

Fertility Rates, Increased Life Expectancy, and Migration

Shaping the Global and U.S. Populations

August 7, 2026



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Planning Department
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KEY TAKEAWAYS

Major Demographic Changes

Declining fertility rates and rising life expectancy over the last 75 years are driving a shift toward an older, slower-growing population in many but not all countries. International migration can act as a balancing force in global demographics.

DECLINING FERTILITY RATES

Below replacement population fertility rates are common in many countries

INCREASED LIFE EXPECTANCY

Global life expectancy has increased by 27 years since 1950

INCREASED INTERNATIONAL MIGRATION

The global stock of international migrants has doubled since 1990

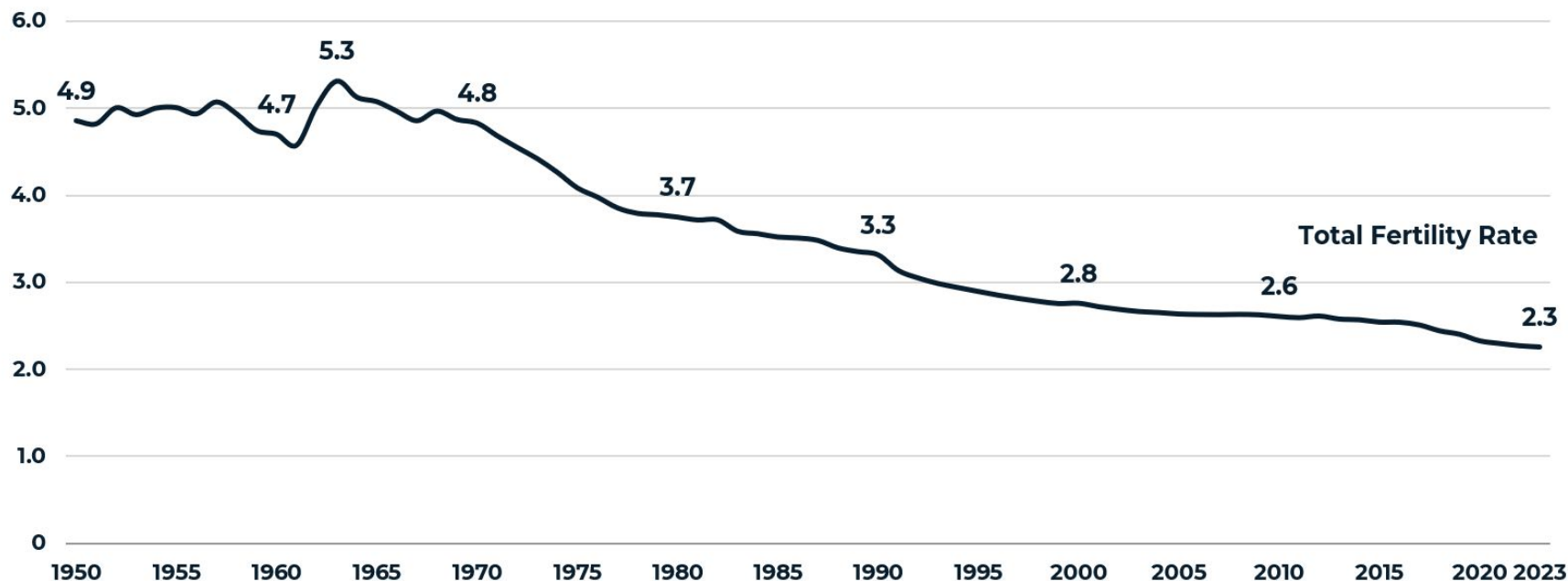
DECREASING FERTILITY RATES



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The global total fertility rate dropped from 5.3 births per woman in 1963 to 2.3 births in 2023

Global total fertility rate, 1950-2023



Source: World Population Prospects, United Nations, City of Boston Research Division Analysis

Economic theories of fertility rates partially explain declining births

- Traditional **Demographic Transition** theory explains how a country's population growth and structure change as it transitions from a pre-industrial, agricultural economy to an industrialized, modern one going shifting from high birth and death rates to low birth and death.
 - **Nigeria since the 2000s**
- **Economic Precarity and Risk** posits that modern declines and delays in childbearing are primarily driven by labor market instability and prolonged financial anxiety, rather than purely by the actual monetary cost of raising children.

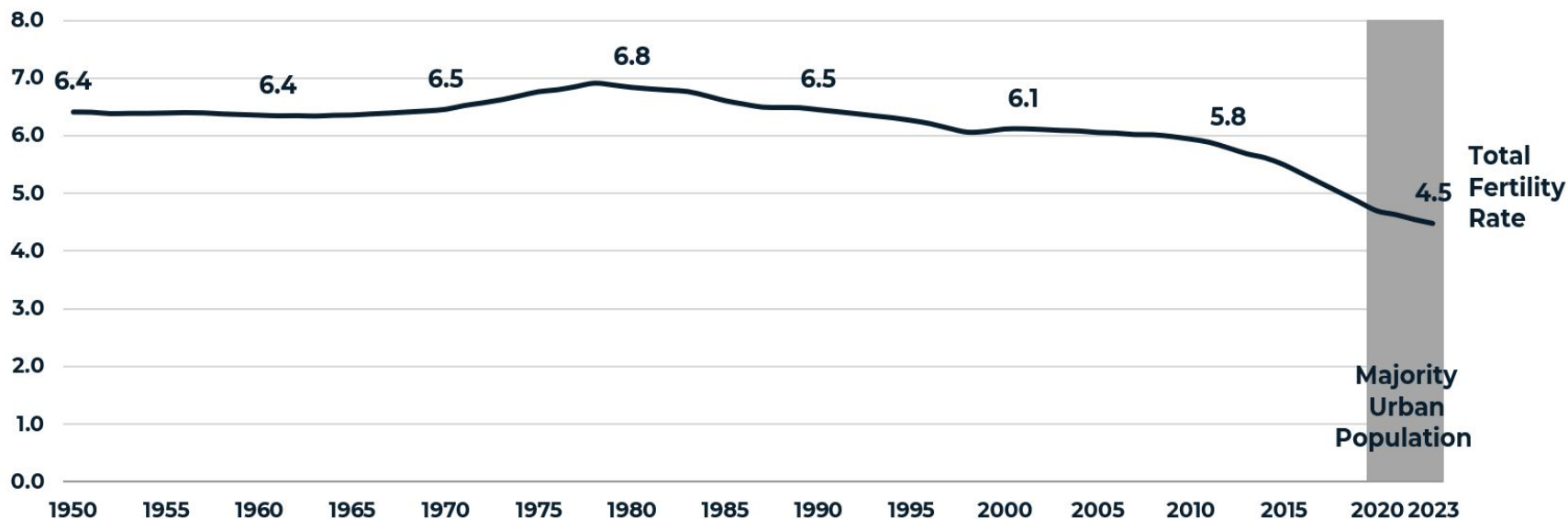
Notestein, F.W. (1945) "Population-The Longview" In *Food for the World*. Ed Schultz, T.W.. University of Chicago Press

- **United States since 2008**

Mills, M., & Blossfeld, H.-P. (2005). Globalization, uncertainty and the early life course: A theoretical framework. In H.-P. Blossfeld, E. Klijzing, M. Mills, & K. Kurz (Eds.), *Globalization, uncertainty and youth in society* (pp. 1-24). Routledge.

Nigeria's total fertility rate dropped from 6.1 to 4.5 as industrialization and urbanization increased in the 2000s

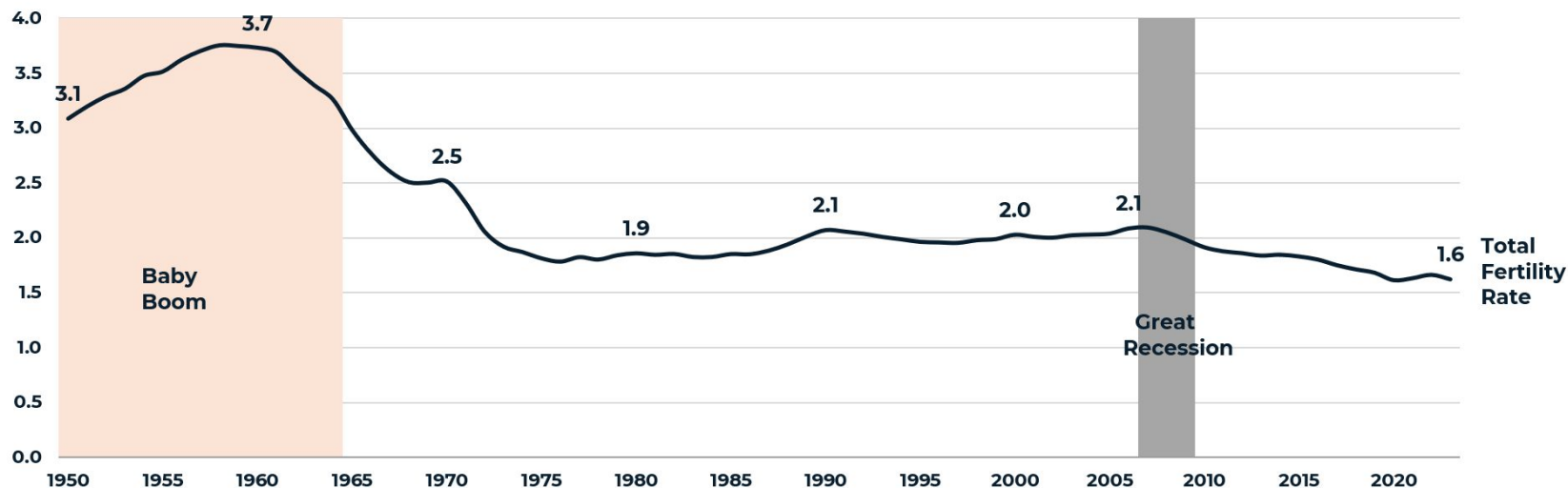
Nigeria's total fertility rate, 1950-2023



Source: World Population Prospects, United Nations, City of Boston Research Division Analysis

The US total fertility rates fell below 2.1 during the Great Recession, potentially due to economic precarity

United States' total fertility rate, 1950-2023



Source: World Population Prospects, United Nations, City of Boston Research Division Analysis

Cultural theories of fertility rates can also explain declining births

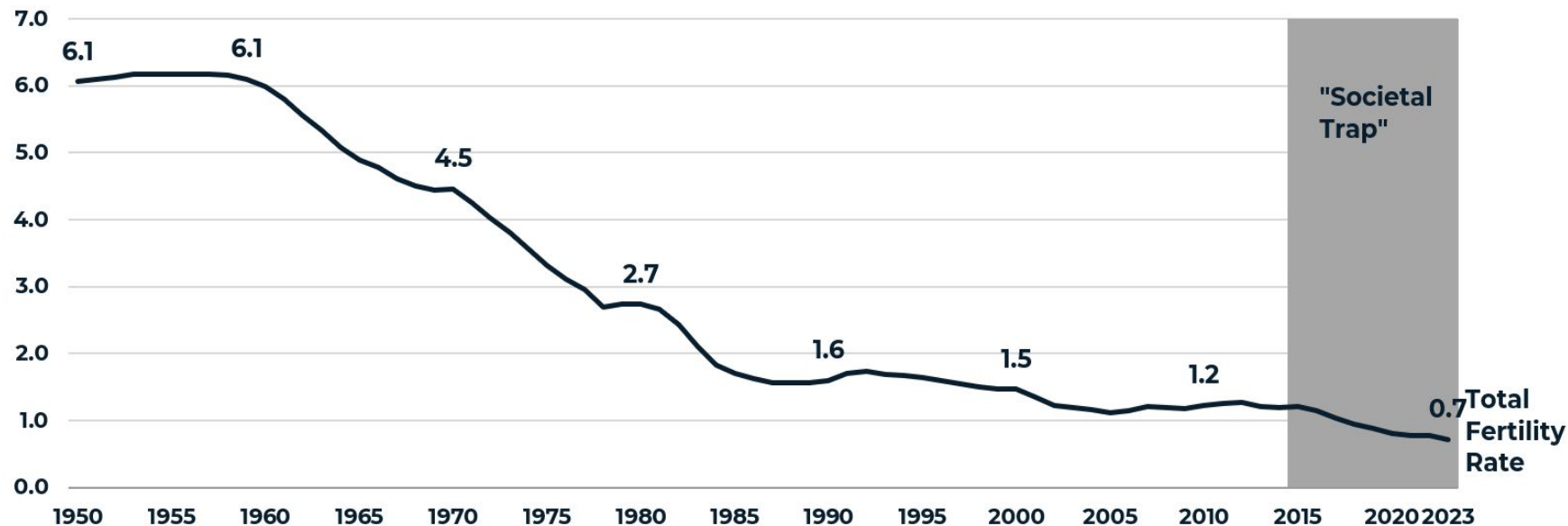
- The **Gender Equity Theory** posits that very low birth rates in high-income countries occur when women face a "dual burden" of working paid jobs while still shouldering most of the domestic and childcare responsibilities.
 - **South Korea since 2010**
- The **Second Demographic Transition** theory explains the shift in modern societies from uniform family structures and stable birth rates to diverse living arrangements and sustained sub-replacement fertility.
 - **Norway since mid 1960s**

McDonald, P. (2000). Gender equity in theories of fertility transition. *Population and Development Review*, 26(3), 427–439.

Van de Kaa, D. J. (1987). Europe's second demographic transition. *Population Bulletin*, 42(1), 1–59.

South Korea's total fertility rate dropped from 1.5 births per woman in 2000 to 0.7 births in 2023 as women increasingly see childbearing as a “societal trap”

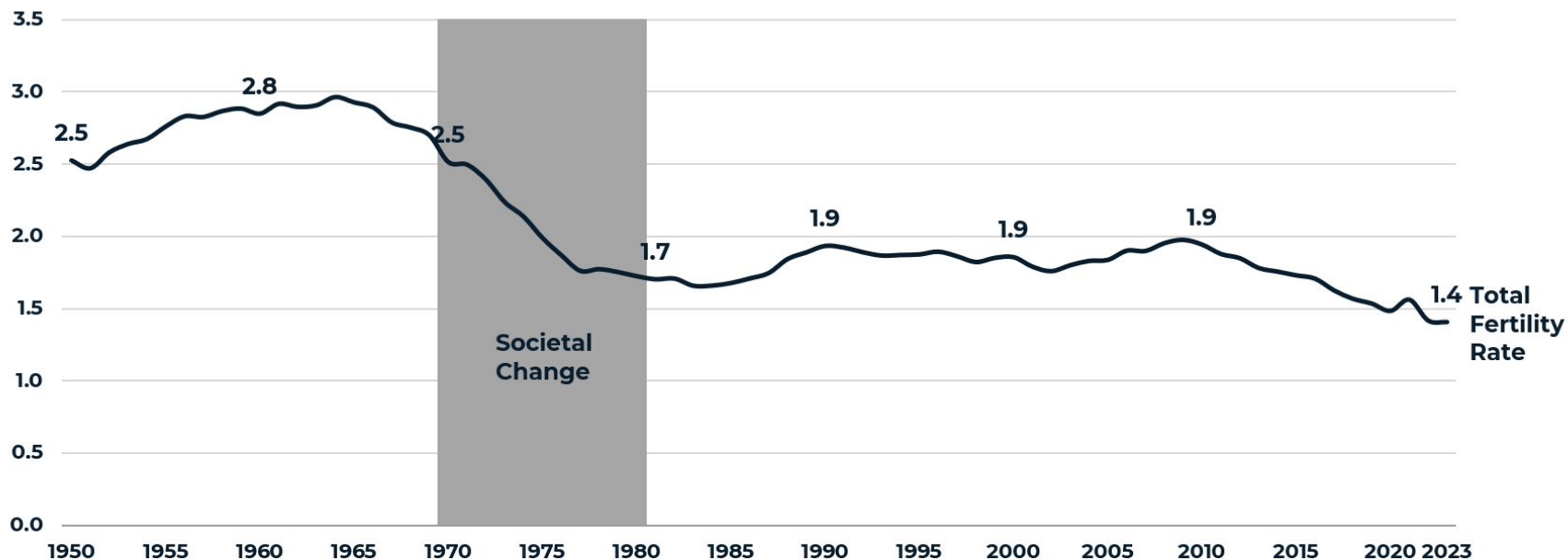
South Korea's total fertility rate, 1950-2023



Source: World Population Prospects, United Nations, City of Boston Research Division Analysis

Norway's total fertility rate dropped from 2.8 births per woman in 1960 to 1.7 births in 1980 as social norms changed

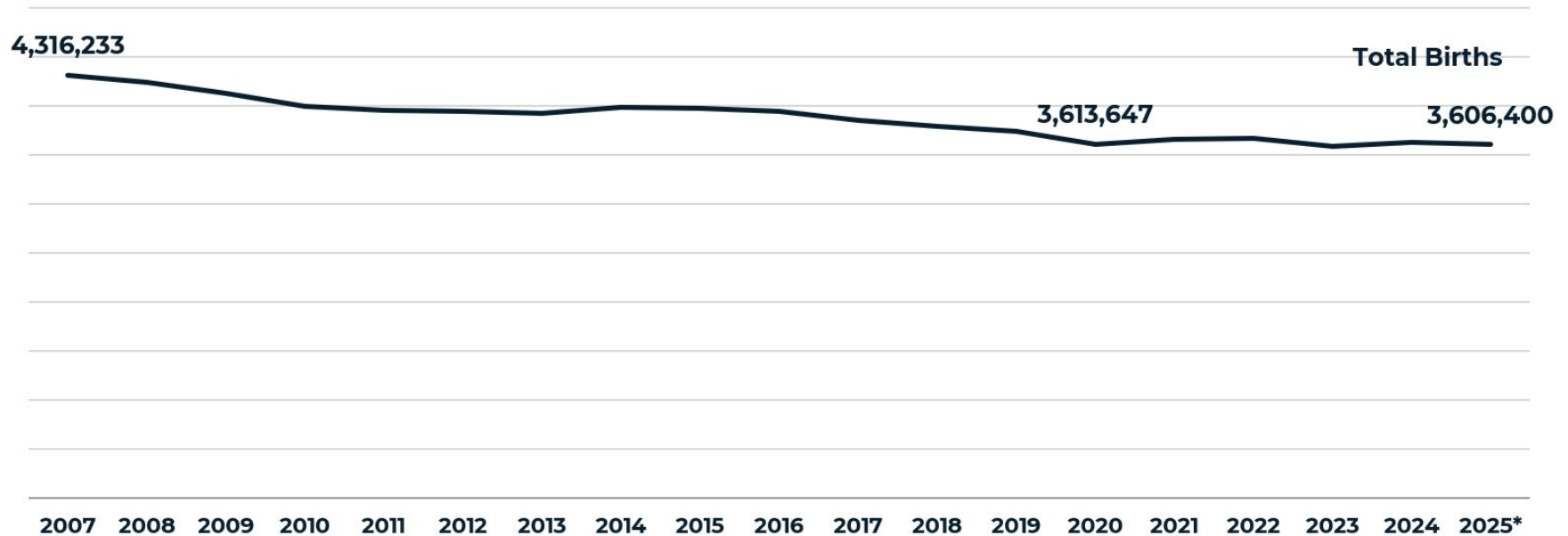
Norway's total fertility rate, 1950-2023



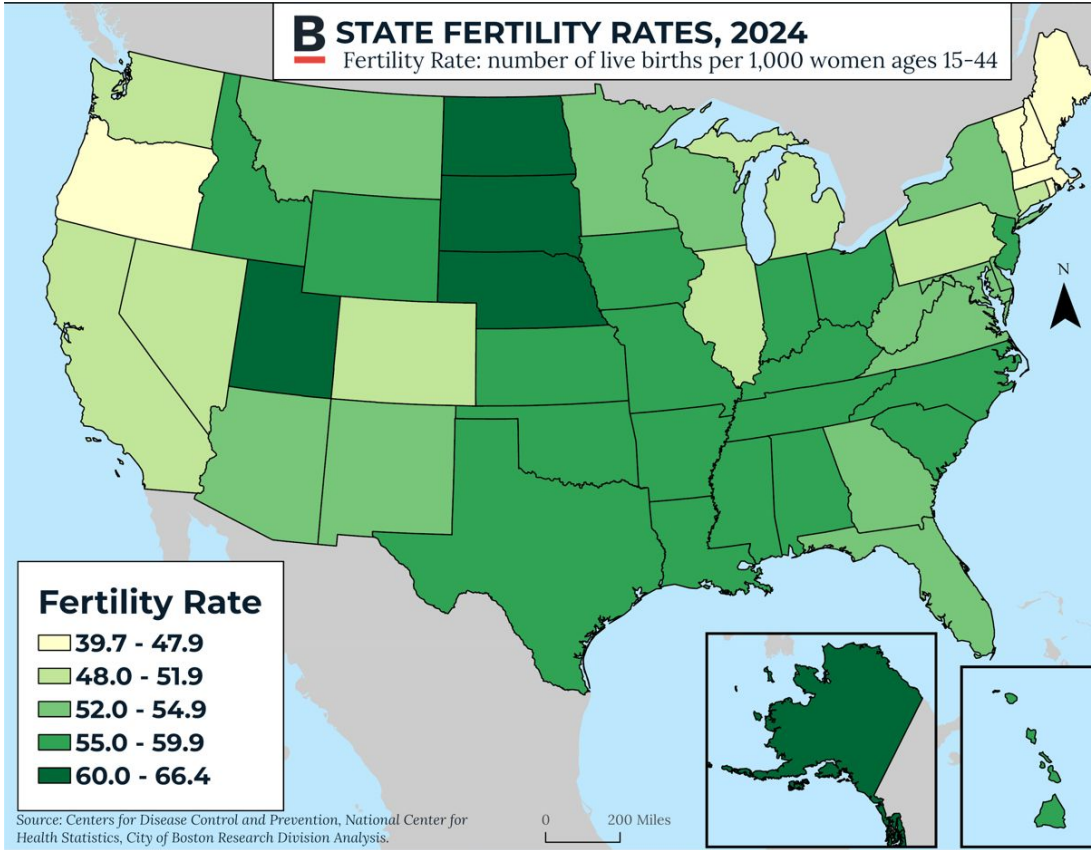
Source: World Population Prospects, United Nations, City of Boston Research Division Analysis

In the US, the cumulative effect of lower fertility rates for 18 years since 2007 is ~8.4 million fewer children under 18 in 2025 than if 2007 births had been constant

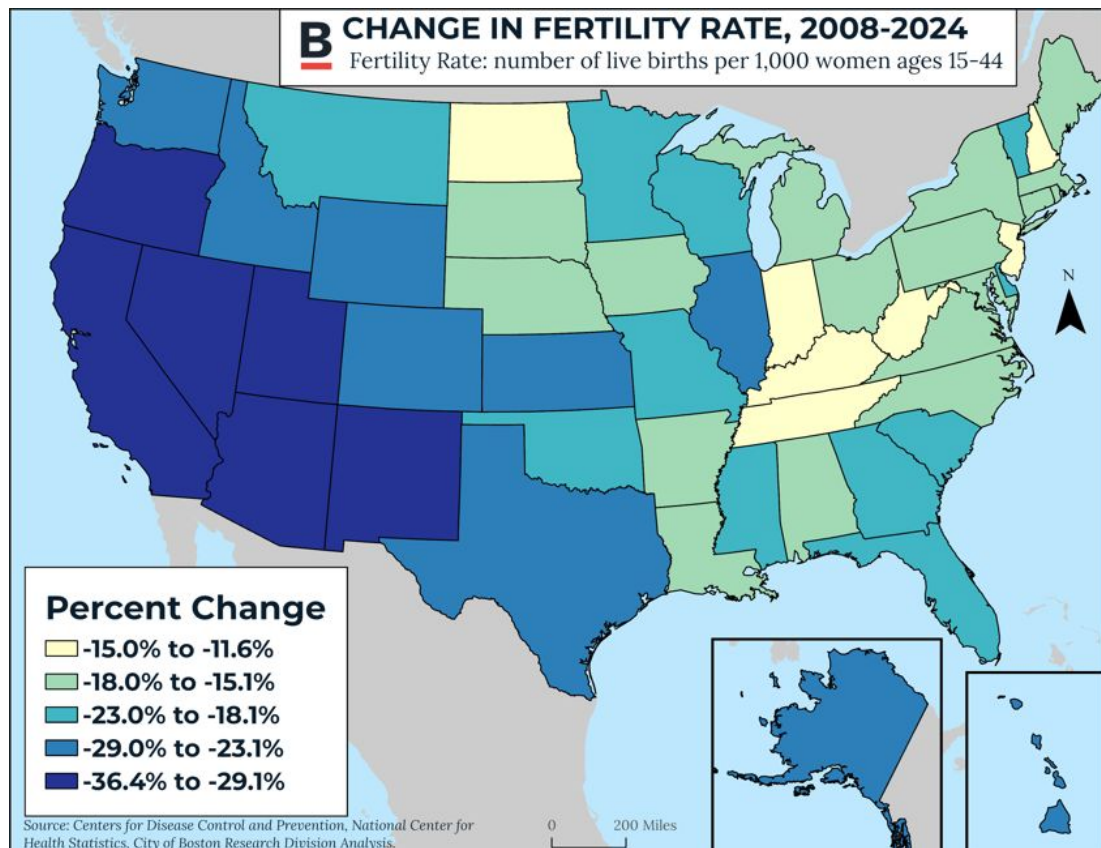
Total births in the United States, 2007-2025



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. City of Boston Research Division Analysis
* Provisional



Massachusetts fertility rate in 2024 was 46.6 births per 1,000 women ages 15 to 44. The New England states and Oregon have the lowest fertility rates in the United States.



Every state had at least an 11.6% decline in its fertility rate 2008-2024.

Fertility rate declines were especially pronounced in the West and Southwest.

Massachusetts ranked 24th with an 18.0% decline in its fertility rate.

LIFE EXPECTANCY, HEALTH, AND AN AGING POPULATION



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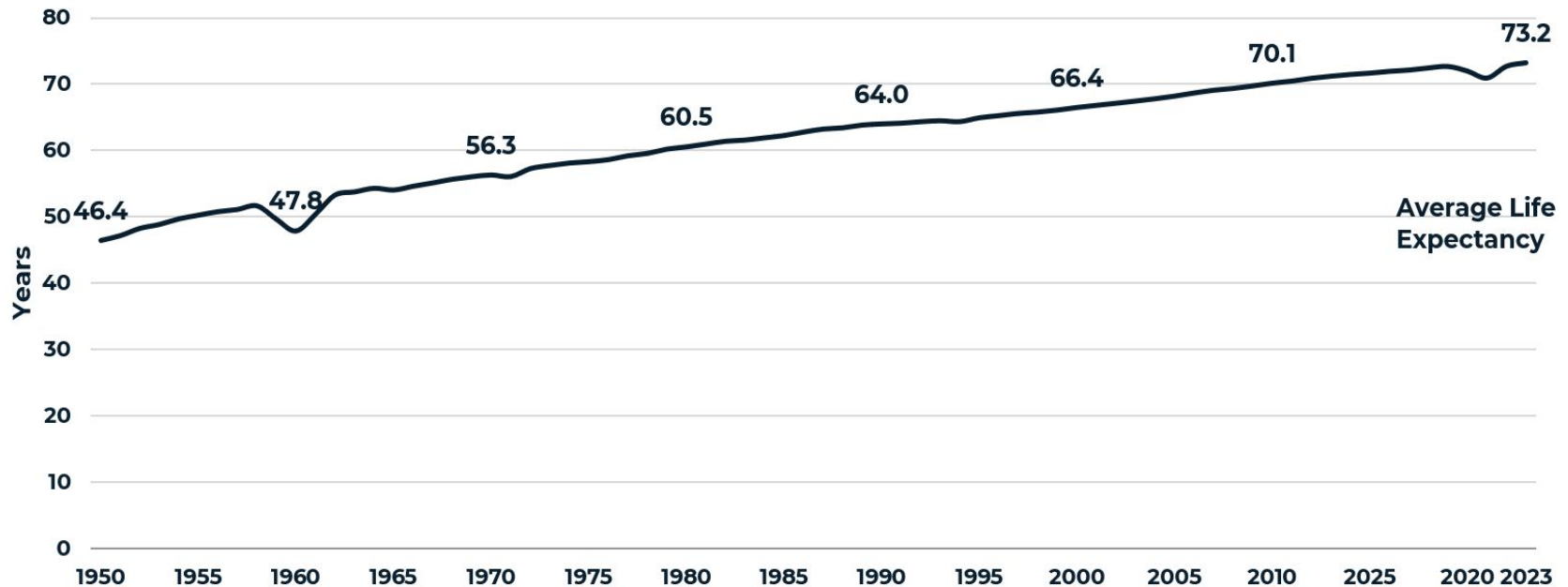
Increased standard of living has driven an increase in global life expectancy

- The **Standard of Living** theory posits a population's life expectancy is directly shaped by material well-being, specifically nutrition, housing, income, and public health.
 - **Economic development**
 - Better nutrition and housing
 - **Public health measures**
 - Clean drinking water and wastewater treatment
 - **Medical advancements**
 - Antibiotics, vaccines, and other medical technologies

Preston, S. H. 1975. *The changing relation between mortality and level of economic development*, *Population Studies*, Vol. 29, No. 2;
Cutler, D., Deaton, A., and Lleras-Muney, A. 2006. "The Determinants of Mortality." *Journal of Economic Perspectives* 20 (3): 97–120

Global average life expectancy has risen from 46.4 years in 1950 to 73.2 years in 2023 with declines due to the Chinese famine in the early 1960s and COVID in 2020-2021

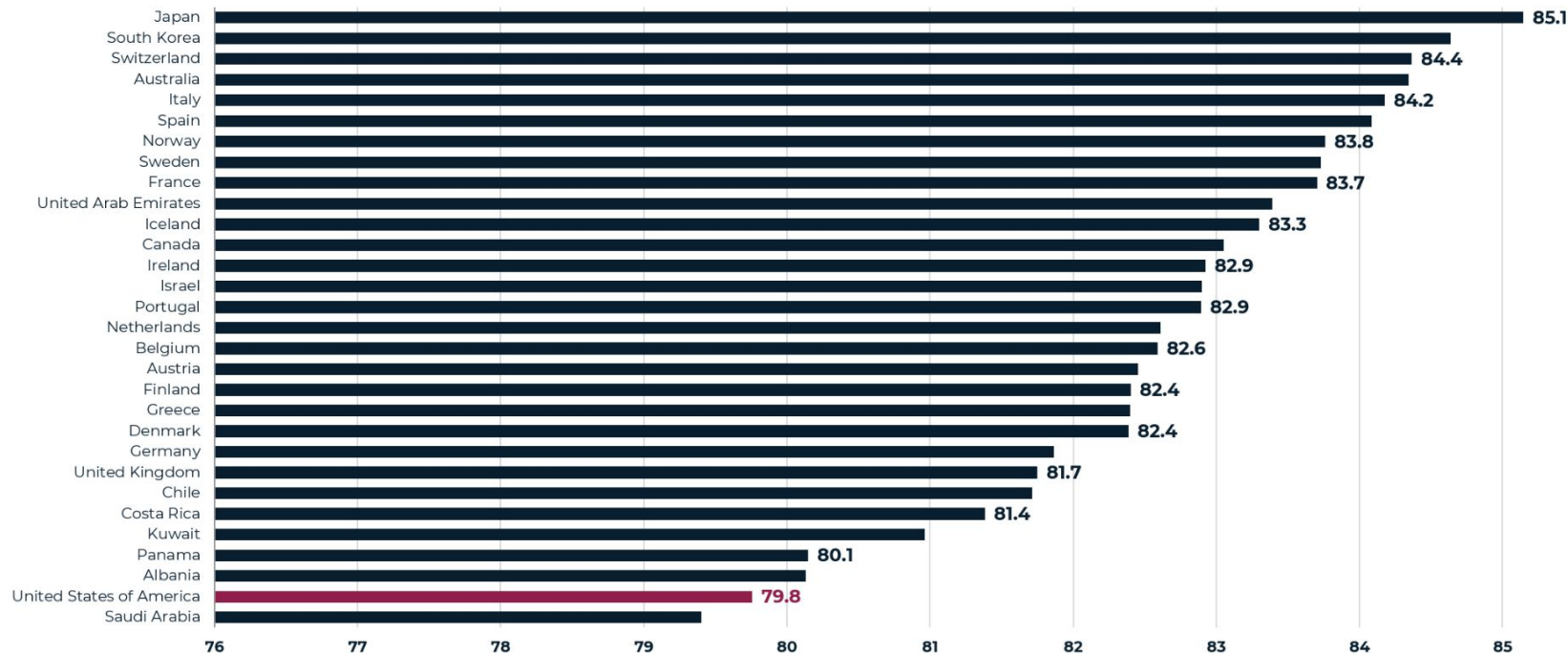
Global average life expectancy, 1950-2023

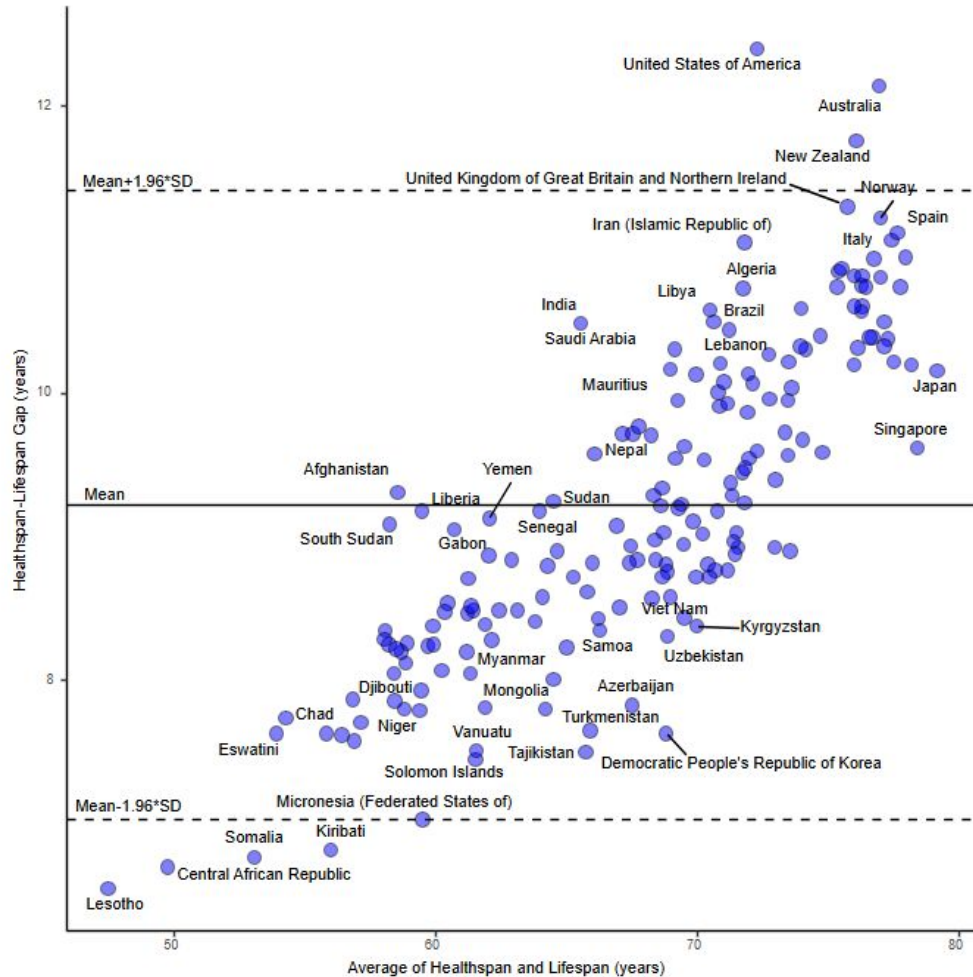


Source: World Population Prospects, United Nations, City of Boston Research Division Analysis

Japan had the highest average life expectancy in 2024 at 85.1 years, while in the United States it was 79.8 years

Average life expectancy at birth, 2024





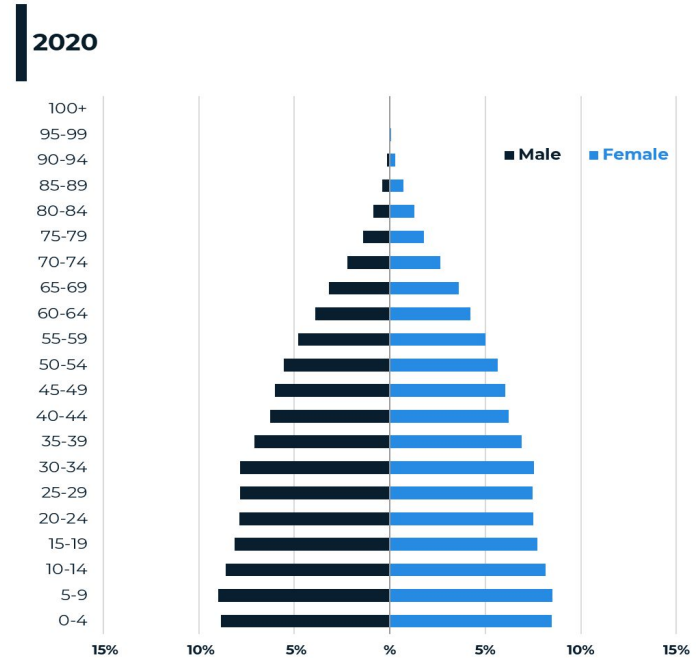
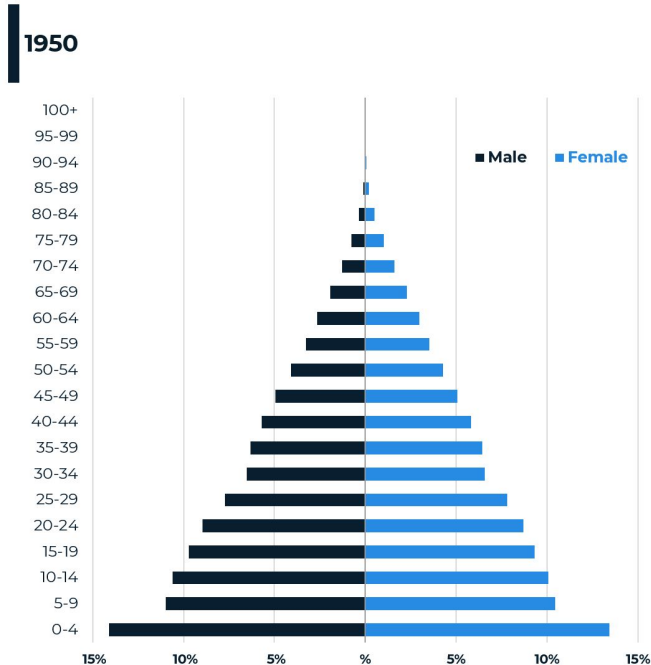
Lifespan has increased faster than healthspan from 2000 to 2019, increasing the gap years in which people may be increasingly disabled.

In the U.S. the lifespan-healthspan gap rose from 11 years to 12.4 years - the highest in the world.

Garmany, A., & Terzic, A. (2024). Global Healthspan-Lifespan Gaps Among 183 World Health Organization Member States. JAMA Network Open, 7(12), e2450241 <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2827753>

Over 70 years, the broad base of the global population pyramid has shrunk, producing a more rectangular shape as the proportion of children decreased and older age groups expanded

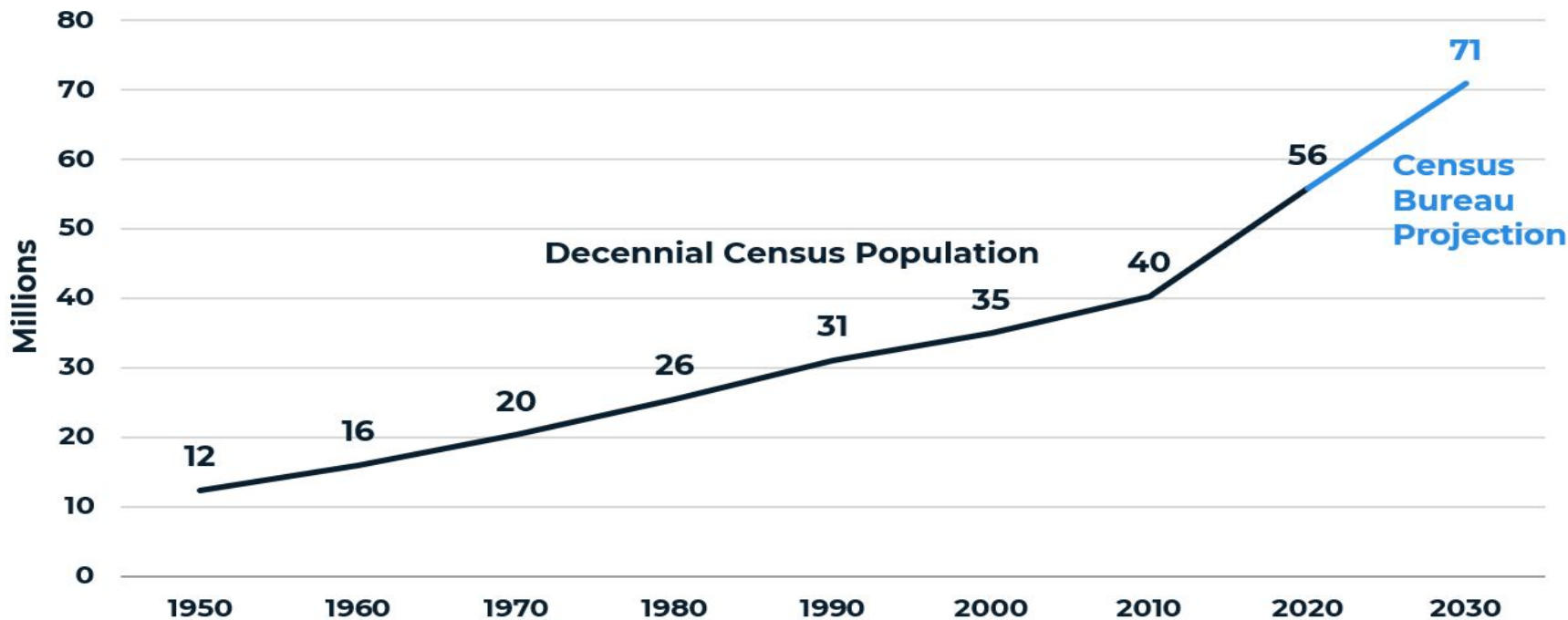
Global Distribution of Population by Age, 1950 & 2020



Source: United Nations World Population Prospects, 2024 revision, City of Boston Research Division Analysis

The 65 and older population in the United States is projected to double between 2000 and 2030

U.S. population 65 and older, 1950-2020 and 2030 projected



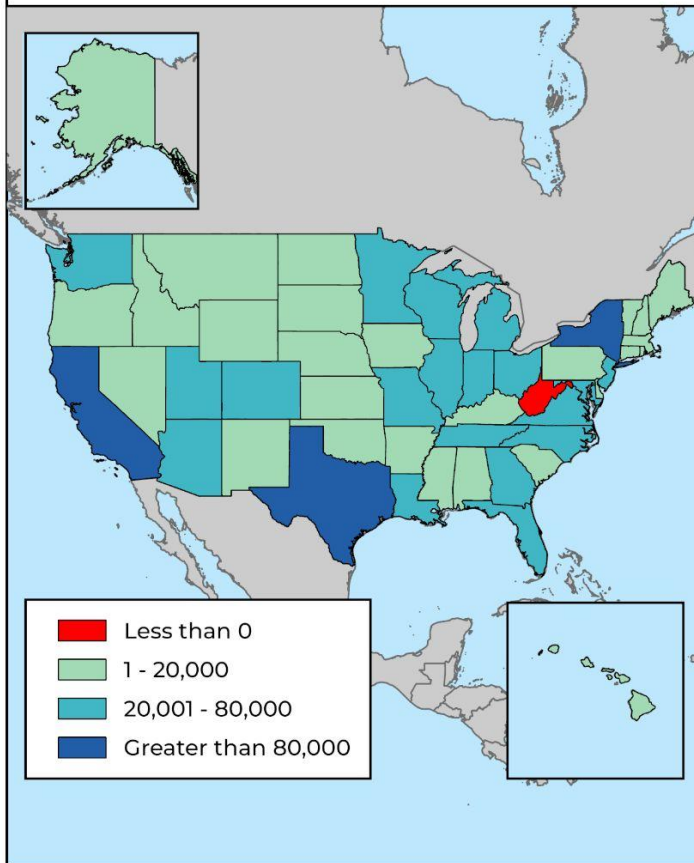
**Without migration,
an increasing
number of states
will lose
population.**

In 2010, West Virginia was the only state where deaths outnumbered births.

By 2025, that number had risen to 17 states.

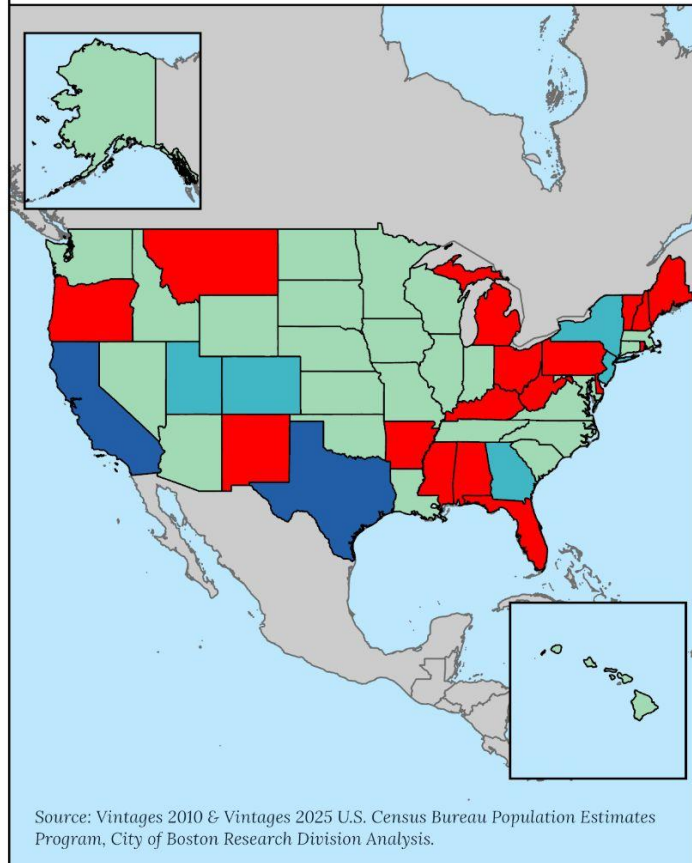
B NATURAL POPULATION CHANGE

Births vs Deaths, 2010



B NATURAL POPULATION CHANGE

Births vs Deaths, 2025



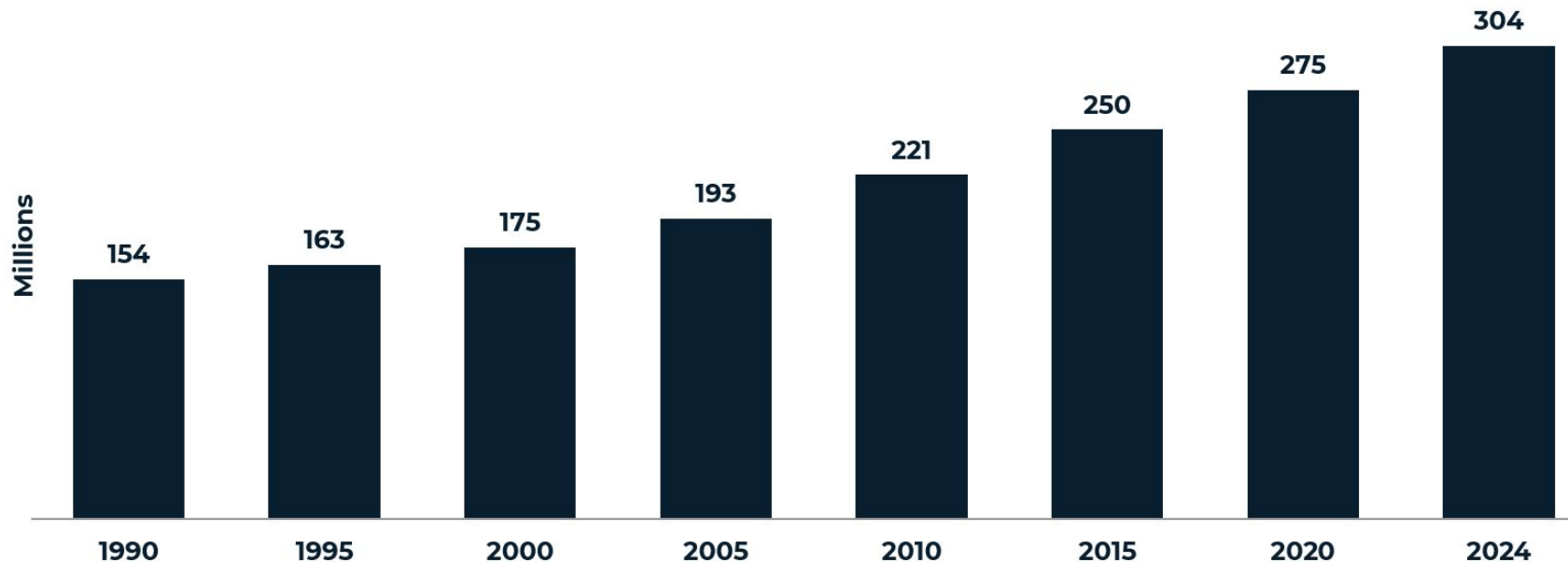
INCREASING GLOBAL MIGRATION AND CHANGING MIGRATION TRENDS IN THE US



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In 2024, 3.7% of the world's population lived in a country other than their country of birth, up from 2.9% in 1990

Global stock of international migrants, 1990-2024



Competing theories of migration

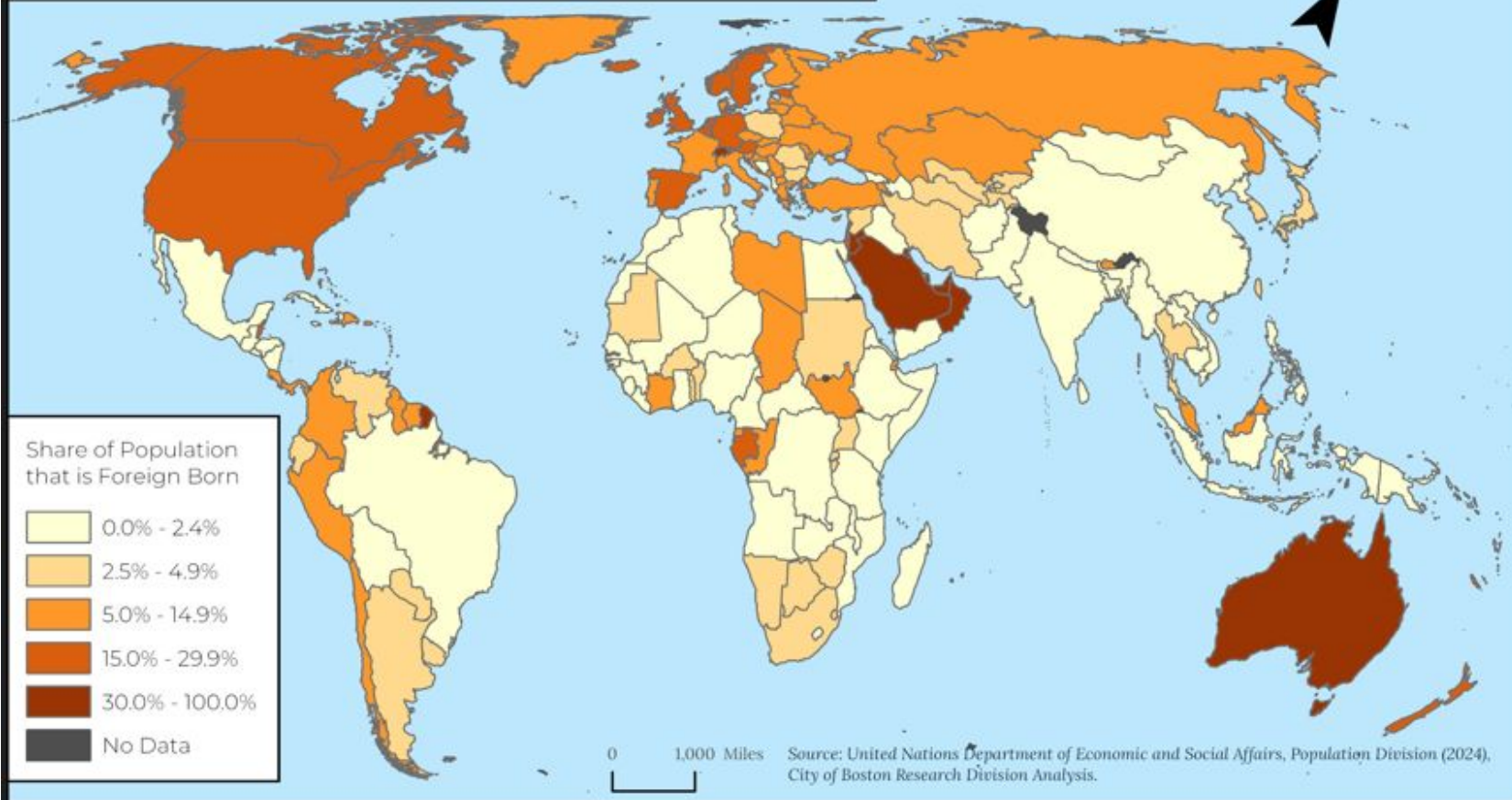
- **Economic theories** suggest that migrants seek economic opportunity and a country should admit immigrants as long as the contribution of the marginal immigrant is positive.
 - Example: Countries such as **Saudi Arabia and Australia** that have abundant resources and opportunities relative to population tend to attract and admit immigrants

Simon, J. (1984). "Immigrants, Taxes and Welfare in the United States." *Population and Development Review* 10(1):55-69.

- However, **cultural conservatism** highlights how foreign-born persons bring different cultures that threaten the social cohesion of the receiving country, prompting a rejection of immigrants in spite of economic benefits
 - Example: **Japan and South Korea** restrict immigration despite declining domestic working age population

Zolberg, A. R. (2006). *A nation by design: Immigration policy in the fashioning of America*. Harvard University Press.

B GLOBAL FOREIGN BORN SHARE, 2024

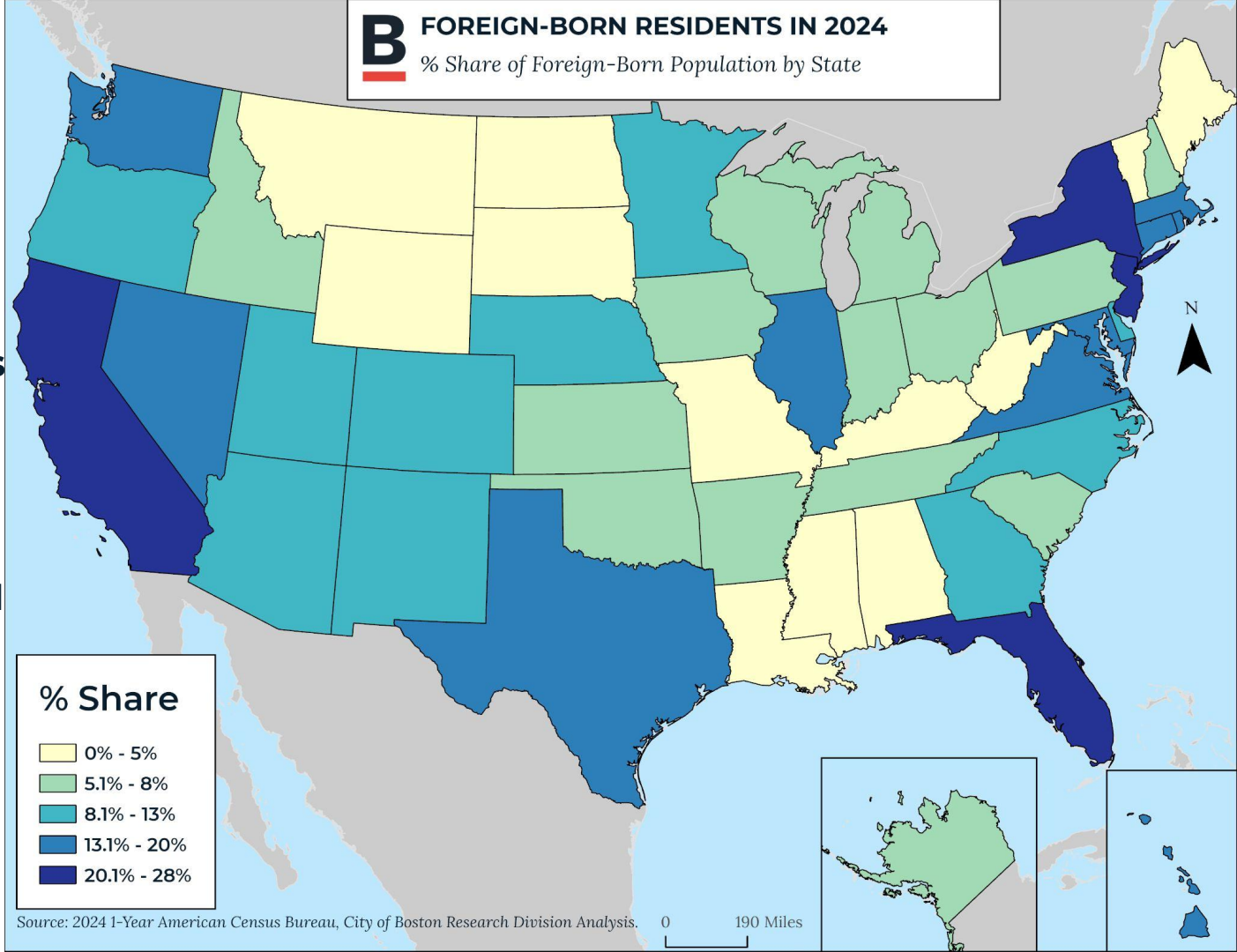




% Share of Foreign-Born Population by State

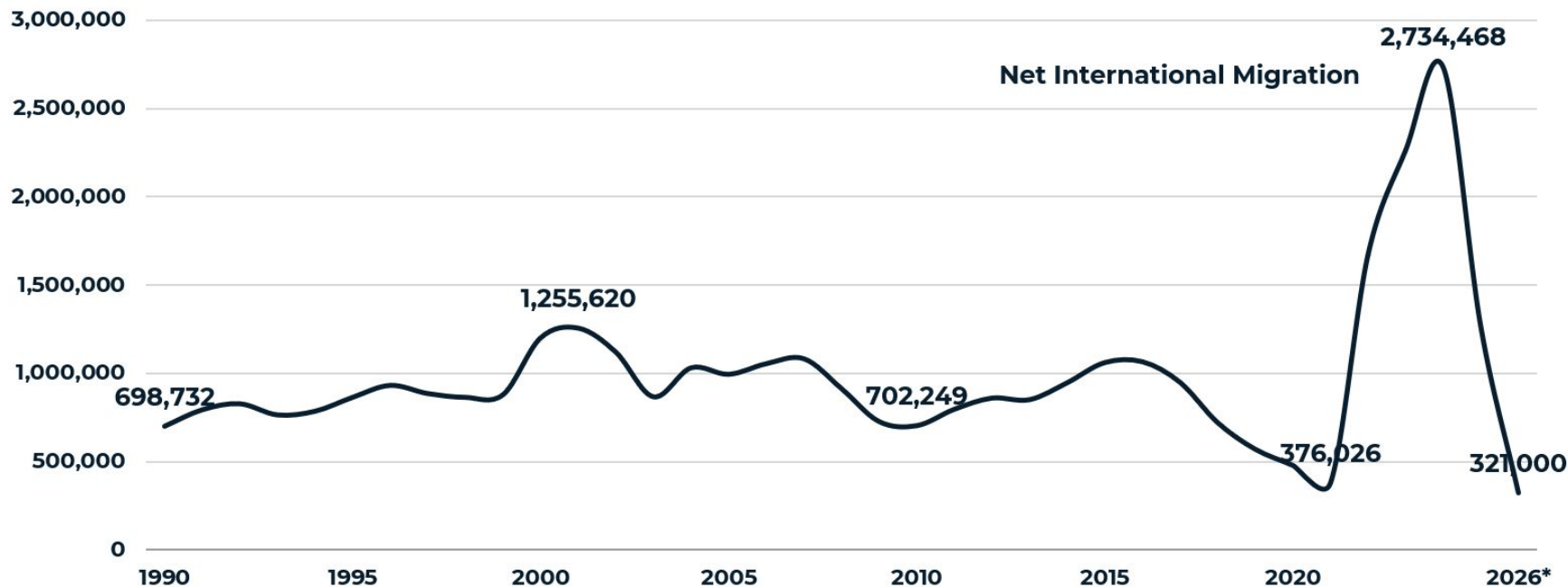
California (28%) had the highest share of foreign-born residents in 2024, followed by New Jersey (25%) and Florida (23%).

In contrast, Montana and West Virginia had the lowest shares, at 2%.



Net international migration to the US is positive and a source of population growth, though it has experienced significant recent fluctuations

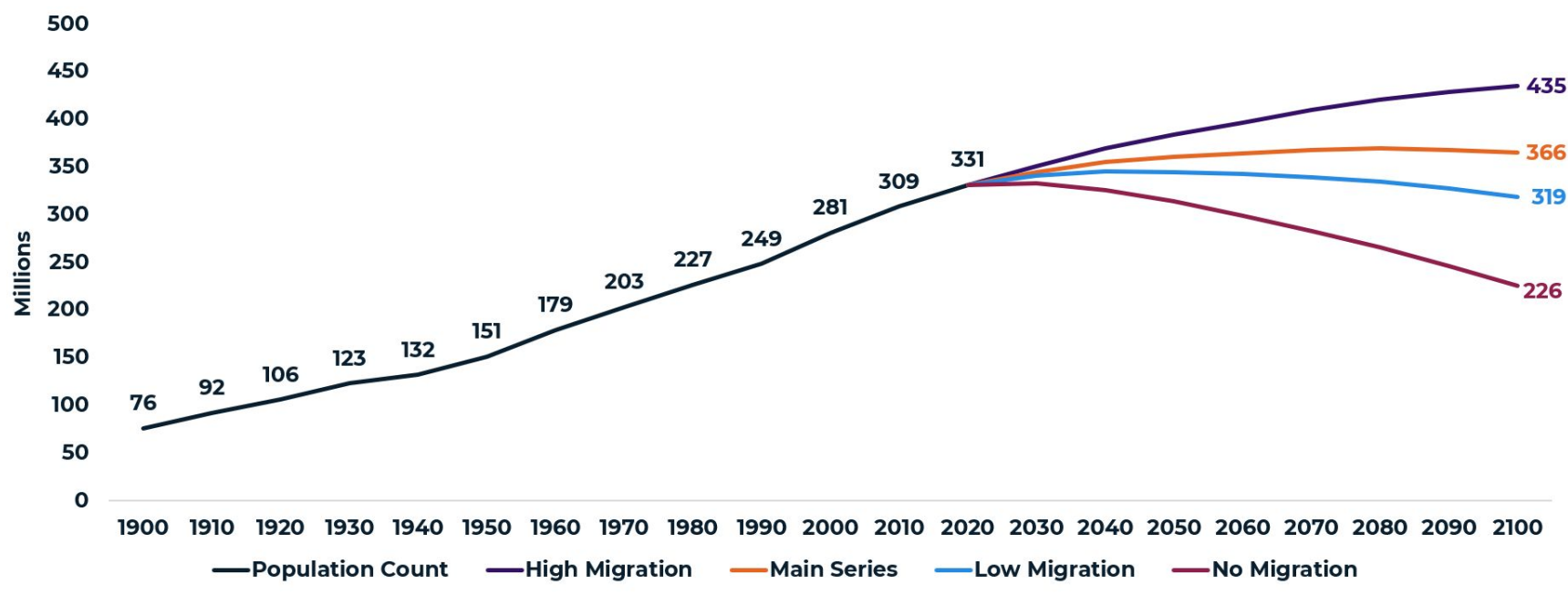
U.S. mid-year net international migration, 1990-2026



Source: U.S. Census Bureau, Population Estimates Program, City of Boston Research Division Analysis * 2026 Projected

Reduced international migration will jeopardize the country's projected population growth

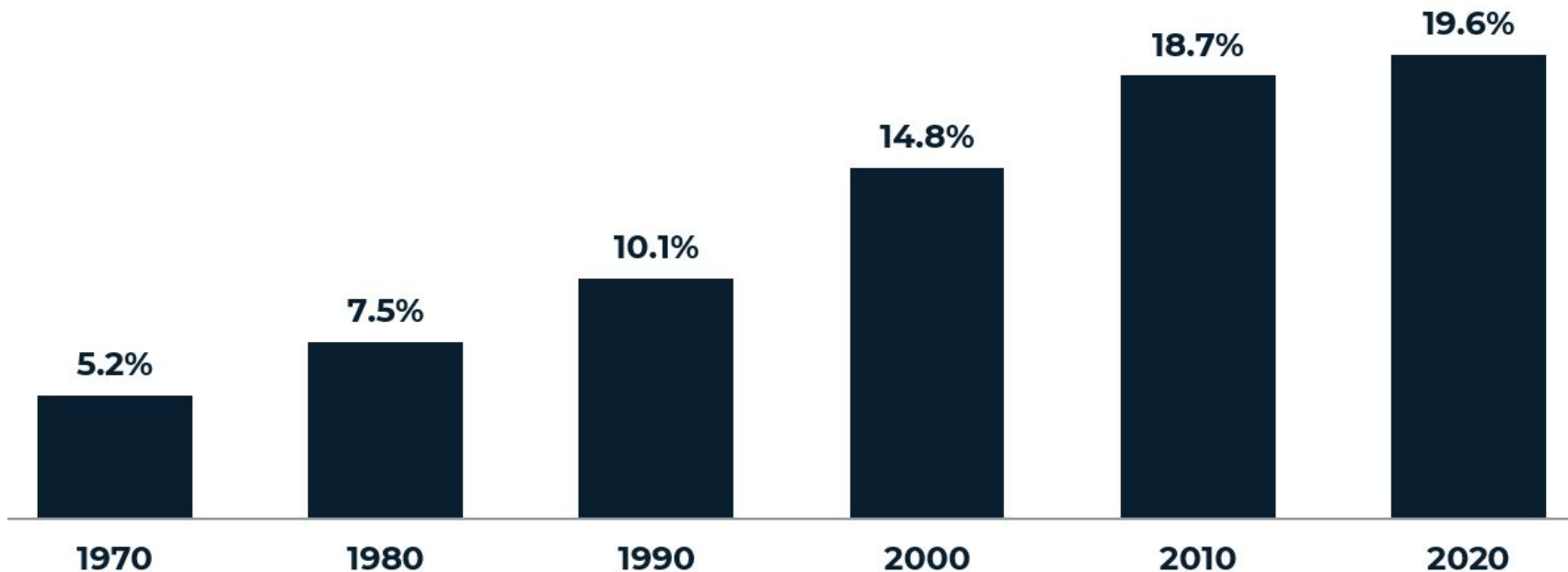
U.S. population 1900-2020 & projected 2030-2100



Source: 1900-2020 Decennial Censuses & 2030-2021 2023 Population Projections, City of Boston Research Division Analysis

19.6% of the prime working-age population in the US was foreign born in 2020 an increase from just 5.2% in 1970

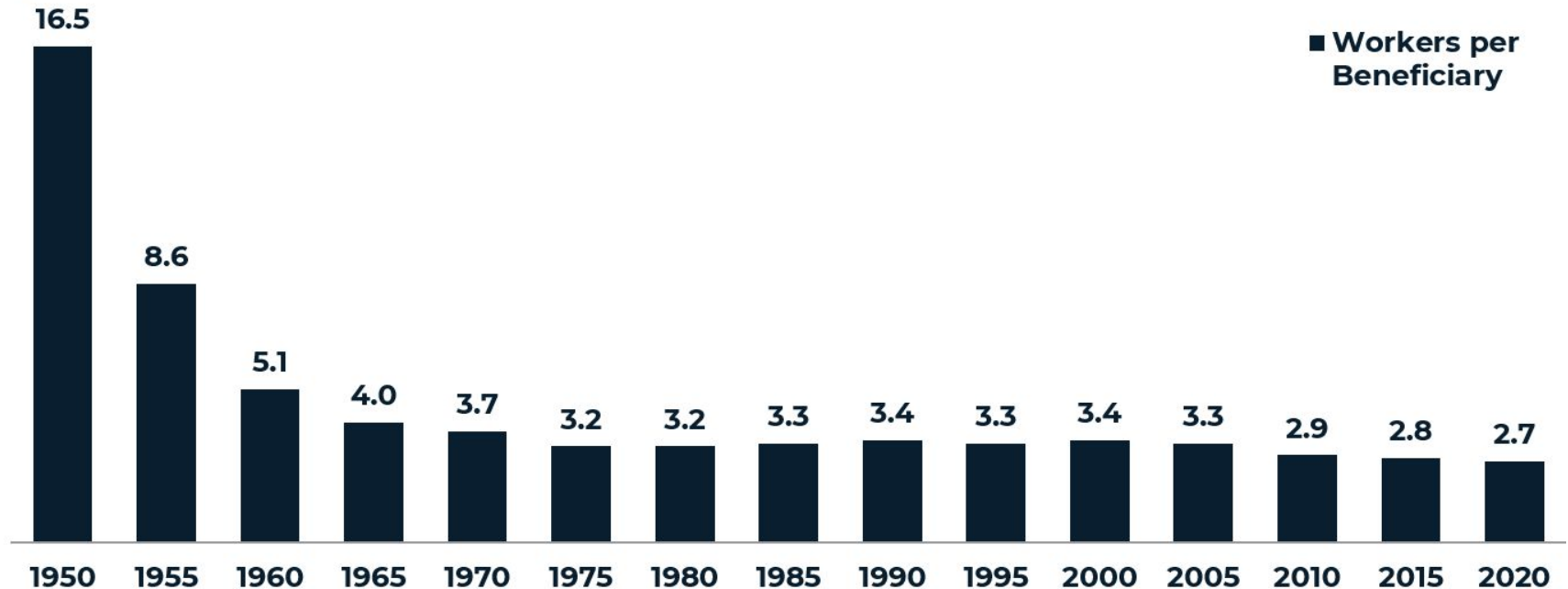
Foreign-born share of the U.S. prime working age population, 1970-2020



Source: 1970-2020 Decennial Censuses, City of Boston Research Division Analysis

Lower birth rates and an aging population have reduced the covered workers supporting each Social Security beneficiary - a decline in immigration could exacerbate this trend

Workers per Social Security beneficiary, 1950-2020



Source: Social Security Administration, City of Boston Research Division Analysis

Conclusion

Major Demographic Changes

Declining fertility rates and rising life expectancy over the last 75 years are driving a shift toward an older, slower-growing population in many but not all countries. International migration can act as a balancing force in global demographics.

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MyDemographic Viewer

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Economic Indicators Dashboard

Employment Map

Exploring Neighborhood Change

Exploring Land Use and Value

Mapping Diversity in Boston

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Data Sets

RESEARCH

The Research Division strives to understand the current environment of the city to produce research and targeted information that will inform and benefit the residents and businesses

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Where to find 2020 Census data and analysis for Boston.

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MyCensus Viewer is an interactive map product that visualizes U.S. Census data for Boston. It includes two maps built...

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Explore the stories and demographics of Boston's diverse residents.

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DOMESTIC MIGRATION MAP

ECONOMIC INDICATORS

EMPLOYMENT MAP

RESEARCH DIVISION

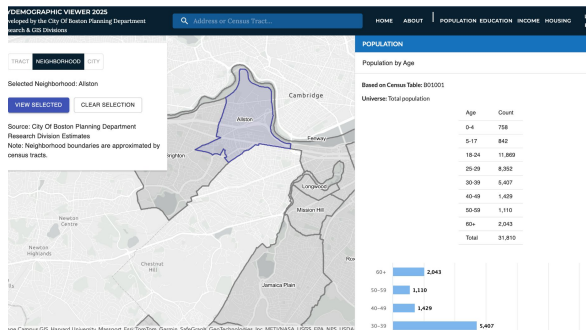
City of Boston

PUBLIC RESEARCH TOOLS



To make data easy to access and understand, the Division has created **interactive tools**:

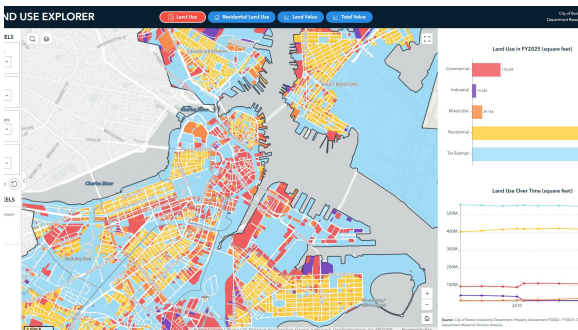
MYDEMOGRAPHIC VIEWER



Tool to interactively view & download the Research Division's 2025 population estimates, with data topics including:

- Population,
- Education,
- Income,
- Housing,
- Labor force

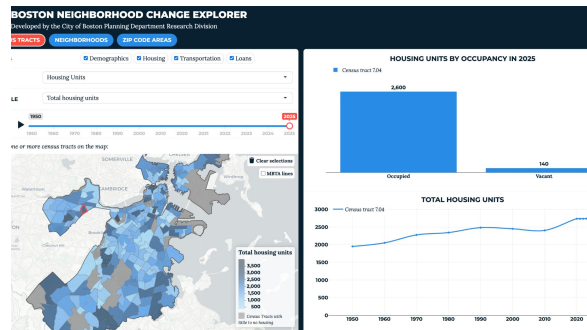
LAND USE & LAND VALUE EXPLORER



Interactive dashboard to view historical and current dynamics of parcel land use and assessed property values in Boston.

- Filter by neighborhood, main street district, or custom area
- View key Land Use, Residential Land Use, Land Value, and Total Land Value variables

NEIGHBORHOOD CHANGE EXPLORER



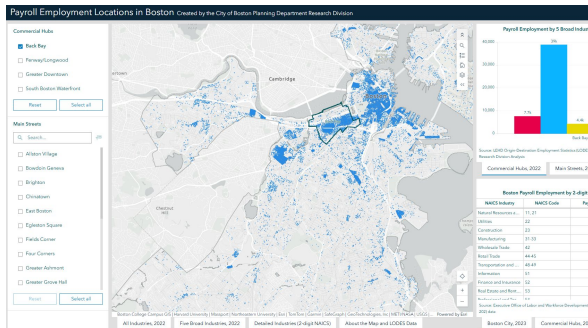
Tool to interactively view, map, & download demographic, housing, transportation, and loan data from 1950 to 2035.

PUBLIC RESEARCH TOOLS



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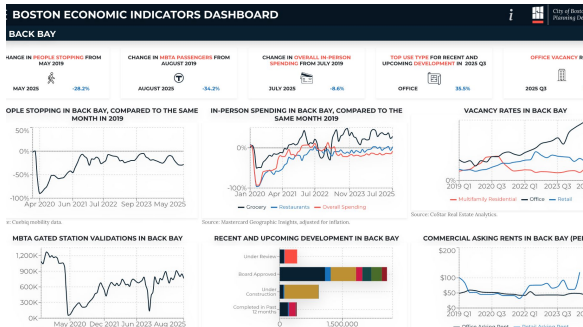
EMPLOYMENT MAPPING TOOL



Tool to interactively view employment in Boston by location and industry

- Filter further by commercial hub or main street district
- View broad and detailed industry breakdown

ECONOMIC INDICATORS DASHBOARD



A monthly-updated dashboard visualizing longitudinal data on:

- Employment,
- Real Estate Market,
- Real Estate Development,
- Inflation,
- Mobility,
- Economic Activity

For Boston citywide and 4 Boston commercial hubs.

BUSINESS PATTERNS TOOL

... Coming soon!

... Coming soon!

Tool to interactively visualize Boston business establishment data:

- Explore by location or by industry
- View total establishments estimates
- View employment estimates