasing the

availability of these resources per person via population decline is unlikely to make a noticeable difference to living standards.

In addition, climate mitigation and more-efficient use of natural resources depend on human ingenuity, technological innovation, and tax capacity. These paths become more difficult to pursue amid population decline, with fewer minds to create new innovations and a smaller tax base from which to draw the resources to finance these high-fixed-cost investments. Kuruc concludes by warning that smaller communities may lack the political resolve to pass the kinds of long-term sustainability policies necessary to effectively address climate change, as a smaller and older voting base is, in his assessment, less likely to design, vote for, or enforce rules that restrict resource use. Ultimately, Kuruc concludes that welcoming depopulation on environmental grounds is unscientific and potentially counterproductive to effectively addressing climate goals.

2. The Age Divide in the American Workplace

These demographic shifts are already affecting the composition of the US labor market. In ***The Age Divide in the American Workplace***, economists Nicola Bianchi and Matteo Paradisi highlight the firm dynamics that result from an aging population and workforce. Crucially, the rise in life expectancy highlighted above has been accompanied by improvements in later-life health, allowing many older workers to postpone retirement. As a result, high-paying leadership positions are increasingly held by older workers: In the mid-1970s, workers over 50 were about 5 percentage points more likely than workers under 30 to be employed in management occupations in the top quarter of the wage distribution. By 2024, this gap had widened to almost 8.3 percentage points.

Bianchi and Paradisi observe that the greater availability of older, experienced workers can be beneficial for firms, at least in the short term, as firms can rely on more workers with deep firm-specific knowledge and experience. However, this same force also results in “congestion effects” within firms, which can slow the advancement of younger cohorts. Younger workers face fewer opportunities to move into high-paying and managerial jobs, limiting their ability to make key life investments, such as buying a home or starting a family, and to gain the leadership experience they will eventually need. This risk is not hypothetical; the authors show that it is happening empirically.

The authors characterize this phenomenon as a shift in fortunes across generations, where gains from experience for older workers come at the cost of decreased opportunities for younger ones. As firms benefit from potential short-term productivity gains, they also neglect long-term investments in the next generation of the labor force. The central task for firms and policymakers is thus to ensure that the benefits of longer and more productive careers for older workers do not come at the expense of the dynamism and opportunities that younger workers need to thrive.

3. *Low Fertility and Fiscal Sustainability: The Effects of Past and Future Fertility Rates on the US Federal Budget Outlook*

The country's demographic trends have also shaped the US federal government's spending and revenue patterns, contributing in large part to the large and growing federal debt, which the CBO projects will grow from 98 percent of GDP in 2024 to over 150 percent by 2055 (CBO 2025b). Lisa Dettling and Luke Pardue examine the role of these trends in shaping America's current fiscal position, and the potential for a reversal of these trends to relieve our fiscal pressures in ***Low Fertility and Fiscal Sustainability: The Effects of Past and Future Fertility Rates on the US Federal Budget Outlook***.

Their analysis first finds that the dramatic rise and fall in fertility rates during and after the mid-twentieth-century Baby Boom led to a marked rise in old-age entitlement spending, primarily in Social Security and Medicare, as the Baby Boom cohort entered retirement. As life expectancy continues to rise, and America's elderly population lives longer than ever before, old-age entitlement spending will continue to place pressure on federal deficits and debt for the next three decades.

Then, looking at how shifts in near-term fertility trends would affect the federal budget in the coming decades, the authors find that deficits and debt are projected to remain on an unsustainable path through 2055 under both a baseline scenario of continued low fertility and one in which the US returns to a replacement-level total fertility rate in 2026. In the outlook beyond 30 years, the fiscal position would gradually become relatively better if fertility rates were higher. However, given the current unsustainable trajectory of the US federal debt, it appears likely that changes in tax or spending policy would need to occur before the fiscal benefits of higher fertility rates could be realized.

4. *Implications of Low Fertility and Declining Populations for the Operations of US State and Local Governments*

The collapse in US birth rates in particular geographic regions and communities poses significant challenges for local governments tasked with providing high-fixed-cost services, including education and health care. Indeed, many local areas are already dealing with population decline: Roughly half of US counties lost population from 2010 to 2020 (Asquith and Mast 2024). In ***Implications of Low Fertility and Declining Populations for the Operations of US State and Local Governments***, Jeffrey Clemens outlines the contours of these challenges.

Using data on public school districts, Clemens provides preliminary evidence that scaling down capital-intensive services, particularly schooling, is considerably more difficult than scaling them up. Looking at school district enrollment and expenditure data, he estimates that the per-enrollee

cost increases associated with a 10 percent enrollment decline were four times larger than the cost decreases associated with a 10 percent enrollment increase. State and local governments will have to deal with difficult decisions surrounding the closure of underutilized schools and other infrastructure.

Regions with contracting populations will face additional challenges as a smaller working-age population bears the burden of funding pensions and retiree health plans for larger aging cohorts. Clemens points out that, as discussed above in the context of the federal debt, lower fertility can create a short-run fiscal dividend for localities that serve fewer children. Policymakers should use that time to prioritize efficient retrenchment to accommodate the declining need for education and other public services.

To be sure, the country faces difficult decisions across many spaces as it manages a very different future. Our aim for this series is to highlight four such challenges we view as particularly important and to spur scholars and policymakers to think further about solutions.

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