2024 Annual Economic Analysis Report

Massachusetts Workforce and Labor Area Review

Executive Office of Labor and Workforce Development
Department of Economic Research
October 2025

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MASSACHUSETTS DEPARTMENT OF ECONOMIC RESEARCH

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Program Year 2024

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About Annual Economic Analysis Report

The Department of Economic Research (DER) submits this Annual Economic Analysis Report under the Workforce and Labor Market Information Grants to States (WIGS) requirements outlined by the Employment and Training Administration (ETA) Guidance Letter No. 14-23 for Program Year 2024.

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About Department of Economic Research (DER)

The Massachusetts Executive Office of Labor and Workforce Development (EOLWD) Department of Economic Research produces, analyzes, and distributes various data, labor market reports, and other resources related to employment, unemployment, occupations, industries, and other components of the Massachusetts labor market. Our stakeholders include policy makers in state and local government, workforce development agencies, institutions within academia, employers, jobseekers, and others. Visit mass.gov/EconomicResearch to learn more.

Contents

Executive Summary

The story of the Massachusetts labor market in 2024 is one of rebalancing. The tight, post-pandemic hiring landscape moved toward a labor market with a higher supply of workers relative to job openings. While resident employment continued to grow, the rising unemployment rate signaled new challenges, with uneven impacts across industries, regions, and demographic groups. This report examines these dynamics in three parts: a statewide analysis of labor market trends, a deep dive into regional economies, and an overview of key career pathways.

Part 1: Statewide Labor Market Trends

The defining trend of 2024 was a divergence between two key employment indicators. While employer payroll jobs located in the state remained nearly flat (CES), the number of employed Massachusetts residents grew by 45,000 (LAUS). Potential economic explanations for this shift include a shift toward increased self-employment (up 0.8% in 2024), and an increase in residents working remotely for out-of-state companies.

This shift occurred as employer demand for labor decreased. The ratio of job openings per unemployed person fell from 1.7 to 1.2, indicating fewer available jobs for each job seeker. Simultaneously, the state's labor force grew by over 63,000 people. This combination of slowing demand and growing supply drove the state's unemployment rate from 3.7% to 4.1% over the year. The cooling labor market disproportionately affected certain groups; the unemployment rate for recent college graduates rose, and the share of unemployment claimants exhausting their benefits climbed from 28% to 40%.

This economic slowdown was not uniform across sectors. Growth was concentrated in Health Care and Social Assistance (+10,700 jobs), while key sectors contracted, including Manufacturing (-6,300 jobs) and Professional, Scientific, and Technical Services (-2,500 jobs).

Part 2: Regional Labor Market Dynamics

The statewide trends of contracting manufacturing and expanding healthcare manifested with different consequences across the Commonwealth's regional economies. A deep dive into local labor markets reveals that the rebalancing was not experienced uniformly.

The Southeast region experienced the strongest relative labor force growth, and losses in manufacturing were more than offset by significant gains in the Health Care and Social Assistance sector. In contrast, the Greater Lowell and Lower Merrimack Valley regions experienced the largest employment contractions in manufacturing—an industry accounting for a significant share of their employment. This, coupled with a decline in Health Care jobs in Hampden County, contributed to some of the largest unemployment rate increases in the state. The Berkshires faced a different challenge: a

multi-year labor shortage, particularly in its tourism and healthcare sectors, driven by a lack of prime-working-age residents.

Part 3: Pathways to Quality Jobs

In the context of a cooling labor market, connecting residents to stable employment requires a data-driven approach. The final section of this report applies DER's "Opportunity Star" framework, a rating system that identifies high-quality jobs based on dual criteria of strong long-term demand and high wages.

Applying this framework reveals clear, actionable career pathways for residents, particularly those with barriers to employment. For some, a direct transition exists, such as the path from a Certified Nursing Assistant (CNA) to a higher-paying Licensed Practical Nurse (LPN). For many others, navigating from a low-wage starting point to an "Opportunity Star" job requires strategic "stepping stone" roles to build skills and experience. By mapping these pathways, this framework provides a practical roadmap for career advisors and workforce development professionals to guide residents toward greater economic stability.

Data Sources Explained

- **American Community Survey (ACS):** The ACS is a large annual survey conducted by the U.S. Census Bureau that provides detailed socioeconomic and housing information. While other surveys provide more timely data, the ACS's large sample size makes it the best source for detailed, yearly data on topics like employment, income and poverty, educational attainment, disability status, and nativity.

- **Current Employment Statistics (CES):** Often called the "payroll survey," the CES is a monthly survey of employers. It provides data on the number of wage and salary jobs by industry, which is used to measure net job growth or decline in specific sectors. Because it counts jobs at businesses, it does not include self-employed individuals.

- **Current Population Survey (CPS):** Often called the "household survey," the CPS is a monthly survey of households that measures the labor force status of individuals. It is the primary source for the labor force participation rate, the total number of employed residents, data on self-employment, and demographic characteristics of the workforce such as age, race, and educational attainment.

- **Job Openings and Labor Turnover Survey (JOLTS):** The JOLTS program provides monthly data on labor demand and turnover from the employer's perspective. It measures key dynamics including the number of job openings, the hiring rate, and the rate of separations (quits and layoffs), which are indicators of the tightness or slack in the labor market.

- **Local Area Unemployment Statistics (LAUS):** The LAUS program uses data from the CPS, CES, and state unemployment insurance claims to produce the official monthly estimates of the labor force, the number of employed and unemployed residents, and the headline unemployment rate for the state.

- **Occupational Employment and Wage Statistics (OEWS):** The OEWS program is a survey of employers that produces employment and wage estimates for specific occupations. It is the primary source of detailed information on which jobs exist in the state and the wage ranges associated with them.

- **Occupation Projections:** The Occupation Projections program develops long-term (10-year) forecasts of industry and occupational employment. These projections are used to estimate future job growth and replacement needs, providing a critical tool for career planning, education, and workforce policy.

- **Quarterly Census of Employment and Wages (QCEW):** The QCEW is a comprehensive quarterly count of jobs and wages derived from unemployment insurance tax records. As a near-census of all payroll jobs, it provides the most detailed and accurate data on employment by specific industry and is used as the benchmark for the CES survey.

Statewide Labor Market Trends

In 2024, the Massachusetts labor market underwent a transition, slowing from the tight conditions of the prior post-pandemic period. The overall data for 2024 indicates a market rebalancing from a period of high labor demand and labor scarcity toward an environment with relatively more job seekers than job openings. A defining feature of the market has been the rapid growth of the labor force, which expanded by over 63,000 people in 2024 (LAUS). At the same time, the state's unemployment rate, which began 2024 below 4.0%, rose steadily throughout the year (LAUS). This section analyzes these trends, the divergent performance across industries, and the implications for the state's workforce.

Employment and Labor Force Dynamics

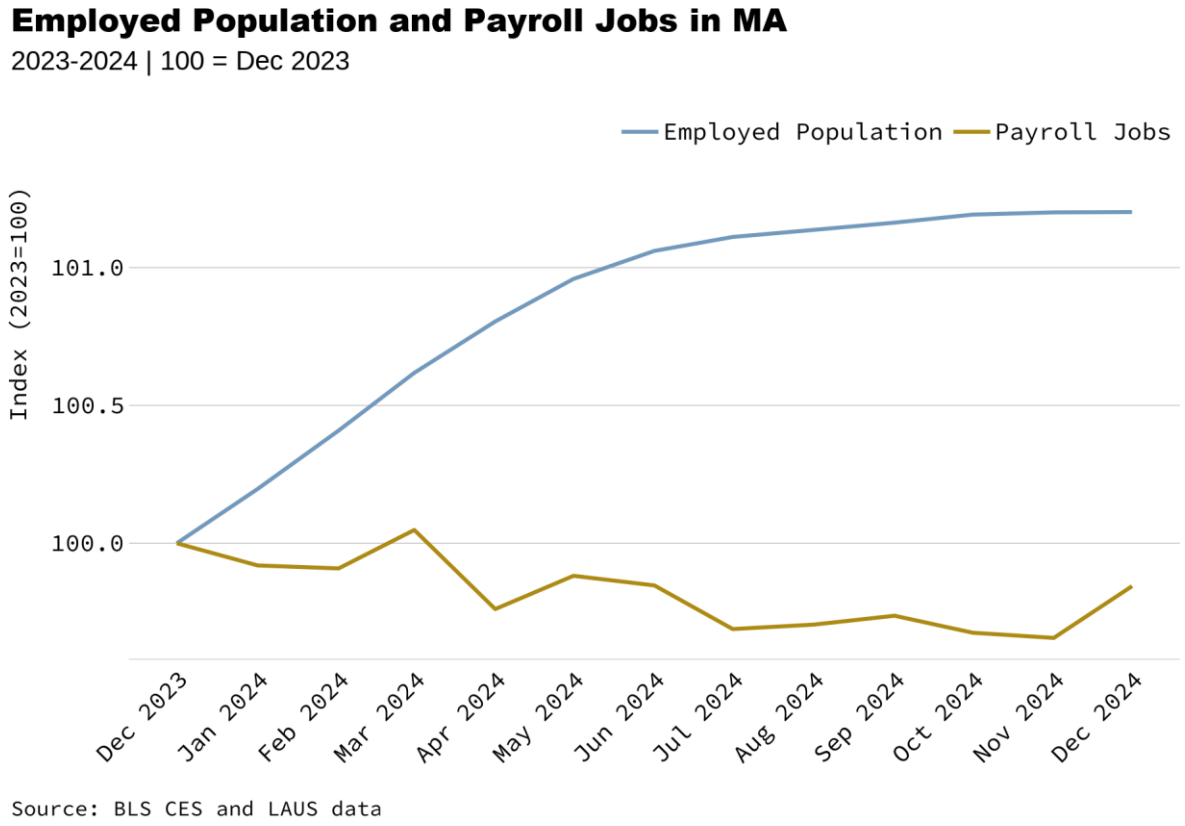
The cooling of the labor market in 2024 meant that those seeking new employment faced longer search times and fewer options. These impacts have not been shared equally across all demographic groups. Notably, employment among Asian and Black residents trended upward, while Hispanic residents experienced a decline in employment levels (CPS). This occurred even as the Commonwealth's workforce grew and evolved, presenting a complex picture of both new challenges and underlying strengths.

Divergence Between Payroll Jobs and Resident Employment

The defining characteristic of the 2024 labor market was a significant divergence between what employer surveys and resident surveys revealed (Figure 1). On one hand, employer-based data showed that wage and salary employment was nearly flat over the year (CES). While job gains were largely concentrated in sectors like Health Care and Social Assistance (+10,000 jobs) and Leisure and Hospitality (+7,500 jobs), sectors such as Construction (-6,700 jobs) and Professional and Business Services (-6,500 jobs) experienced declines (CES).

In stark contrast, resident-based data showed that the number of Massachusetts residents who were employed grew significantly, increasing by 45,000 people over the year (a 1.2% growth rate) (LAUS). This placed Massachusetts among the top ten states in the nation for resident employment growth. This divergence points to potential shifts in the nature of work.

Figure 1



The Impact of Self-Employment and Remote Work

Two key factors help explain why resident employment could have grown strongly while payroll jobs from Massachusetts employers did not. One potential driver is a notable structural shift toward self-employment, which is not captured by the payroll job counts. Since 2023, growth in self-employment has outpaced the growth of traditional wage and salary employment, and in 2024, the annual average number of self-employed workers was up 0.8% compared to 2023 (CPS).

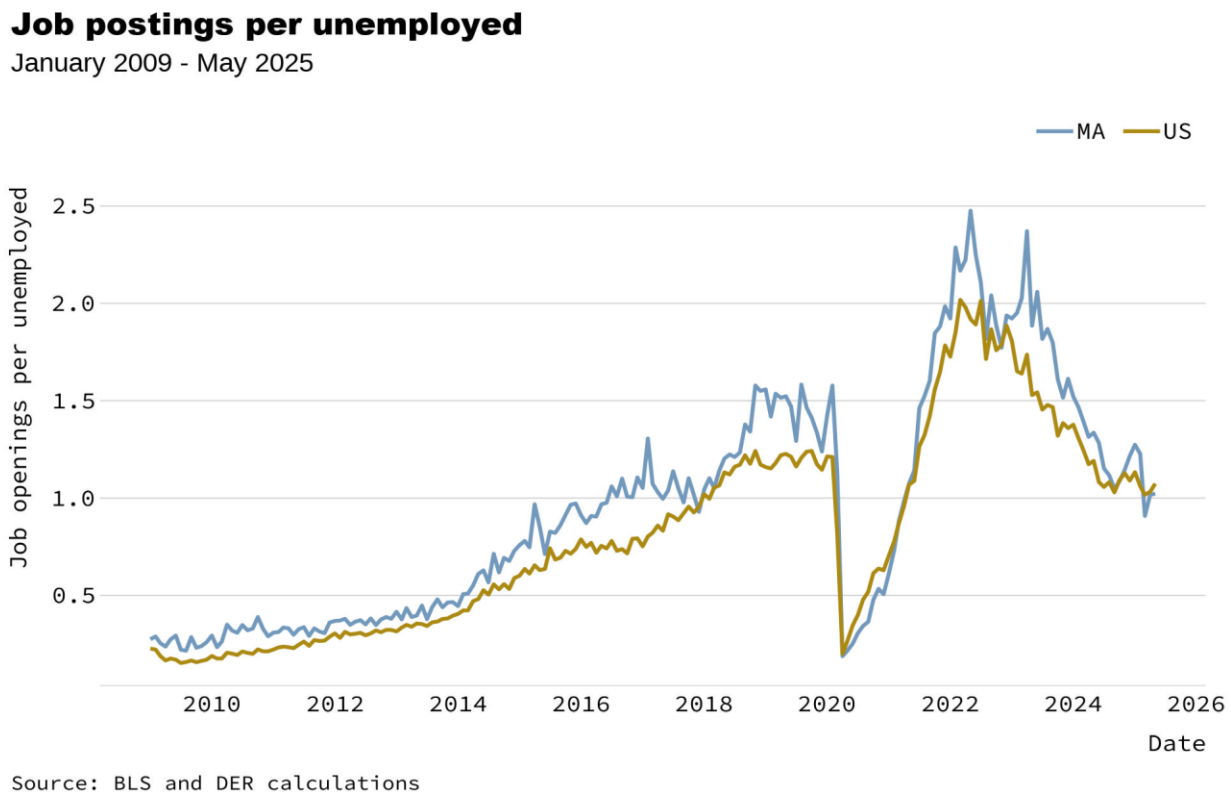
The rise in self-employment presents two different dynamics, reflecting both a pursuit of opportunity and a lack of traditional options. On one hand, it could signify a durable preference for flexible, entrepreneurial arrangements that expanded during the pandemic, especially in high-skill, remote-capable fields. On the other hand, it is often a necessity for those facing structural barriers to traditional employment. This is particularly evident among some foreign-born workers, for whom self-employment becomes an alternative to wage-and-salary jobs where language may be a barrier. This path, however, can lead to work characterized by low wages and few safety nets. For instance, between 2019 and 2023, growth in self-employment for this demographic was largely concentrated in occupations such as delivery drivers, hairdressers, and animal caretakers (ACS). Consequently, the overall growth in self-employment can represent a complex reality of both entrepreneurial advancement and economic insecurity.

Another potential contributor is the rise of remote work. As detailed in the 2023 Annual Economic Analysis, Massachusetts saw one the largest shifts towards remote work arrangements in the US during the pandemic. An increase in residents working remotely for out-of-state employers would be captured as an increase in the employed population (a resident-based measure) but would not appear in the state's payroll employment data (an employer-based measure).

A Growing Labor Force Meets Slowing Demand

Despite the strong growth in resident employment in 2024, data on employer demand points a slowdown in demand. Data from the Job Openings and Labor Turnover Survey (JOLTS) indicates the average hiring rate in 2024 was 3.1%, down from this post-pandemic high of 3.7% in 2021. The ratio of job postings per unemployed person fell from 1.7 to 1.2 in 2024 (Figure 2), and has continued to fall to 0.9 in March 2025, indicating that for the first time in the recent recovery, there are more unemployed individuals than available jobs (JOLTS). This cooling in employer demand occurred within the context of a highly engaged and expanding workforce. Massachusetts maintains a high rate of labor force participation relative to the national average, reaching 66.9% in May 2025 (LAUS). This dynamic—slowing employer demand meeting growth in the labor supply—is the primary reason the unemployment rate rose steadily through 2024, increasing from 3.7% in January to 4.1% by the end of the year (LAUS).

Figure 2



The Impact on Job Seekers

A primary outcome of a market where the supply of workers is outpacing demand is a more challenging environment for those seeking employment, with the largest impact in 2024on new entrants and workers that have lost their jobs.

The tightening conditions were evident among younger and early-career workers. The unemployment rate for recent college graduates (ages 22-27 with a bachelor's degree), for example, rose steadily throughout the year to surpass 6% by early 2025—a rate significantly higher than for the workforce as a whole (CPS).

The challenges were not confined to those just beginning their careers. Data on workers who lost their job also points to a more difficult job search. The state's unemployment insurance (UI) exhaustion rate—the share of claimants who use all of their available benefits—rose significantly in 2024, climbing from 28% to 40% over the course of the year (ETA). This indicates that workers who had lost their jobs found it increasingly difficult to secure new employment before their benefits ran out.

Disparities in Employment Outcomes

The 2024 labor market slowdown had a varied and unequal impact across the Commonwealth's racial and ethnic groups. Employment trends through the year showed a clear divergence: the annual average number of employed white, (+3.5%), Asian (+2.0%), and Black (+1.9%) residents trended upward compared to 2023, while employment among Hispanic (-6.0%) residents trended downward (CPS).

However, this employment growth did not translate to lower unemployment for all. Throughout 2024, the average unemployment rate for Black workers remained significantly elevated at approximately 7.0%, nearly double the 3.7% rate for white workers (CPS). To make sense of this this paradox of simultaneously rising employment and a high unemployment rate, it's important to distinguish between the official unemployment rate and the receipt of unemployment insurance (UI) benefits which are only available to people who have lost their job. The unemployment rate is a statistical measure; a person is counted as "unemployed" if they are jobless and actively looking for work. Thus, the unemployed population that is used to calculate the unemployment rate includes peoples who have lost their jobs and claim UI benefits, as well as new entrants to the labor force, such as recent immigrants, youth, or recent graduates, who are seeking employment but do not receive unemployment benefits.

This seeming contradiction—more people working, but still a high unemployment rate—is partially explained by rapid growth in the number of new entrants to the labor force that identify as Black. This growth is partly driven by an influx of new immigrants, particularly from Haiti. After these new arrivals gain federal work authorization, they are counted in the labor force. As they begin seeking employment, they are statistically counted as unemployed until they find a job. This can temporarily

increase the total number of unemployed people in that demographic group, pushing the unemployment rate up even as other members find jobs. While this statistical dynamic is important, the high unemployment rate itself remains a critical indicator of the barriers to employment that Black residents, particularly new arrivals, continue to face in the labor market.

In response to these disparities, recent state policy initiatives have focused on creating more equitable pathways to opportunity. State run programs, such as the Donnelly Workforce Success Grants, have funded program models that integrate English for Speakers of Other Languages (ESOL) training with vocational training to reduce barriers for immigrants.

Industry-Specific Trends

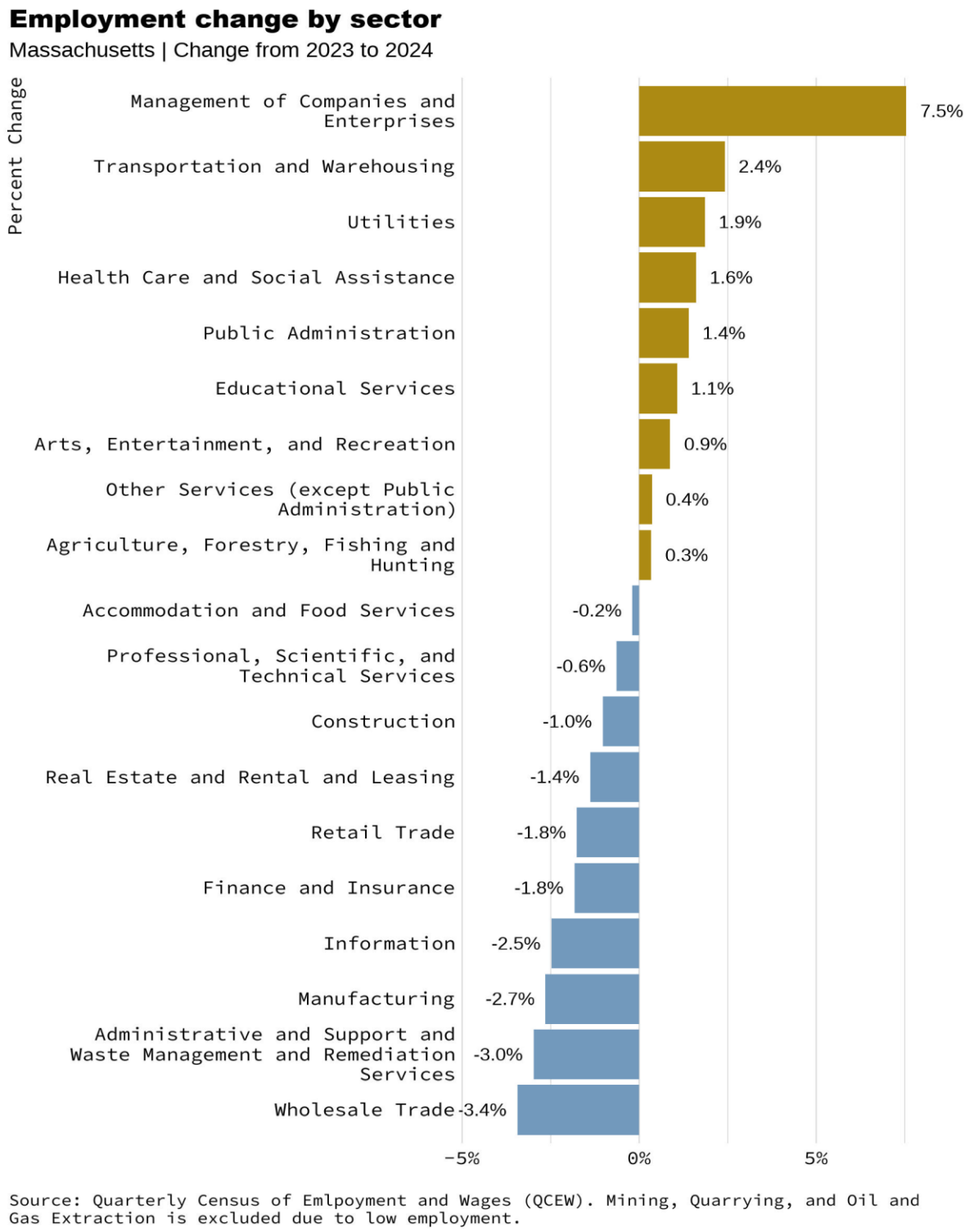
The story of the 2024 Massachusetts industries is one of significant divergence. While the overall economy slowed, performance varied dramatically across industries. A detailed analysis of 2024 data from the industry from the Quarterly Census of Employment and Wages (QCEW)—a near complete count of all wage and salary jobs—reveals a complex landscape where some sectors grew, others began to recover from long-term declines, and several key industries faced significant contractions.

Figure 3 shows job growth between 2023 and 2024 sectors. The Management of Companies and Enterprises sector saw the fastest rate of growth of 7.5% (+5,300 jobs), leading all other sectors by a wide margin. Other areas of expansion included Transportation and Warehousing (+2.4%, +3,000 jobs) and service sectors like Health Care and Social Assistance (+1.6%, +10,700 jobs) and Educational Services (+1.1%. +4,200).

In contrast, a broad range of industries contracted. The largest declines occurred in Wholesale Trade (-3.4%, -4,300 jobs), Administrative and Support Services (-3.0%, -5,500 jobs), and Manufacturing (-2.7%, -6,300 jobs). Notably, several key knowledge-economy sectors also saw declines—including Information (-2.5%, -2,500 jobs), Finance and Insurance (-1.8%, -3,100 jobs), and Professional, Scientific, and Technical Services (-0.6%, -2,500 jobs).

Digging deeper into these trends, the performance of specific industries tells a more detailed story of growth and contraction:

Figure 3



Source: Quarterly Census of Emlpoyment and Wages (QCEW). Mining, Quarrying, and Oil and Gas Extraction is excluded due to low employment.

Areas of Growth and Recovery

- **Health Care and Social Assistance:** This sector was a primary source of job growth, though the expansion was uneven across different types of care. Growth was concentrated in community and home-based care industries. For instance, Residential Intellectual and Developmental

Disability Facilities grew by 8.9% (+2,745 jobs). The Child Care Services industry also expanded significantly, growing by 5.8% (+1,694 jobs), including significant increases in funding for Commonwealth Cares for Children (C3). In contrast, employment in the sector's largest component, General Medical and Surgical Hospitals, grew by only 0.2% (+340 jobs).

- **Growth in the Innovation Economy:** Despite economic challenges in 2024, such as higher interest rates and a slowdown in venture capital, key parts of the state's innovation economy continued to grow. For example, Scientific Research and Development Services added over 1,000 jobs (+1.0%), while Management, Scientific, and Technical Consulting Services grew by 3.2% (+1,842 jobs). Both of these industries, which are central to innovation, grew faster than the national average in 2024. The sustained growth in these core research and consulting fields as a positive signal indicates continued activity in the state's innovation pipeline.
- **Rebounding Industries:** A significant trend in 2024 was the partial recovery of industries that had declined for several years. After a difficult post-pandemic period, Home Health Care Services grew by 4.8% (+1,923 jobs). Similarly, Nursing Care Facilities, which had been shrinking for years, saw employment increase by 4.0% (+1,551 jobs). Parts of the leisure and hospitality sector also began to grow again; Other Amusement and Recreation Industries expanded by 4.0% (+1,786 jobs), and Traveler Accommodation added over 800 jobs (+2.4%). This suggests that while these industries remain below pre-pandemic employment levels, they began to stabilize in 2024.

During this period of growth, the state enacted several new investment policies. The Mass Leads Act, for example, authorizes a ten-year, $1 billion reauthorization of the Life Sciences Initiative and includes a major investment package for climate-tech modeled on that successful approach. The act also directs $100 million to an Applied AI Hub to accelerate the use of AI in the state's established industries, such as life sciences and advanced manufacturing.

Areas of Challenge and Contraction

While some sectors grew, several key industries contracted in 2024:

- **Contractions in Key Service Industries:** The most significant job losses occurred across a range of service industries. The Employment Services subsector, which includes temporary help and placement agencies, shrank sharply, losing over 7,100 jobs (-10.4%) and consistent with the overall slowdown in hiring. The downturn was also clear in high-technology services, as Computer Systems Design and Related Services lost over 5,200 jobs (-6.5%). The social assistance sector also slowed, with the large Individual and Family Services subsector declining by 3,709 jobs (-3.5%).
- **Job Losses in Advanced Manufacturing**: The state's advanced manufacturing sector contracted across several key high-tech subsectors. The downturn was pronounced in computer and electronics, where Semiconductor and Other Electronic Component Manufacturing lost over 800 jobs (-5.6%) and Computer and Peripheral Equipment Manufacturing declined by 546 jobs

(-9.0%). The production of complex instruments also shrank, as the Navigational, Measuring, Electromedical, and Control Instruments industry shed nearly 1,500 jobs (-5.6%). This slowdown also affected other critical innovation areas; Medical Equipment and Supplies Manufacturing lost 280 jobs, and Aerospace Product and Parts Manufacturing lost 250 jobs (-2.6%).

- **Mixed Performance in Construction:** The construction sector showed varied performance in 2024. Public infrastructure work was a source of strength, with Highway, Street, and Bridge Construction growing by 400 jobs (+2.4%). However, private residential and commercial employment slowed. Residential Building Construction saw a modest decline of 164 jobs (-0.9%), while Nonresidential Building Construction fell by 228 jobs (-1.3%). These downturns were also seen in the specialty trades, with Building Finishing Contractors losing 506 jobs (-2.2%) and Other Specialty Trade Contractors losing 525 jobs (-2.6%). The Affordable Homes Act, signed into law in August 2024, aims to spur housing production and demand for construction labor in Massachusetts. The Act authorized over $5.1 billion in spending and implemented nearly 50 policy changes to stimulate development. In addition to policies aimed at spurring housing development, the state has also implemented a workforce strategy focused on expanding Registered Apprenticeship programs, which create debt-free pathways into the construction trades to ensure a skilled workforce is available to build these new homes.
- **Ongoing Structural Declines:** The job losses in 2024 added to persistent, long-term declines in other major sectors. The Retail Trade sector, which lost nearly 22,000 jobs between 2019 and 2023, saw subsectors like Office Supplies and Gift Retailers decline by another 660 jobs (-13.8%) in 2024. Likewise, the Accommodation and Food Services sector, which lost over 18,000 jobs in the prior four years, saw minimal growth in 2024 and remains well below its pre-pandemic employment peak.

In response to shift demand for talent across industries, state policy has focused on creating a more responsive talent development system, guided by the Massachusetts Workforce Agenda. A cornerstone of this strategy is increasing access to education and training. The MassReconnect program, for example, provides free community college to residents 25 and older without a prior degree. Since its launch in 2023, over 20,000 new students in the MassReconnect population have enrolled in community colleges. Building on this success, the state launched MassEducate in 2024 to make community college universally free for all residents, regardless of age. Together, these programs represent a major investment in eliminating tuition as a barrier to training and education and expanding the Commonwealth's talent pipeline.

In addition to policies aimed at spurring housing development, the state has also implemented a workforce strategy to fund specific funding programs:

- The **Workforce Training Fund Program (WTFP)** serves as the primary tool for upskilling incumbent workers. In Fiscal Year 2025, the state invested $20.6 million through WTFP to train over 18,000 employees at 1,500 businesses, with a focus on manufacturing and technical services.

- The **Workforce Success Grants** program targets unemployed and underemployed residents to expand the talent pool. In May 2025, $6.8 million was awarded through this program to train over 1,100 individuals, primarily for roles in healthcare and education.
- The **Skills Capital Grant Program** addresses the physical infrastructure of training. In May 2025, it provided $15.4 million to 58 educational institutions to purchase modern, industry-standard equipment.
- The **Career Technical Initiative** partners with Career and Technical Education (CTE) Schools to provide adult learners, especially unemployed and underemployed individuals from underserved populations and underrepresented groups, with career training and technical skills. In August 2025, the state awarded $24.2 million in Career Technical Initiative (CTI) implementation grants to train 2,490 individuals for careers in high-demand occupations within the trades, construction, and manufacturing sectors.

Together, these initiatives in college affordability, incumbent worker training, new entrant pipelines, and equipment modernization strengthen talent supply chain for the Commonwealth's most critical industries.

Conclusion: An Economic Inflection Point

The Massachusetts economy enters the second half of 2025 at an inflection point. The state's labor market has slowed considerably, with payroll job growth lagging the national average and an unemployment rate that has climbed above it. These near-term issues are compounded by external pressures, including a shifting federal policy landscape and potential cuts to research funding, which create uncertainty for the state's knowledge-dependent industries.

These immediate pressures are layered on top of long-standing structural challenges, primarily a long-term housing shortage and related affordability issues and the ongoing need to maintain the state's economic competitiveness. In response, the Commonwealth has enacted a series of significant, long-term investments. These include major capital authorizations for housing through the Affordable Homes Act, new investments in life sciences and climatetech under the Mass Leads Act, a tax relief package to improve affordability, and programs like MassReconnect to expand the workforce talent pipeline.

The depth and quality of the Commonwealth's skills workforce is distinct feature of its economy. The recent investments in people and industries are designed to protect and extend this workforce. Ultimately, maintaining the strength of Massachusetts' economy will depend on building direct and effective pipelines that connect the residents being trained through these new programs to the high-quality jobs being created in the Commonwealth's target industries.

Regional Labor Market Dynamics

While the statewide labor market rebalanced from post-pandemic conditions in 2024, a closer examination reveals significant variation across Massachusetts' regions. This section analyzes regional labor market performance, highlighting areas of strength and weakness in 2024.

Regional Labor Market Performance

Table 1 presents data by Workforce Development Area (WDA) for three key economic indicators that together paint a picture of labor market trends across regions. The first is the change in the number of payroll jobs located in the region from 2023 to 2024, the second is the change in the number of residents participating in the labor force from 2023 to 2024, and the third is the annual unemployment rate for residents in 2024. The cells of the table are shaded to denote if the WDA's metric was relatively weak, average, or strong compared to the others (based on normalized changes since 2023). The WDAs are organized by the size of their broader Workforce Skills Cabinet region's workforce, and then within that, by their own size.

Table 1: Labor market performance in 2024, by Workforce Development Area (WDA)

Relative performance* (2023–2024):		weak	average	strong
	WDA	**Change in Payroll Jobs 2023-2024**	**Change in Resident Labor Force 2023-2024**	**2024 Annual Unemployment Rate**
Greater Boston	**Boston**	1,650	10,300	3.9%
	Metro South/West	–1,150	13,450	3.5%
	Metro North	2,000	12,000	3.5%
Southeast	**South Shore**	–700	8,550 (+3%)	3.9%
	Bristol County	400	6,000 (+3%)	4.4% (+.4 pp)
	Brockton	–150	3,600	4.4% (+.4 pp)
	Greater New Bedford	–900 (–1%)	3,100 (+3%)	5.1% (+.4 pp)
Northeast	**North Shore**	3,250 (+2%)	5,700	3.9%
	Lower Merrimack Valley	–1,750 (–1%)	4,900	4.3% (+.6 pp)
	Greater Lowell	–2,450 (–2%)	4,250	4.1% (+.7 pp)
Central	**Central MA**	200	8,150	4.0%
	North Central	550	3,650	4.3% (+.7 pp)
Pioneer Valley	**Hampden County**	–1,050	4,650	5.1% (+.6 pp)
	Franklin Hampshire	0	2,950	3.8%
	Cape & Islands	450	4,000 (+3%)	5.0% (+.4 pp)
	Berkshire	–650 (–1%)	700 (+1%)	4.0% (+.4 pp)

Table 1 Sources: QCEW, LAUS

*For each column, performance ratings (weak, average, strong) are assigned relative to other WDAs' trends across the same metric, measured by comparing annual averages in 2024 with annual averages in 2023. This comparison goes back further in time than the statewide analysis in order to capture regional trends. See Appendix for details on the assignment of ratings.

The first column of Table 1 shows that most WDAs saw relatively minor changes to payroll jobs in 2024 (half a percentage point change in either direction) – including the three Greater Boston WDAs that comprise about half of statewide employment. However, looking across the metrics reveals some distinct patterns in certain regions of the Commonwealth.

Northeast

The North Shore was the only WDA to have substantial job growth. Over 3,000 jobs in the North Shore were added in 2024, a 2% increase. Yet, the Greater Lowell and Lower Merrimack WDAs lost a significant number of jobs in 2024, over 4,000 jobs in total. Their unemployment rates grew by +0.7 and +0.6 percentage points respectively since 2023. In fact, Greater Lowell's unemployment rate, along with North Central's (the WDA bordering Greater Lowell to the west) saw the largest increases of any WDA.

Southeast

The four Southeast WDAs (South Shore, Bristol County, Brockton, and Greater New Bedford) grew their labor forces at higher rates than other regions in 2024 (3% growth), with comparatively small increases to their unemployment rates (+0.4 percentage points). A similar dynamic was observed in the Cape & Islands WDA as well. While these WDAs did not experience significant growth in payroll jobs – reflecting the statewide reality – employment remained stable in all but Greater New Bedford. The significant divergence in regional trends in 2024 suggests that job seekers south of Boston faced a more favorable labor market than those north of Boston, as reflected in lower increased in the regional unemployment rate.

Western Massachusetts

In the western part of the state, several labor market indicators slowed in 2024. The Berkshires stands out as the only WDA whose resident labor force grew by less than 2% in 2024. It also lost 1% of its payroll jobs, which translates to 650 fewer jobs than 2023. These trends are a continuation from prior years, as found in the 2023 Annual Economic Analysis. Meanwhile, Hampden County WDA, also a focus of last year's report, saw its unemployment rate climb more than most WDAs in 2024 (+0.6 percentage points). This is notable given that Hampden County already has one of the highest unemployment rates across the WDAs and has lost over 12,000 payroll jobs since the pandemic – a 4% reduction in jobs from 2019 to 2024.

Caveat: Underestimation of Payroll Jobs by Region

Given the methods used to collect and report payroll employment data, the change in payroll jobs metric in Table 1 is likely understated across WDAs. There was substantial growth in jobs reported in Massachusetts without a specific city or town (+6,400 jobs), a case which occurs when a Massachusetts worker cannot be assigned to a Massachusetts work site. This dynamic likely reflects an increase in

remote work or other forms of geographically dispersed employment. While the upside is that there continue to be remote opportunities for workers, growth in this category presents a challenge to precisely estimate regional job numbers.

Understanding Regional Divergence

The differences between regional labor markets seen in Table 1 are driven by industrial and demographic shifts that have not affected all areas of the Commonwealth equally. This section describes four dynamics seen in the data that may explain why some regions did well in 2024 while others struggled.

Health Care Sector Growth Concentrated in Eastern Massachusetts

One notable statewide trend in 2024 was the growth of payroll jobs in the Health Care and Social Assistance sector, particularly in industries such as Residential Intellectual and Developmental Disability Facilities, Nursing Care Facilities, Assisted Living Facilities, Child Care Services, and Home Health Care Services. Much of the employment growth in this set of "community and home-based care" industries came from communities in the eastern part of the Commonwealth. Notably, the Brockton and North Shore WDAs experienced 12% job growth in these industries since 2023, while the Boston, Metro North, and Central MA WDAs all grew over 6%. This growth translates to over 5,000 more jobs in these five regions. 1,500 of those jobs were added by North Shore employers – a significant contributor to the overall growth in payroll jobs in the region in 2024.

However, this trend did not extend to Hampden County in western Massachusetts. Notably, over 1 in 4 jobs in this region are in the Health Care & Social Assistance sector, a higher share than in any other WDA. Yet employment in this sector shrunk in 2024 – a decrease of nearly 900 jobs (-1.6%). This was driven by a contraction in the Individual and Family Services industry in Hampden County, coupled with only slight employment growth in the "community and home-based care" industries that saw job increases in eastern Massachusetts.

Greater Lowell, Lower Merrimack Valley, and Hampden County Lost Jobs in Core Industries

While all 16 WDAs lost manufacturing jobs in 2024, this loss was felt most in the Greater Lowell and Lower Merrimack Valley WDAs. Greater Lowell lost over 500 manufacturing jobs, while Lower Merrimack Valley lost 300. These losses represent around 20% of each WDA's total payroll job loss in 2024. Declines in manufacturing employment have an outsized effect on the Greater Lowell and Lower Merrimack Valley WDAs because 15% of their jobs are in that sector, compared to 6% statewide. This is a reflection of the region's role as a manufacturing hub, which can be traced back to the development of Lowell and Lawrence as industrial cities in the early 1800s and continues today.

Most manufacturing job losses in these two WDAs in 2024 were in the industries of Navigational, Measuring, Electromedical, and Control Instruments; Aerospace Product and Parts Manufacturing; and Industrial Machinery Manufacturing. Demographic data from the Census' Quarterly Workforce Indicators show that the number of manufacturing workers in Greater Lowell and Lower Merrimack Valley between the ages of 45 and 64 has steadily declined since mid-2020, with a sharper drop in 2024. Employment in other age categories has remained constant, which could suggest that older workers are retiring from manufacturing jobs that have not been backfilled by younger workers.

Hampden County also lost around 500 manufacturing jobs, the majority in fabricated metal product manufacturing – a priority industry for that region (Pioneer Valley Workforce Skills Cabinet, 2024). While the Hampden County labor market is less concentrated in manufacturing than the Northeast WDAs (8% of its jobs), the loss of these jobs coupled with the loss of Health Care & Social Assistance jobs compounded the region's economic challenges.

These similar dynamics may explain why unemployment rates rose so much in the Greater Lowell, Lower Merrimack Valley, and Hampden County WDAs in 2024. Their labor forces expanded as jobs were reduced in industries core to their economies, making it difficult to find a job. Another critical detail is that many residents of these WDAs live in Gateway Cities – Lowell, Lawrence, Haverhill, Springfield, Chicopee, Westfield, and Holyoke. Since a large part of these cities' populations have household income and educational attainment below the statewide average, they may need targeted support to adapt to their regions' shifting labor markets.

Labor Market Stability in Southeast Massachusetts

The labor market in Southeast Massachusetts showed signs of stability. The trends in Table 1 suggest that the region's job seekers were more engaged and successful at finding employment in 2024 than in other parts of the Commonwealth, even though the Southeast was not immune to statewide trends. Indeed, the South Shore and Bristol County WDAs each lost hundreds of manufacturing jobs since 2023. They also lost 20% of their Employment Services jobs, for a combined 1,700 fewer jobs in the region. Yet unlike the Greater Lowell, Lower Merrimack Valley, and Hampden County WDAs, these declines were counteracted by increases in Health Care & Social Assistance jobs. For instance, Brockton WDA added 650 more jobs in the "community and home-based care" set of industries identified above. And unlike in the Greater Boston region, employment at General Medical and Surgical Hospitals rose significantly across the Southeast – with growth rates of over 6% in the South Shore and Greater New Bedford WDAs.

This strength in the Health Care and Social Assistance sector, combined with less reliance on manufacturing compared to the Northeast, likely contributed to strong Southeast labor market performance in 2024 relative to other regions. Notably, the Southeast region contains six Gateway Cities – Quincy, Brockton, New Bedford, Fall River, Taunton, and Attleboro. Yet residents of these cities looking for a job in 2024 likely faced a more favorable market than residents of Lowell or Springfield,

especially when comparing to 2023. Brockton WDA in particular showed signs of industry diversification not seen in the Greater Lowell or Hampden County WDAs – for instance the addition of 550 jobs in the Management, Scientific, and Technical Consulting Services industry. Future research could look for the drivers of Brockton's relative stability and explore how it could be replicated in other parts of the Commonwealth.

Lack of Prime-Working-Aged Residents in the Berkshires

The loss of 650 payroll jobs in a year might be insignificant for other regions of the Commonwealth, but it has a big impact in the Berkshires – Massachusetts' least populated WDA. 250 of the lost jobs were in the Finance & Insurance sector, and 170 were in Accommodation and Food Services, representing a 2.5% decline since 2023. The latter continues the downward trend in employment in the region's tourism economy, which was already down 5% in 2023 compared to pre-pandemic levels (2023 Annual Economic Analysis).

In contrast, employment in the Health Care and Social Assistance sector increased in 2024 by 180 jobs (+1.5%). However, there are still signs of a tight labor market in the Berkshires for health care workers, a key takeaway of the 2023 Annual Economic Analysis. Job postings in Health Care and Social Assistance tripled from 2019-2023 and increased further in 2024 (Lightcast). This is a sign that Berkshire employers continue to find it difficult to attract workers to fill available jobs in this sector.

A comparison of data on residents of the Berkshires with residents of the Cape & Islands gives some insight into the challenges faced by the Berkshire WDA. In many ways, the Berkshires and the Cape & Islands are similar – they have older populations, are low-density regions located 1+ hour drive from a major city and are heavily reliant on tourism. Looking at Table 1, both regions saw relatively slight increases in their unemployment rates in 2024. Yet the Berkshire's labor force grew by only 1%, while the Cape & Islands' labor force grew by 3%. This divergence likely stems from the fact that the Cape & Islands saw a surge of prime-working aged residents since the pandemic (+6% from 2019 to 2024, or 5,000 more individuals between the age of 25-54), while that demographic in the Berkshires remained stagnant (Donahue Institute, 2024). A large increase in the prime-age workforce on the Cape & Islands may also explain why Accommodation and Food Services employment in the region grew in 2024, while it declined in Berkshire WDA.

The data suggests that there may not be enough people of prime-working age living in the Berkshires to support its key sectors, and this may have contributed to the region's slower job growth and rising unemployment. Given that the Berkshires population is aging, the need for health care services is high, and that tourism continues to rebound post-COVID (Massachusetts Office of Travel and Tourism, 2024), the tight labor market is likely to continue in the coming years and points to a need for tailored workforce development and attraction strategies in the region.

Conclusion

While slow growth in payroll employment in 2024 posed a challenge to most areas of the Commonwealth, this analysis illustrates that some regions maintained more stable labor market outcomes than others. For instance, the Southeast region had a relatively strong labor market compared to the rest of the state. Losses in Manufacturing jobs were balanced by growth in sectors such as Health Care and Social Assistance. The number of Southeast residents participating in the labor force grew at a higher rate than any other region, along with the neighboring Cape & Islands. And with only slight increases in unemployment rates, most of those job-seekers were successful at finding a job.

On the other hand, Greater Lowell and Lower Merrimack Valley were hit especially hard by employment losses in the Manufacturing sector, an industry that is central to the Northeast economy. Hampden County was also impacted by the loss of jobs in Manufacturing, but even more by the loss of jobs in Health Care and Social Assistance – a sector responsible for 1 out of 4 jobs in the region. The reliance on industries that suffered declines in 2024 likely contributed to the large rise in unemployment rates in those regions.

Future work can seek to draw lessons from the regions of Massachusetts that showed relative stability in 2024 and examine ways to share those strategies with other regions. For instance, the labor market data for Brockton WDA showed indicators of labor force engagement and industry diversification that may be able to be replicated in the Greater Lowell, Lower Merrimack Valley, or Hampden County WDAs. There are already a few notable economic development and workforce initiatives happening in these regions that may address some of these challenges. These are driven by community leaders with support from state as well as private funding sources.

For instance, the Lowell Innovation Network Corridor (LINC) is a public-private venture creating a high-density commercial and residential hub in downtown Lowell, with an angle towards life sciences industries. Scheduled to open by 2027, the development has attracted employers such as Draper Laboratory and Mass General Brigham and has sparked the development of training programs by UMass Lowell and Bioversity to meet demand for new jobs (University of Massachusetts Lowell, 2025). Meanwhile, Springfield WORKS is addressing a common issue faced by workers in Hampden County – the "benefits cliff" that occurs when steep losses in public benefits create a disincentivize to increasing wages above a certain threshold. The organization is currently running the Cliff Effect Pilot with 100 workers from Springfield, Boston, and Worcester to provide cash to make up for these losses, along with career coaching and networking opportunities. Especially in a difficult labor market, it is critical that low-income workers can work their way up without a drastic loss of food or housing support – and this pilot is a step towards alleviating this barrier.

The Berkshires faces unique challenges compared to the rest of the Commonwealth. It is the only WDA to still exhibit a tight labor market in 2024, as it appears there are not enough workers to sustain

employment in tourism or health care sectors. Subsequent research could examine why the Cape & Islands WDA was able to attract thousands of prime-age working residents since the pandemic and compare that to what Berkshire leaders have tried thus far to boost its labor force. Lessons from the Cape & Islands' success, along with a tailored workforce development strategy, may be able to help the Berkshires counteract recent demographic trends.

Pathways to Quality Jobs

In a challenging labor market, the workforce development system helps individuals who are out of work find quality employment. It supports jobseekers facing barriers—such as low-income, disability, or limited education—by supporting them in finding employment in good jobs, often through training, education, or personalized assistance.

Given the complexities and shifting dynamics of the job market, labor market data can be used to identify quality career pathways. To support this goal, this analysis utilizes DER's Opportunity Star framework—a data-driven rating system that identifies occupations with both strong demand and high wages. By using this framework to define what constitutes a "quality job," we can identify career pathways offering long-term opportunities for workers, and map career pathways for populations typically eligible for training through MassHire career centers, which are funded by the Workforce Innovation and Opportunity Act (WIOA).

Opportunity Star Jobs

In DER's Opportunity Star framework, an Opportunity Star job is an occupation that is both in high demand and offers competitive wages, as determined by a rating system of one to three stars. To qualify as an Opportunity Star, a job must show long-term demand and typically pay more than the statewide median wage or the median for occupations with similar education requirements. Computer user support specialists, who typically do not require a college degree, are an example of a high-rated occupation. The roles show high demand and earn a median salary of $74,000, which is above the statewide median and the median for other jobs that don't require a college degree (DER Long-Term Projections).

Based on most recent data available, approximately half of the 3.6 million jobs in Massachusetts received at least one Opportunity Star. However, access to these quality jobs is not evenly distributed by educational attainment. Two-thirds are concentrated in jobs that typically require at least a bachelor's degree, primarily in occupations related to management, business and financial operations, healthcare, and education. Highly rated jobs include general and operations managers, software developers, management analysts, and nurse practitioners—all with median annual wages exceeding $100,000.

Table 2: Top three occupations for each Opportunity Star category

Occupation	Opportunity Stars	Employment	Annual Openings[1]	Median Annual Wages[2]
General and Operations Managers	★★★	111,380	9,645	$123,850
Sales Managers	★★★	14,820	1,183	$170,610
Marketing Managers	★★★	13,510	1,197	$192,480
Chief Executives	★★	14,497	798	$233,778
Public Relations Managers	★★	2,440	186	$169,760
Fundraising Managers	★★	1,790	139	$145,380
Buyers and Purchasing Agents	★	12,970	1,018	$ 81,310
Compliance Officers	★	10,090	804	$ 92,890
Social and Community Service Managers	★	8,450	763	$ 79,050

[1] Source: DER Long-Term Occupational Projections (2022–2032). Annual job openings is a measure of job demand, representing the sum of employment growth (new jobs) and replacement openings (vacancies from workers leaving an occupation).
[2] Source: BLS OEWS (2024), with missing values supplemented by Lightcast 2024 wage data.

Table 2 highlights how the star rating system reflects trade-offs between wages and demand. For example, three-star jobs like sales managers deliver on both fronts, with a median wage of $170,000—exceeding both the statewide median and the median occupations requiring similar levels of education– and over 1,100 openings each year. In contrast, two-star jobs may offer higher pay but lower demand. Public relations managers, for instance, earn a wage comparable to sales managers, but with fewer than 200 annual openings, opportunities are far more limited. One-star jobs, such as buyers or compliance officers, still represent quality employment because they offer wages that often exceed the statewide median and exhibit high demand.

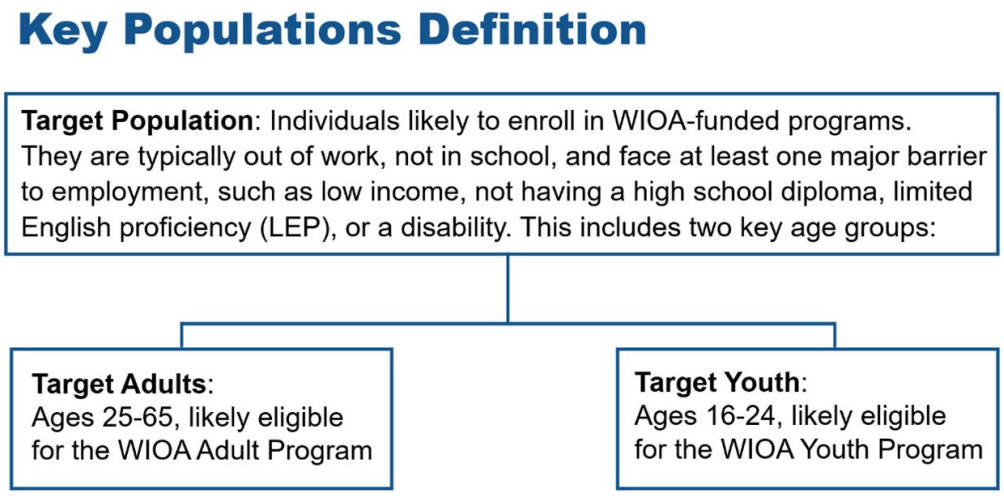
Despite the concentration of high wage and high demand jobs requiring a degree, about one-third of all Opportunity Star jobs do not typically require a bachelor's degree, offering pathways for those without a four-year degree. Examples of Opportunity Star jobs that do not require a bachelor's degree include 3-star jobs like electricians, executive administrative assistants, sales representatives, and licensed practical nurses.

Quality Jobs Pathways for WIOA Participants

The Opportunity Star framework can be used to identify high-wage and high demand career paths for out-of-work individuals who may be eligible for services funded through the Workforce Innovation and Opportunity Act (WIOA). This approach maps opportunities to advance from entry-level positions, like cashiers or personal care aides, into related, higher-paying roles by aligning transferrable skills and knowledge. Because WIOA services prioritize individuals with employment barriers, this analysis focuses on exploring career pathways relevant to out-of-work individuals that have at least one barrier such as low income, limited English proficiency (LEP), or disability.

While WIOA offers multiple programs for different goals, this analysis focuses on exploring career pathways to Opportunity Jobs for participants in its Adult and Youth programs. Individuals eligible for the WIOA Adult program (ages 25 to 65) are referred to as "target adults," and those eligible for the WIOA Youth program (ages 16 to 24) are referred to as "target youth." For the purposes of analysis, both groups are assumed to be out of work and not enrolled in school, aligning with the WIOA out-of-school youth (OSY) program.

These groups are also defined by barriers such as low-income status, disability, and lower educational attainment. The following sections first examine the demographics of these groups, then highlight their common occupations, and finally evaluate how they can transition into higher-quality, Opportunity Star jobs.



WIOA Eligible Adults

Data from the most recent American Community Survey Public Use Microdata Sample (2023 5-Year PUMS, averaging 2019-2023) shows that Massachusetts was home to more than 400,000 adults aged 25-65 facing at least one significant barrier to employment. This group was largely detached from the

labor force, with 88% not in the labor force. The age distribution leaned slightly older with 30% between 25-39, 30% between 40-54, and 40% between 55-65. More than a quarter did not have a high school diploma.

Table 3: Target adults by race

Race & Ethnicity	Target Pop.	Target Pop. Share	Overall Pop. Share	Over/Under Represented
White	226,682	55.0%	68.5%	-13.5%
Hispanic/Latino	98,348	23.9%	12.2%	11.7%
Black	37,536	9.1%	6.6%	2.5%
Asian	24,731	6.0%	7.7%	-1.7%
Two or More Races	18,185	4.4%	3.8%	0.6%
Other Race	6,408	1.6%	1.1%	0.5%

Source: 2023 5-Year ACS PUMS. Race based on the Census race alone definition. Sample sizes for American Indian/Alaska Native and Native Hawaiian/Pacific Islander population estimates too small to report. Overall population share ages 25-65.

The racial and ethnic makeup of this group differs notably from the state's overall adult population. While white and Hispanic/Latino groups made up almost 80% of the target adult population, certain groups are disproportionately affected. Hispanics/Latinos were significantly overrepresented—making up 24% of the target adult population, but only 12% of the total adult population. Black adults were also overrepresented, accounting for 9% of the target adult group, but only 7% of the total adult population.

Figure 4

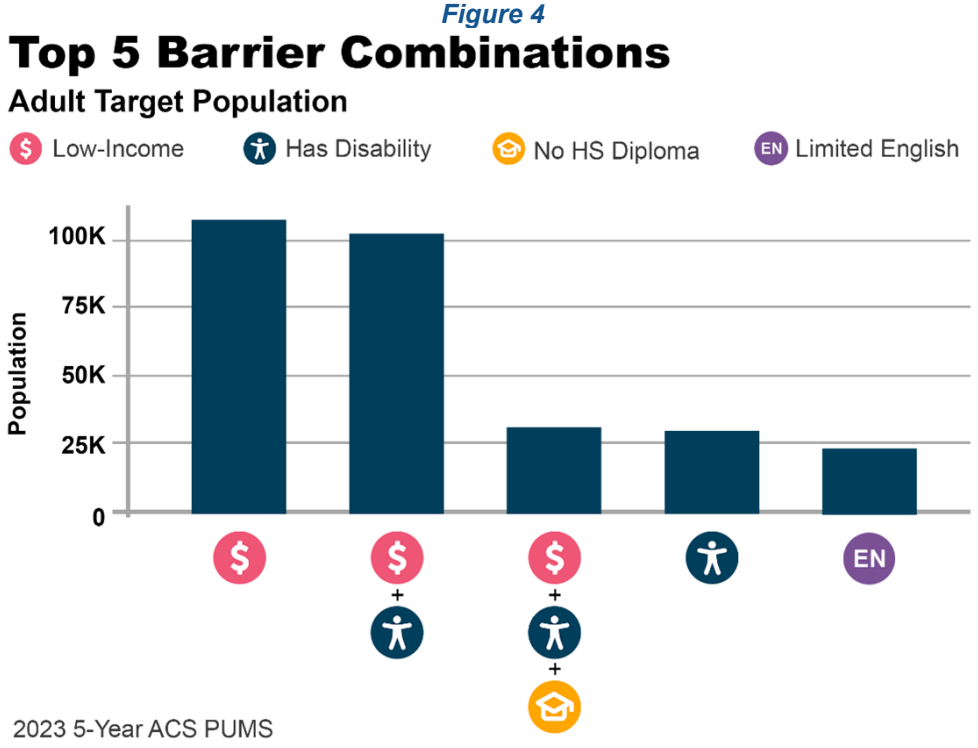


Figure 4 illustrates the most common combinations of barriers this group faces.

Two employment barrier profiles accounted for half of the eligible adult population (roughly 200,000 individuals): those with only a low-income barrier and those with both low income and a reported disability barrier. The next most common combinations included those with low income, disability, and no high school diploma, as well as those with a reported disability only.

Looking at the overall prevalence of each barrier provides another perspective. After low-income status, which is the most widespread barrier, disability was the second most common barrier, appearing in combinations that accounted for roughly 195,000 individuals. This is followed by lack of a high school diploma (115,000 individuals), and limited English proficiency (100,000 individuals).

To identify realistic career pathways for the 400,000 out-of-work target adults, this analysis draws insights from the 725,000 employed adults in Massachusetts who face similar barriers. Both groups experience similar rates of low income and a lack of a high school diploma, factors that can limit access to certain career paths. Additionally, the prior job experience of the out-of-work population closely mirrors that of the employed population, with many previously working in occupations such as cashiers, tractor-trailer drivers, and janitors (2023 5-Year ACS PUMS). By examining the jobs currently held by workers with barriers, this analysis serves a dual purpose: it helps unemployed individuals identify viable starting points for a new career while also helping the currently employed find pathways to advance from their existing roles.

Table 4: Top occupations among employed adults with at least one barrier

Occupation	Typical Education	Opportunity Stars	Employment	Annual Openings	Median Annual Wages
Janitors and Cleaners (Excl. Maids)**	No formal credential	-	25,587	8,383	$44,570
Heavy and Tractor-Trailer Truck Drivers	Non-degree award	★	20,552	4,016	$60,630
Maids and housekeeping cleaners	No formal credential	-	18,011	2,843	$38,150
Nursing assistants*	Non-degree award	-	16,738	5,755	$45,410
Cooks, Restaurant	No formal credential	-	16,220	6,202	$46,280
Personal care aides**	HS diploma or equiv.	-	14,989	20,302	$39,520
Construction laborers	No formal credential	★★★	14,882	2,360	$62,430
Freight, stock, and material movers	No formal credential	-	12,977	5,207	$45,070
Cashiers**	No formal credential	-	12,731	12,188	$34,800
First-Line retail sales supervisors*	HS diploma or equiv.	-	11,997	2,810	$53,050

Source: 2023 5-Year ACS PUMS, DER Long-Term Occupational Projections (2022–2032). Wage data is from BLS OEWS (2024), supplemented by Lightcast (2024).
Note: Excludes occupations requiring a bachelor's degree. Annual openings and median wages are based on data for all workers.
*Reach an Opportunity Star job in one move.
**Reach an Opportunity Star job in two moves.

The top occupations held by adults currently employed with a barrier include janitors and cleaners, heavy and tractor-trailer truck drivers, maids, nursing assistants, and restaurant cooks. While some jobs—such as truck drivers and construction laborers—are high wage and high demand based on their Opportunity Star rating, the majority do not offer high wage and high demand compared to statewide medians or those with similar educational backgrounds.

The objective is then to identify potential related pathways from these common roles to Opportunity Star jobs. To do this, the related occupations framework from the national O*NET program is used to link jobs based on similar skills, work activities, and required knowledge. For example, food preparation workers are highly related to occupations such as restaurant cooks, chefs, and fast food and counter workers due to the parallels in the work and knowledge required and the similarity of their job titles.

This approach reveals several potential pathways. For instance, retail supervisors have high demand, but their median annual wage ($53,000) falls below both the state median ($62,000) and the median for jobs for a similar level of education ($57,000). By pursuing these Opportunity Star paths, they may

be able to grow in pay as the median annual pay is $107,000 for non-retail supervisors, $75,000 for office and administrative support supervisors, and $81,000 for sales representatives of services (except advertising, insurance, financial services, and travel).

While these occupations are highly related to retail supervisors, education and experience may limit opportunities for those without post-secondary degrees. For example, the Bureau of Labor Statistics (BLS) classifies non-retail supervisors, office and administrative support supervisors, and sales representatives of services as typically needing a high school diploma for entry. However, recent job postings reveal a notable discrepancy: 40% of all recent postings for non-retail sales supervisors—and approximately 25% for office and administrative support supervisors and sales representatives of services—listed a bachelor's degree as a preference or requirement (Lightcast). One explanation for job postings showing a preference for a bachelor's degree may be roles in more technical industries such as technology, finance, or life sciences. For example, a sales supervisor in life sciences may need a foundational understanding of biology and science in order to effectively communicate the value of their products.

A similar analysis reveals critical pathways for nursing assistants (CNAs). While the CNA role is in high demand, median annual wages of $45,000 are well below both the state median and the median for jobs requiring similar education levels. The O*NET framework highlights two common advancement opportunities: becoming a licensed practical nurse (LPN) or a registered nurse (RN). Both pathways lead to higher median wages but come with different requirements and barriers.

The path to becoming an LPN is shorter, typically requiring a one-year training program and passing a standardized exam. This path leads to a median annual wage of $77,000, an increase of over $30,000 compared to CNA. However, a potential barrier to this transition is that while a college degree is not required, 88% of recent job postings for LPNs requested an associate's degree. The path to becoming an RN requires at least an associate's degree—but offers an even higher median wage. The RN role benefits from strong demand and a median annual wage of $102,000—more than double that of CNAs.

For roles without a direct transition to an Opportunity Star job, a multi-step "stepping stone" path is often necessary. The journey of a cashier illustrates this approach. Cashiers may first take a "stepping stone" role as counter and rental clerks to build deeper skills in customer service and product knowledge. While this initial move may not include a large pay raise, it can serve as a step towarda 3-star role as a sales representative of wholesale and manufacturing (except technical and scientific products), which has a median wage of $79,000.

Longer-term pathways also exist in healthcare and skilled trades. A personal care aide, for example, might first become a home health aide and eventually transition into a 3-star role as an LPN. Janitors and cleaners—the most common occupation among the target adult population—may consider a related path as a septic tank servicer and sewer pipe cleaner, with a median wage of about $51,000, and eventually move into a 3-star occupation like a plumber, pipefitter, or steamfitter, which offers

strong demand and a median wage of $83,000. This path may be challenging as there are fewer than 40 annual openings for septic tank servicers and sewer pipe cleaners and the training path to become a plumber, pipefitter, or steamfitter requires a 4-5 year apprenticeship.

WIOA Eligible Youth

This analysis now shifts to "target youth"—individuals 16 to 24 who are not working, not in school, and who face significant employment barriers. While the WIOA youth program offers supports beyond employment—such as helping youth finish high school or gain internships—this section focuses on identifying career paths for out-of-school youth to quality jobs, using the same framework and assumptions that were used to analyze career paths for WIOA eligible adults.

Based on the 2023 ACS 5-year sample, there were more than 40,000 target youth in Massachusetts. Seventy percent of the population was between 20-24 years old, and more than one-third did not have a high school degree.

Table 5: Target youth by race

Race & Ethnicity	Target Pop.	Target Pop. Share	Overall Pop. Share	Over/Under represented
White	17,260	41.5%	61.9%	-20.4%
Hispanic/Latino	14,304	34.4%	16.1%	18.3%
Black	4,604	11.1%	7.1%	3.9%
Two or More Races	3,417	8.2%	5.7%	2.6%
Asian	1,421	3.4%	7.9%	-4.5%
Other Race	589	1.4%	1.2%	0.2%

The racial and ethnic makeup of this group (Table 5) was even more disproportionately Hispanic/Latino than the target adult population. Hispanic/Latino youth are starkly overrepresented, comprising 34% of the target group but only 16% of the total youth population. Conversely, white youth were underrepresented, making up 42% of the target youth group, while they comprised more than 60% of the total youth population.

While low household income is a key challenge for both the adult and youth populations, the overall barrier profile for youth is distinct. The key issue is education: over one-third of target youth lack a high school diploma, compared to one-quarter of adults. In contrast, barriers associated with age are less common among youth. Fewer than one-third of youth report a disability, versus nearly half of adults. LEP-related barriers are also less common among youth, with 17% reporting LEP compared to 25% of adults. This suggests that for target youth, the most common obstacles are low income and lack of foundational education.

Employed youth with barriers often work in the same occupations as their adult counterparts, but as shown in Table 6, youth are more concentrated in roles such as cashiers, material movers, and in restaurant jobs such as cooks and waitstaff. For these youth, the framework reveals several pathways to Opportunity Star jobs:

- From Customer Service to Sales: A young person working as a customer service representative ($48,000) can build on their skills to transition to a 3-star role as a sales representative of services. This path, which involves selling services in industries like staffing or logistics, commands a salary of $81,000.
- From Retail to Wholesale: Similar to the adult pathway, youth working as cashiers or retail salespersons can pursue a path toward becoming a 3-star wholesale or manufacturing sales representative, using a role as a counter and retail sales clerk as an intermediate step.
- From Retail to Promotions: An alternative path for a retail salesperson is to first become a demonstrator or product promoter. While this role offers similar pay, it builds skills that can lead to a sales representative of services job, offering a significant wage increase.

Table 6: Top occupations among employed youth with at least one barrier

Occupation	Typical Education	Opportunity Stars	Employment	Annual Openings	Median Annual Wages
Cashiers**	No formal credential	-	3,791	12,188	$34,800
Freight, stock, and material movers	No formal credential	-	2,512	5,207	$45,070
Stockers and order fillers	HS diploma or equiv.	-	2,281	9,356	$37,980
Cooks, Restaurant	No formal credential	-	2,231	6,202	$46,280
Waiters and waitresses	No formal credential	-	2,218	10,622	$36,390
Customer service representatives*	HS diploma or equiv.	-	2,151	7,801	$48,060
Construction laborers	No formal credential	★★★	1,857	2,360	$62,430
Heavy and Tractor-Trailer Truck Drivers	Non-degree award	★	1,763	4,016	$60,630
Retail salespersons**	No formal credential	-	1,618	12,993	$36,320
First-Line retail sales supervisors*	HS diploma or equiv.	-	1,616	2,810	$53,050

Source: 2023 5-Year ACS PUMS, DER Long-Term Occupational Projections (2022–2032). Wage data is from BLS OEWS (2024), supplemented by Lightcast (2024).
Note: Excludes occupations requiring a bachelor's degree. Annual openings and median wages are based on data for all workers.
*Reach an Opportunity Star job in one move.
**Reach an Opportunity Star job in two moves.

Conclusion

This analysis demonstrates that combining the Opportunity Star job rating with the O*NET related occupations model creates a data-driven roadmap for navigating Massachusetts' complex labor market. By using this framework, career advisors within the MassHire system can more effectively identify high-quality career pathways for the population they serve.

The findings highlight that while more direct transitions into high-paying jobs exist—such as from a Certified Nursing Assistant to a Licensed Practical Nurse—finding Opportunity Star pathways may require strategic "stepping stone" roles or pivoting into different career trajectories. The framework may help uncover some of these complex and longer-term options, such as the path from cashier to a well-paying role in wholesale sales. The analysis also reveals subtle barriers, including the prevalence of "degree inflation" in job postings, which may hinder otherwise qualified candidates. By providing these

detailed insights, the framework equips career advisors to help individuals assess whether a path aligns with their goals and circumstances, ultimately guiding them toward greater economic stability and opportunity.

Appendix

Performance Scale for Table 1

The assignment of performance ratings for each metric in Table 1 depends on the nature of the metric, the statewide trend of the metric, and the distribution of the change in that metric across the regions. The change is measured as the normalized difference between the annual average of the metric in 2024 and the annual average of the metric in 2023. For Payroll Jobs, "weak" is defined as a decrease of at least 1%, and "strong" as an increase of at least 1%. For Resident Labor Force, "weak" is defined as an increase of less than 2%, and "strong" as an increase of at least 2.7%. For Unemployment Rate, "weak" is defined as an increase of equal to or greater than .6%, and "strong" as an increase of less than or equal to .4%.

Defining the target WIOA populations

- In order to be consistent with WIOA guidelines, DER classified low income status as those living in low-income households, those receiving public benefits such as SNAP or TANF, youth eligible for free and reduced lunch, and people with disabilities earning low incomes.
- To more accurately target the WIOA-eligible population, the analysis excludes individuals with bachelor's degrees who are employed in occupations typically requiring a bachelor's degree, such as management analysts and accountants.

Opportunity Star methodology

The Opportunity Star (formerly Demand Star) ranking is the primary measure in the tool to identify in-demand jobs by incorporating occupational demand and wage measures. Although Opportunity Stars are calculated using both state and regional data, this report relies solely on state-level results.

Occupations are evaluated based on projected demand and categorized using the following criteria:

- **In-demand:** Top 25% of occupations by annual openings OR top 50% of occupations by projected job growth rate
- **High demand:** Top 10% of occupations by annual openings OR top 25% of occupation by projected job growth rate

Occupations are evaluated based on wages using the following criteria:

- **Education wage:** Median earnings for the occupation is greater than the median earnings for all occupations that require a similar level of education. For example, food services managers are categorized as education wage because they earn more than the median for occupations requiring a high school diploma, whereas photographers are not categorized as education wage because median earnings are less than the median for occupations requiring a high school diploma.

- **High wage:** Median earnings for the occupation is greater than median earnings for all occupations.
- **Top wage:** The occupation is categorized as both education wage and high wage.

Occupation are then assigned stars based on the following criteria:

- **3 stars:** High demand and top wage
- **2 stars:** High demand and high wage OR in-demand and top wage
- **1 stars:** High demand and education wage OR in-demand and high wage

Occupations with missing data, those that fall below the 50th percentile for average openings, or those that fail to meet the criteria for wages and annual openings demand will be assigned a demand star score of 0.

Figure 4: Top 5 Barrier Combinations: Adult Target Population

Low Income	No HS Diploma	Has Disability	Limited English	Population	Share
TRUE	FALSE	FALSE	FALSE	105,998	25.7%
TRUE	FALSE	TRUE	FALSE	100,747	24.5%
TRUE	TRUE	TRUE	FALSE	31,527	7.6%
FALSE	FALSE	TRUE	FALSE	30,004	7.4%
FALSE	FALSE	FALSE	TRUE	24,023	5.8%

Source: 2023 5-Year ACS PUMS

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