

At a Glance: The Massachusetts Labor Force in 2022

Structural demographic headwinds portend labor shortages

By Aidan Enright

Summary

Pioneer Institute annually issues its report on the Massachusetts labor force, compiled to give state leaders and residents insight into the Commonwealth's workforce and its changes over time. Pioneer's goal is to provide a broad, fact-based overview of the current state of labor and how Massachusetts compares with its peers regionally and across the country.

Introduction

The labor force has seen significant transformation over the last several decades, namely through a handful of key trends: the advancement of women, the declining participation rate of men, increasing diversity, the aging of the American workforce, and the divergence in participation rates by educational attainment.¹ These trends have had a tremendous effect on the nation and on Massachusetts. Decreasing rates of participation among prime-aged (25–54) men and a shrinking college-educated workforce may portend serious future labor shortages for the Commonwealth, especially as the state faces headwinds with an older-than-average workforce; a birthrate significantly below the national average; falling postsecondary enrollment; and a large cohort of workers set to retire.

As of July 2023, there are nearly 240,000 unfilled jobs in the state, with some economists citing a mismatch between the skills and interests of workers and open jobs, immigration restrictions, and a spike in retirements as leading factors.²

The following report seeks to create a clearer picture of the Massachusetts labor force by breaking down participation in the state by demographic characteristics, including race, age, and sex.

Key Findings

Existing Trends

- The Massachusetts labor force is smaller in 2022 than it was in 2019, prior to the COVID-19 pandemic.
- The Massachusetts labor force has trended significantly older since 2012, with an increase of 650,000 workers aged 55 or older.

Aidan Enright is Pioneer's Economic Research Associate. He previously served as a congressional intern with Senator Jack Reed and was a tutor in a Providence city school. Mr. Enright received a B.S. in Political Science and Economics from the College of Wooster.



- Massachusetts has one of the most educated workforces in the country, with over half of all workers having a bachelor’s degree or higher; however, postsecondary fall enrollment in Massachusetts has dropped every year since 2013, except for 2021, indicating a likely reversal in this distinguishing factor.
- There is a correlation between educational attainment levels and labor participation. The labor participation rate for those with a bachelor’s degree is 20 percentage points higher than for those with only a high school diploma.
- The fertility rate in the Bay State, at 49 births per 1000 women aged 18–44, was several births below the national average of 56.
- The participation rate among prime-aged (25–54) men has declined nearly eight points from 96.2 percent in 1948 to 88.8 percent in 2022.³
- New England has consistently had the second-highest labor force participation rate at 64.3 percent, behind only the West North Central Census region at 66.6 percent.⁴

New Trends

- 2022 was the first year since 2018 that the labor participation rate of white workers surpassed that of the nonwhite population in Massachusetts.
- There are nearly 240,000 unfilled jobs in Massachusetts and over 8.8 million nationwide as of July 2023, down from highs of 300,000 and 10 million in 2022.⁵

Developments Across the Bay State

Total Labor Force

Prior to the pandemic, Massachusetts experienced a small surge in its labor force. From 2016 to 2018, an additional 236,000 workers were either employed or actively seeking employment. As shown in Figure 1, this coincided with the largest spike in labor force participation since 2007, rising from 64.9 percent to 67.9 percent. The pandemic, while causing a significant decrease in the labor force, did not fully erase the gains from the preceding years. In 2022, there were still more workers in the labor force than in 2016; however, there were 100,000 fewer than in 2019.

In 2022, there were still 100,000 fewer workers in the Massachusetts labor force than in 2019.

Figure 1: Massachusetts Labor Force as a Percentage of the Population

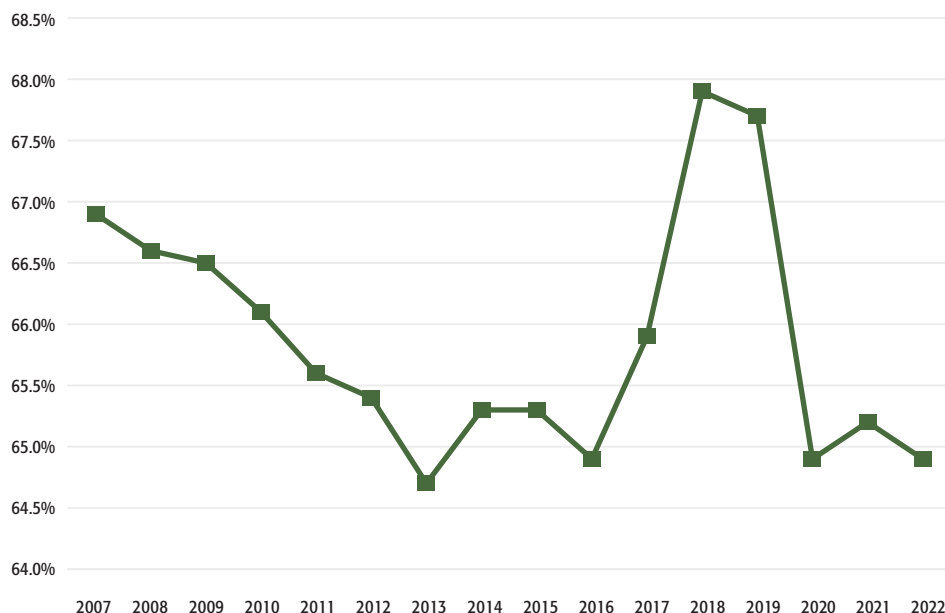


Figure 1: Graphic derived from Pioneer’s Laboranalytics.org, data from the Bureau of Labor Statistics - Current Population Survey (CPS)

Trending Older

One of the primary findings on the labor force is the shift in the ages of those participating. There has been stagnation in employment for the youngest population groups, while the number of older workers has noticeably increased.⁶ Federal Reserve Bank of Boston data bears this out.⁷ The number of those aged 16 to 19 in the labor force has not grown over the past 15 years, remaining at 2007 levels in 2022. Conversely, as seen below in Figure 2, the number of those age 55 and older in the labor force increased by more than 650,000 over the past decade.

The 65+ demographic, in particular, has more than doubled in recent years, from 131,000 in 2007 to 291,000 in 2020, and has plateaued since then. The only cohort that has not fully recovered from the pandemic are workers aged 55 and up, whose employment peaked in 2018 and did not rebound in 2021 or 2022. These data align with national trends and may be a result of pandemic-induced retirements and other lifestyle factors.⁸

Figure 2: Change in Massachusetts Labor Force, 2012–2022, by Age

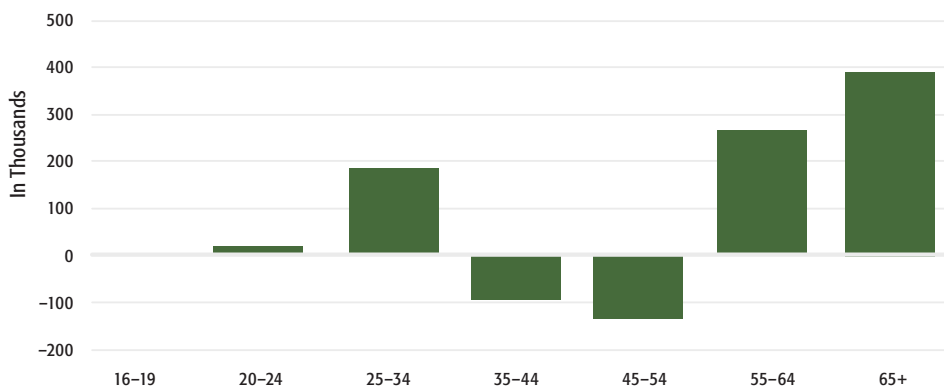


Figure 2: Graphics derived from Pioneer’s Laboranalytics.org, data from the Bureau of Labor Statistics - Current Population Survey (CPS)

Educational Attainment

Despite New England having an older workforce compared to other states, it has also maintained higher rates of labor force participation from prime-aged workers (25–54) than the rest of the country, outperforming all but the West North Central region. This is likely a result of educational differences between regions. New England, and Massachusetts specifically, has higher rates of bachelor’s degree holders than the rest of the country, and that is the demographic with the highest labor participation rates.

The effect of educational attainment on workforce participation rates is immediately apparent from the data, indicating the advantage Massachusetts has with its highly educated workforce. As seen in the figure below, only 43.9 percent of individuals with less than a high school education participated in the labor force in 2022, whereas 57.9 percent of those with a high school degree and 76.5 percent of those with a bachelor’s degree or higher did.

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Figure 3: Massachusetts Labor Participation Rate by Educational Attainment, 2015–2022

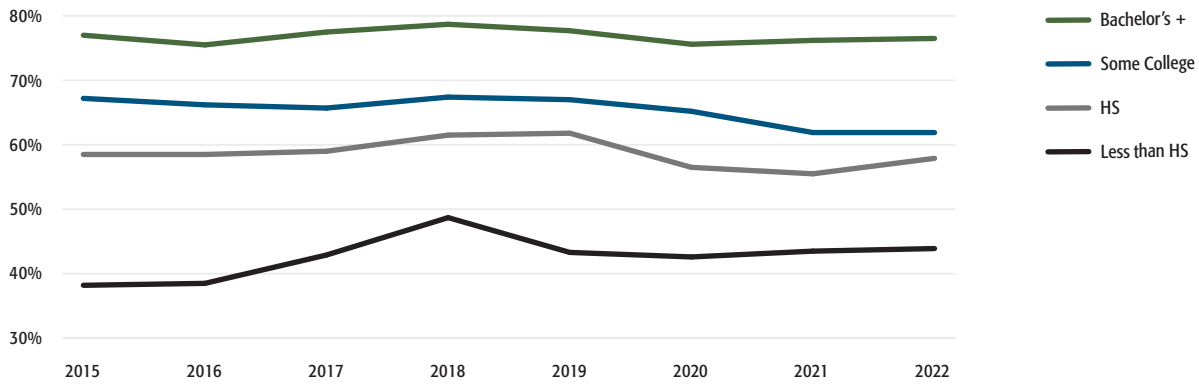


Figure 3: Graphic and analysis by author, data from Bureau of Labor Statistics - Current Population Survey (CPS)

Massachusetts has continually exceeded the nation and its regional peers in the educational attainment of its workers. In 2022, the state boasted the highest percent of workers aged 25 and over with a bachelor’s degree or higher, at 51.8 percent, an increase of 6.2 percent points since 2015. This is almost four percentage points higher than the next-highest state, Colorado at 48 percent, and several points higher than Vermont (45.3 percent), Rhode Island (43.9 percent), New Hampshire (42.4 percent), Maine (37.1 percent), and Connecticut (45.6 percent). Conversely, the tendency for individuals without a high school degree not to participate in the labor force is even stronger in less-educated states. For example, Mississippi has the lowest percentage of workers with a bachelor’s degree or higher (25.9 percent), but also has a lower participation rate than Massachusetts for workers with a high school diploma or less. This translates to Mississippi having a labor participation rate for its total population a full 10 percentage points lower than the Bay State.

In 2022, the Commonwealth boasted the highest percentage of workers with a bachelors degree or higher of any state at 51.8 percent.

Recent declines in postsecondary enrollment and a predicted decrease in the total college educated population by 2030 could spell trouble for the state’s economic growth and dynamism in the years to come, given that the state’s predominant industries are heavily reliant on skilled labor.⁹

Figure 4: Massachusetts Postsecondary (Fall) Enrollments, 2003–2021

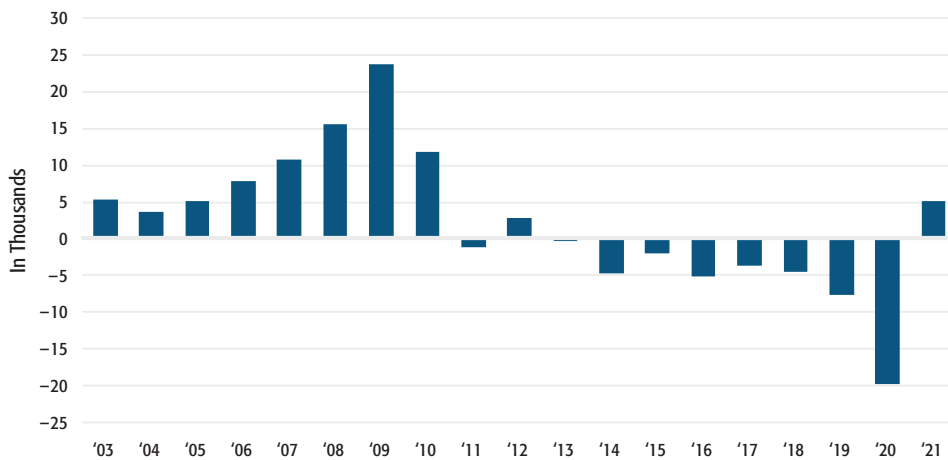


Figure 4: Graphic and analysis by author, data from the National Center for Education Statistics (NCES)

More worrying are the data indicating that declines are not the result of fewer students graduating from Massachusetts’ public and private high schools.¹⁰ To the contrary, the number of graduates in 2010, the last year of major growth in fall college enrollments, was 64,462. In 2022, it was 69,200. Thus, the decline in college enrollment is not simply a result of fewer people of college age. High

school graduates are increasingly turning down the opportunity to pursue a college degree and are instead opting for alternative pathways.¹¹ This decline in Massachusetts and nationally has been attributed to the lingering effect of the pandemic, but this trend of falling enrollments has been occurring in the Commonwealth for several years, as Figure 4 shows.

Declining college enrollment is particularly acute for men, who have lagged behind women in college enrollment and completion for decades.¹² This trend grew more pronounced during the pandemic, with men accounting for over 70 percent of enrollment declines.¹³ These decreases have corresponded with several decades of decline in labor participation for prime-aged male workers.

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Industry Makeup

In 2022, the Massachusetts economy was dominated by management, professional, and related occupations. This is not surprising given the concentration of highly educated workers that these occupations require. More surprising is the fact that most states, regardless of their educational attainment levels, had at least 40 percent of workers in those fields, suggesting that there is no causal connection between educational attainment levels and the concentration of white-collar jobs.

Instead, this may be the result of most states shifting from a manufacturing-based economy to one dominated by services. In Ohio, Oklahoma, and Louisiana, the percentage of workers in professional occupations was a full 10 percentage points greater than the percentage of workers with a bachelor’s degree or higher. This may be the result of employers in those states being more open to hiring workers without college degrees and providing on-the-job training, a broad definition of what encompasses professional or managerial roles, the result of an older workforce that started their positions before college degrees were a job requirement, or a combination of the three. In states like Massachusetts, by contrast, the percentage of workers with a bachelor’s degree closely aligned with the percentage of workers in professional occupations, likely indicating an unwillingness by employers to hire outside the most-educated labor pool.

Figure 5: Massachusetts Share of Workforce by Industry, 2022

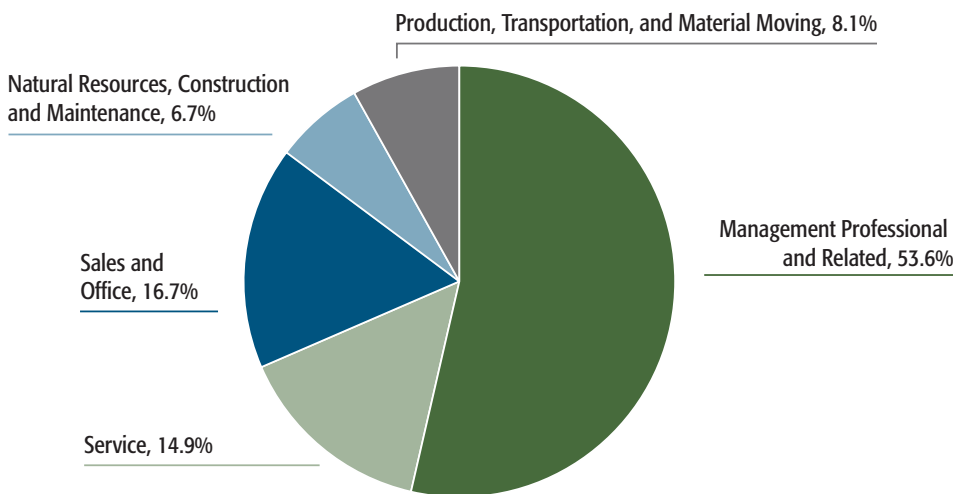


Figure 5: Graphic and analysis by author, data from the Bureau of Labor Statistics – Current Population Survey (CPS)

Further, with a greater share of workers in professional and management-related occupations, Massachusetts had fewer workers in other sectors, such as transportation, manufacturing, and sales and office occupations.

A Growing Share of Minority Workers

Overall labor force participation rates have been steady for the last 15 years, but the participation rates by race have changed over time, with a growing number of nonwhite workers compared to white workers in the workforce. In 2022, that trend reversed, with the white labor participation rate exceeding the nonwhite population for the first time since 2018. It is too soon to tell whether this is a temporary shift. The significant age difference between the two demographics is noteworthy and may offer a partial explanation for why this change occurred. The median age among whites is 44, while the median age among the minority population is 31. The surge in pandemic-era retirements was likely concentrated among whites, leading to the divergence in labor force participation in Massachusetts.

2022 was the first year since 2018 that the labor force participation rate of the white population exceeded that of the minority population.

Figure 6: Massachusetts Labor Force Participation Rate by Race, 2007–2022

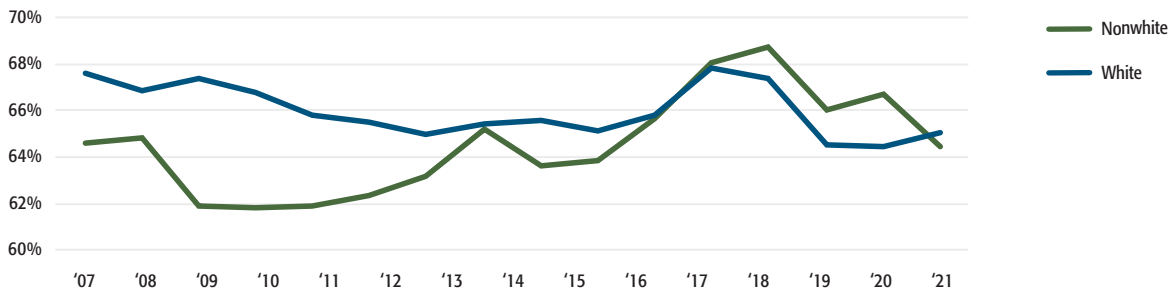


Figure 7: Change in Median Age by Race - Total U.S. Population, 2012 & 2022

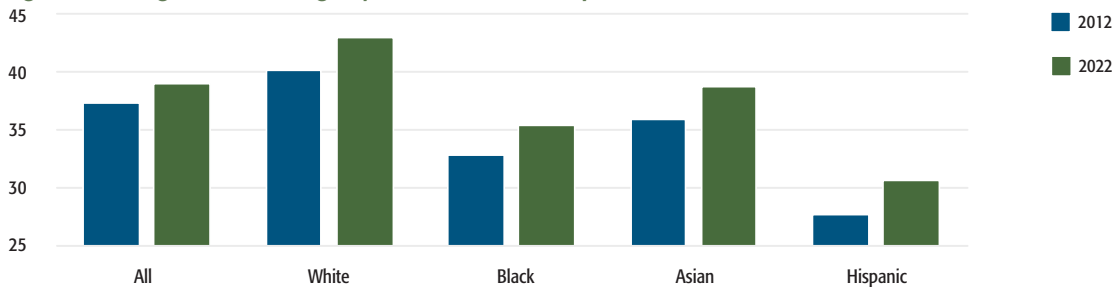


Figure 6/7: Graphic and analysis by author, data from the Census Bureau and the Bureau of Labor Statistics - Current Population Survey (CPS)

The only racial group to not see a decline in the number of workers in the labor force during the pandemic was Hispanics, who had an increase of 40,000 workers between 2020 and 2022. Between 2007 and 2022, the number of Hispanic workers in Massachusetts more than doubled. However, Hispanics in the state had the largest dropoff in participation during the pandemic and subsequent years, likely a result of a greater concentration among Hispanics in lower wage and service-related occupations.

By 2022, immigrants made up nearly 30 percent of all workers in the Massachusetts labor force, a far higher percentage than other New England states.

The total minority share of the labor force has increased significantly in recent years. In 2007, racial minorities made up approximately 18 percent of the total labor force in Massachusetts, by 2022 it was nearly 30 percent. While Massachusetts still lags in this respect compared to other states, it has by far the most diverse workforce in New England.

By Gender

From 2007 to 2022, male and female employment rates were largely in sync. As shown in Figure 5 below, men participated in the labor force at rates 6–8 percentage points higher than women from 2008 to 2022. The male participation rate has dropped considerably over the last 70 years from the 85 percent participation in 1948 to around 65 percent today, accounting for a significant share of the closing gap between men and women. After the Great Recession, men saw modest gains

in their employment as a percent of their total population, but then cratered to new record lows during the pandemic before recovering to 2019 levels.

Figure 8: Massachusetts Percentage Employed by Gender, 2007–2022

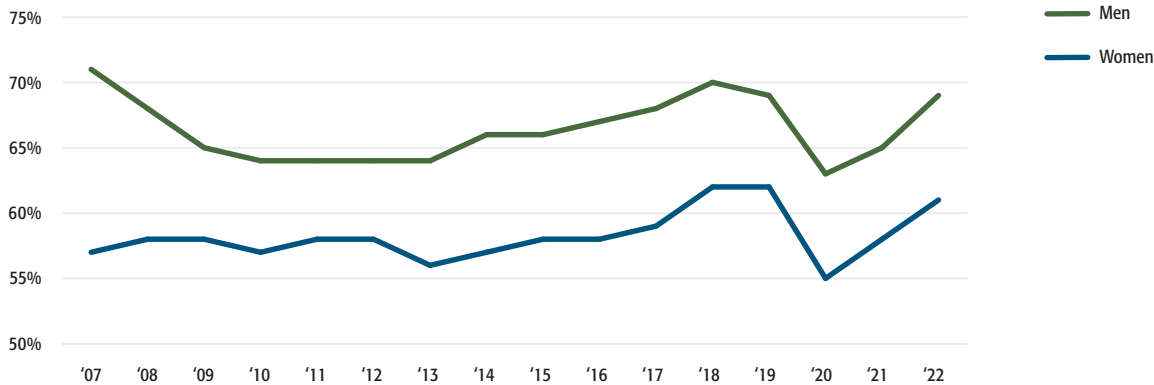


Figure 8: Graphic from Pioneer’s Laboranalytics.org, data from the Bureau of Labor Statistics - Current Population Survey (CPS)

Women’s labor participation rates are trending in the opposite direction. A historically high participation rate among women is one of the reasons why New England had a higher overall labor participation rate than other census regions in 2022. New England men, on the other hand, ranked 5th out of the nine total census regions in 2022.

The pandemic also affected women the most, even though their recovery from it has been quicker than for men. Their employment rate dropped 7.7 percentage points compared to 6 percentage points for men. Women in Massachusetts also had a labor participation rate 3 percentage points higher in 2022 than women nationally.

In Massachusetts, between 2007 and 2021, women aged 55–64 increased their labor force participation numbers at even higher rates than their male counterparts (105,000 versus 79,000). In New England and Massachusetts, the numbers of 55–64-year-old men and women in the labor force were almost equal. In 2022, that trend fizzled out as the number of men aged 55–64 in the labor force increased by 14,000, while the number of women in that age range decreased by 3,000. Also, despite the similar numbers of workers employed or looking for work between men and women in that age range, 55–64-year-old men had a participation rate 10 percentage points higher, as there were more women in the total population.

Employment/Unemployment

In terms of overall rates of employment, Massachusetts ranks second in New England, with 62.7 percent of all residents employed, behind only New Hampshire (64.1 percent), and just higher than Connecticut (62.6 percent).

However, Massachusetts has consistently trailed some of its peers in unemployment, though it is doing better than the national average. At 3.4 percent, Massachusetts had a lower unemployment rate than Maine (3.5 percent), Rhode Island (3.5 percent), and Connecticut (4.2 percent), although the Bay State lagged behind New Hampshire (2.8 percent) and Vermont (2.5 percent). This trend has continued into 2023. In August, New Hampshire and Vermont had unemployment rates of 1.8 percent, while Massachusetts was at 2.6 percent.

Even with nearly 240,000 open jobs, the state has had difficulty getting unemployed workers back into the workforce. This is likely the result of a mismatch between the qualifications of unemployed workers and available jobs and its generous unemployment assistance benefits.

The pandemic also affected women the most, even though their recovery from it has been quicker than for men.

Declining Fertility

According to a large body of academic literature, fertility rates have been falling for quite some time in the United States and among other prosperous nations across the developed world.¹⁴ This drop has been attributed to their more educated and wealthy populations. While the country's birth rate decline to below the rate of replacement is cause for concern, Massachusetts' drop in fertility is even more drastic.

In 2021, the number of births per 1,000 women aged 18 to 44 in Massachusetts was a paltry 49, nearly 7 births lower than the national average and 100 lower than the fertility peak during the post-World War II baby boom. Total births have dropped by almost 8,000 per annum since 2008, when 76,969 babies were born in the state. This trend exacerbates the Commonwealth's aging population and does little to offset its decline in immigration.¹⁵ Without changes to the current trends, Massachusetts must attract immigrants and increase its labor participation rates in order to grow its economy.

Massachusetts' fertility rate has continually been one of the lowest in the nation for years, and trailed the national average by 7 births per 1000 women aged 18 to 44 in 2021.

Figure 9: Birth Rate Per 1,000 Women Aged 18–44, 2008–2021

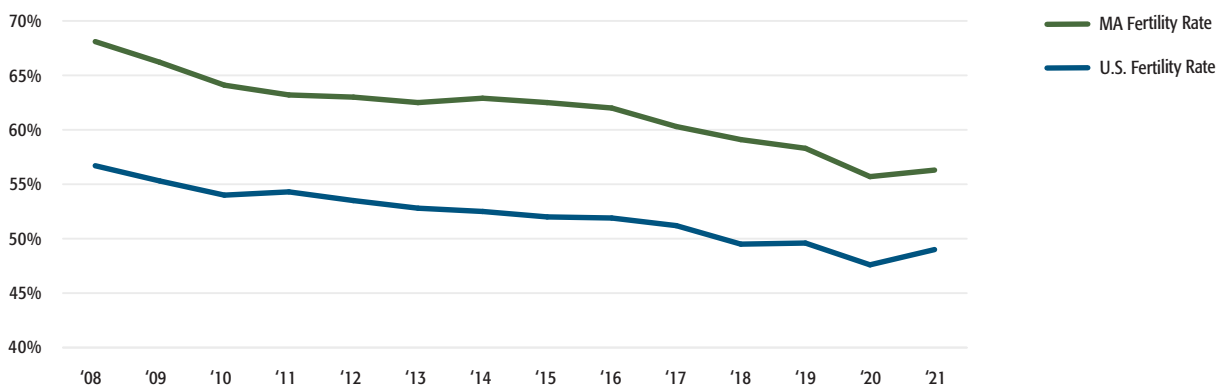


Figure 9: Data from the CDC – National Vital Statistics System

Foreign Workers

As the workforce ages and Baby Boomers are replaced by less numerous cohorts of Millennials and Gen Zers, skilled immigrant workers will play an ever-greater role in the labor force. Massachusetts has had a larger immigrant population than most states in recent times. In 2022, Massachusetts had 850,000 foreign workers, according for 21.7 percent of its workforce, the seventh-largest foreign labor force in the U.S. This represents a material increase from 2010, when there were 650,000 foreign workers in Massachusetts, making up roughly 18 percent of the total labor force. This growth is even more remarkable given the pandemic occurred within this timeframe.

Figure 10: Massachusetts Foreign Labor Force, 2010–2022

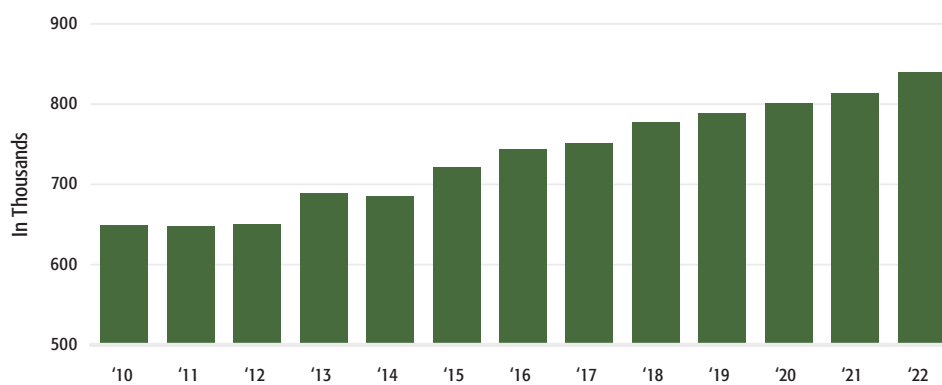


Figure 10: Data from the American Community Survey – Selected Characteristics of the Native and Foreign-Born Populations

Policy Recommendations

Without any policy intervention, serious structural challenges will remain for the Massachusetts labor force. Massachusetts, like the rest of New England, has an older population and will struggle to maintain and grow its labor force as Baby Boomers continue to retire and less populous younger generations are left to fill the void. With employers finding it increasingly difficult to hire skilled candidates to fill positions, the impact will limit the state's economic growth potential.

Thus, policymakers should seek to remove the impediments to working by:

Matching training programs to available jobs

Many workers remain sidelined as a result of a skills mismatch between them and hiring employers. While there are nearly 240,000 job openings in the state, there remain roughly 100,000 unemployed workers, a ratio of more than two open jobs for every unemployed person.^{16,17} This ratio has largely remained the same since 2021 despite millions of dollars spent on workforce training.

The pandemic resulted in many changes to the overall economy, how businesses operate, and the workforce. The state should prioritize investing in K–12 schooling that best prepares the next generation for the needs of the future labor force, and should reform the structure of the workforce development apparatus to ensure that unemployed and underemployed workers can be effectively upskilled to fill current positions.

- *Expand vocational–technical school capacity by 5,000 additional student seats.*
- *Reassess workforce development structures, provide greater transparency on outcomes and access the most pressing worker trainee and employer needs, and create flexibility.*

Enabling more immigration of skilled workers

Lastly, and likely most consequential, the state has suffered from diminished immigration levels due to overly restrictive federal immigration policies. Massachusetts relies heavily on immigrants, as the state would likely have seen significant net out-migration without inflows from immigrants over the last decade. Only recently has the state lost residents on net, over 110,000 since 2019, due to pandemic era restrictions on immigration and other compounding factors like remote work.¹⁸

- *Advocate for sensible immigration reform that increases the cap on H1-B visas and the percentage allowed under country-of-origin caps for EB-2 visas. As a result of our immigration backlog, tens of thousands of highly educated immigrants, often with bachelor's and master's degrees from U.S. universities, are rejected without even having their applications adjudicated each year. These educated workers would go a long way to filling many gaps that Massachusetts has in its workforce.*

Serious structural challenges will remain for Massachusetts without policy intervention. Policymakers should look to reforming the current K-12 pipeline and workforce development apparatus to address current and future needs.

Data Note

All data included in this report have been pulled from Pioneer Institute's LaborAnalytics.org. The source data included in LaborAnalytics.org is the Current Population Survey, a monthly survey of roughly 60,000 households conducted by the U.S. Bureau of Labor Statistics and the Census Bureau. The survey seeks to collect data on several measures of the U.S. economy, including income, earnings, income inequality, unemployment, and labor participation. The data are often broken down by demographics and sub-demographics. As a result, and by nature of being a survey, the sample size of certain demographics, especially at the state level, tends to be small enough that they either get excluded from the data set entirely or create some volatility for certain statistics. For example, the Asian population of Maine is so small that from 2007–2021 the CPS only reported the labor force participation rate for that demographic three times (2009, 2012, and 2013). Even when data is reported, if the demographic is small enough year-to-year changes are unlikely to be statistically significant.

In our analysis, we have selected the most reliable and accurate data from the CPS to provide the best possible snapshot of the Massachusetts labor force.

Endnotes

1. “The Long-Term Decline in Prime-Age Male Labor Force Participation.” 2016. *Council of Economic Advisors*. [Link](#)
2. Ferguson, Stephanie. 2022. “Understanding America’s Labor Shortage: The Scarce and Costly Childcare Issue.” *U.S. Chamber of Commerce*. [Link](#); Caldwell, Alicia A. 2021. “Ban on New Foreign Workers Left U.S. Jobs Unfilled, Even in Covid Downturn.” *The Wall Street Journal*. [Link](#)
3. “The Long-Term Decline in Prime-Age Male Labor Force Participation.” 2016. *Council of Economic Advisors*. [Link](#); Winship, Scott. 2017. “Declining Prime-Age Male Labor Force Participation: Why Demand- And Health-Based Explanations Are Inadequate.” *SSRN Electronic Journal*. [Link](#)
4. Burke, Mary A. 2016. “Labor Force Participation in New England vs. The United States, 2007–2015: Why Was the Regional Decline More Moderate?” Federal Reserve Bank of Boston. [Link](#)
5. U.S. Bureau of Labor Statistics, Job Openings: Total Nonfarm [JTSJOL], retrieved from FRED, Federal Reserve Bank of St. Louis. [Link](#)
6. Bureau of Labor Statistics – Current Population Survey
7. Burke, Mary A., 2016. Ibid. [Link](#)
8. Ferguson, Stephanie. 2022. Ibid. [Link](#)
9. Forman, Ben, and Simone Ngongi-Lukula. 2022. “Sizing up Massachusetts’ Looming Skilled-Worker Shortage.” MassINC. [Link](#)
10. “Digest of Education Statistics, 2021,” National Center for Education Statistics (NCES). [Link](#)
11. Binkley, Collin, and The Associated Press. “The Labor Shortage Is Pushing American Colleges into Crisis, with the Plunge in Enrollment the Worst Ever Recorded.” *Fortune*. [Link](#)
12. Reeves, Richard V., and Ember Smith. “The Male College Crisis Is Not Just in Enrollment, but Completion.” *Brookings*, October 8, 2021. [Link](#)
13. Belkin, Douglas. “A Generation of American Men Give Up on College: ‘I Just Feel Lost.’” *The Wall Street Journal*, September 7, 2021. [Link](#)
14. Aitken, R John. “The Changing Tide of Human Fertility.” *Human Reproduction* 37, no. 4 (January 25, 2022): 629–38. [Link](#)
15. Stergios, Jim, Mary Connaughton, and Eileen McAnneny. “Net Out-Migration of Wealth from Massachusetts Nearly Quintupled from 2012–2021.” Pioneer Institute, June 22, 2023. [Link](#)
16. “Table 1. Job Openings Levels and Rates for Total Nonfarm by State, Seasonally Adjusted.” 2023. U.S. Bureau of Labor Statistics. [Link](#)
17. “Table 1. Civilian Labor Force and Unemployment by State and Selected Area, Seasonally Adjusted” 2023. U.S. Bureau of Labor Statistics. [Link](#)
18. Nanos, Janelle. 2023. “‘People Are Leaving’: Massachusetts Has Lost 110,000 Residents since COVID Began. Is Life Better Out There?” - *The Boston Globe*. *BostonGlobe.com*. [Link](#)

