Massachusetts

Labor Market and Economic Review

2013

COMMONWEALTH OF MASSACHUSETTS
Department of Unemployment Assistance
Economic Research Office
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2013 Massachusetts Labor Market and Economic Review

Massachusetts Executive Office of Labor and Workforce Development
Department of Unemployment Assistance
Economic Research Office
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This report is based on data available through June 2014.

Report is available for download at: *http://www.mass.gov/lmi*

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2013 MASSACHUSETTS LABOR MARKET AND ECONOMIC **FAST FACTS**

Like the country as a whole, Massachusetts' population growth is slowing.

Our highly educated labor force is aging and younger workers are less likely to have higher educational attainment.

Younger workers under 25 are delaying entering the labor force.

Older workers are staying longer in the labor force.

Middle age workers have been dropping out of the labor force.

Leading New England Economy

12th Largest Economy in the US

Most Educated Labor Force in US

Labor force growth in less educated populations

10th Oldest Population in US

Aging faster than the US as a whole

Working age population under 35 growing

Attracting younger workers and retaining through midcareer and middle age is key

Executive Summary

Beginning with performance patterns and ending with regional dynamics, the following review highlights Massachusetts labor market and economic trends in an effort to support strategic policy, workforce, and economic development decision-making.

In 2014, the six state New England region contributed $847.7 billion to the total value of goods and services produced by the nation, with Massachusetts supplying 49.6 percent of the region's share, making the Commonwealth the largest regional economy, twelfth largest in the nation, and sixth highest per capita.

More jobs were created in 2014 than any time since the start of the new millennium in 2001 with the state's leading job creating industries – *Education and Health Services, Professional, Scientific, and Business Services,* and *Leisure and Hospitality* in a continuous annual growth pattern over the thirteen year span, which has more than made up for job losses in other sectors.

Sustained job creation in Massachusetts' knowledge and innovation intensive industries reflects the strength of state's labor force. Commonwealth employers benefit from the most educated population in the nation.

In tandem with being the most educated, Massachusetts is home to one of the oldest populaces. The aging labor force has implications for a number of the state's industries. Worker median age in key employment sectors ranges from 41 to 43 years.

With an eye to the aging labor force and slowed population growth, attracting and retaining younger workers is central. Present labor market dynamics reveal that older workers are staying in the labor force longer and younger working age residents under 25 are delaying entry.

Also of note are middle age workers between 45 and 54 years who over the year were the only age cohort to decline in every labor market measure; making their improved unemployment rate an indication that middle age Commonwealth workers are not seeking employment.

A final key development is that over the year the ratio of labor demand to unemployed labor supply dipped by .43 of a point but remained above one, indicating more advertised job vacancies than the number of unemployed job seekers.

At the same time, less education required occupations rose in demand. Given a demand/supply ratio favoring workers with more demand than supply and current occupational growth patterns, workers with **less than** a Bachelors degree or some college have opportunities for even greater *near-term* employment and labor force participation in the Commonwealth.

Longer-term, cultivating education attainment and labor force participation among Massachusetts' more diverse younger residents is paramount.

The Bureau of Economic Analysis' most comprehensive measure of U.S. economic performance is captured in the nation's Gross Domestic Product (GDP), the value of incomes earned by labor and capital and the costs incurred in the production of goods and services. In 2013 the estimated GDP contributed by Massachusetts grew by 1.6 percent. Of New England states, Massachusetts was second only to Vermont, which grew by 1.8 percent. While a regional leader, nationally our GDP growth performed on average with Midwestern states like: Kansas, Wisconsin, Kentucky and Ohio, and below Rocky Mountain and Plains states that led the nation.

DRIVING NEW ENGLAND ECONOMIC GROWTH

Home to world-class education, health care, and professional services sectors, the Massachusetts economy is driven by innovation and knowledge based industries.

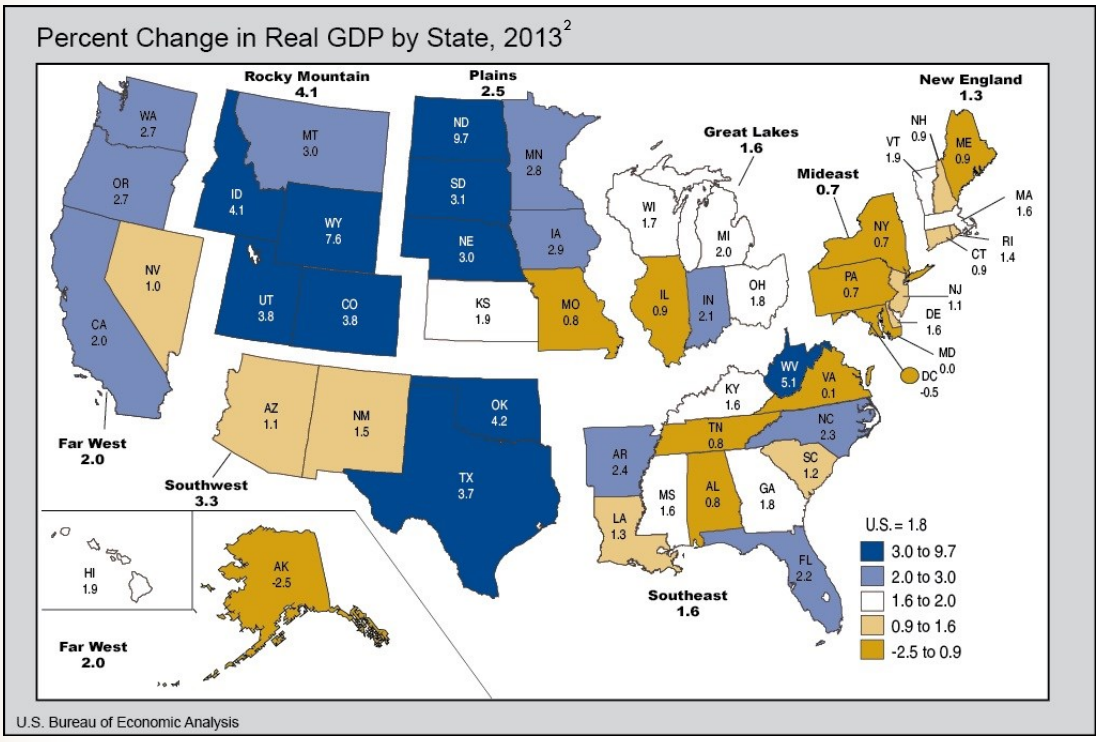
Regionally, Massachusetts now contributes nearly half of the total six New England state Gross Domestic Product.

While the state's economic growth in 2013 was slightly slower than the nation as a whole, it led the New England region.

Millions of Chained (2005) Dollars[1]

Year	MA GDP	Regional GDP
2005	$ 377,051	**$ 796,270**
2006	$ 382,815	**$ 812,920**
2007	$ 392,651	**$ 828,375**
2008	$ 392,554	**$ 820,684**
2009	$ 383,150	**$ 796,697**
2010	$ 396,122	**$ 815,965**
2011	$ 404,929	**$ 823,294**
2012	$ 414,144	**$ 836,667**
2013	$ 420,748	**$ 847,710**

FIGURE 1. State and Regional Gross Domestic Product Annual Percentage Growth Rates



U.S. Bureau of Economic Analysis

[1]US. Bureau of Economic Analysis, *Real Gross Domestic Product [GDPC1], retrieved from FRED, Federal Reserve Bank of St. Louis https://research.stlouisfed.org/fred2/series/GDPC1/, January 23, 2015.*

[2]US. Bureau of Economic Analysis image, *retrieved from http://www.bea.gov/newsreleases/regional/gdp_state/gsp_newsrelease.htm, June 11, 2014.*

MASSACHUSETTS JOBS SET NEW HIGH

Propelled by innovation intensive industries, the Commonwealth recovered job loss from the Great Recession faster than the majority of the U.S. As of January 2013, Massachusetts was the seventh state to regain its prerecession job levels.

A key indicator of the state's economic health is the ability of its industries to create jobs. The federal Bureau of Labor Statistics' Current Employment Statistics (CES) establishment survey provides jobs estimates.

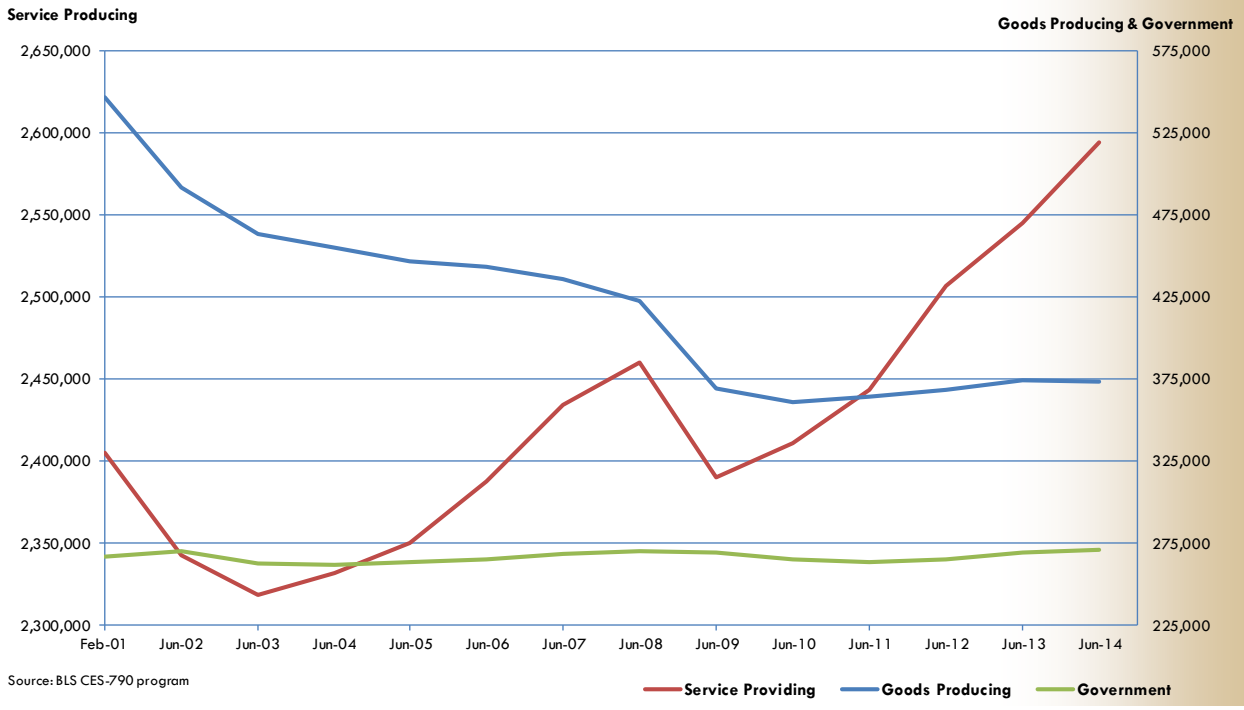
Surpassing February 2001's pre-recession peak, Massachusetts jobs reached a record 3,408,300 in June 2014. This peak represents an 88,600 increase in the number of jobs since June 2008, just prior to the last recession.

Over the year, from June 2013 to June 2014, total nonfarm Massachusetts jobs grew by 47,700.

This overall gain represents a 48,200 private sector increase fueled by Service Producing sectors and a 500 public sector job decline.

At an aggregate level, the mix of private to public sector employment remained essentially constant at 87 and 13 percent, respectively.

FIGURE 2. Massachusetts Jobs by Service Producing, Goods Producing, and Government Sectors
February 2001 - June 2014 (Seasonally Adjusted)



Source: BLS CES-790 program

MASSACHUSETTS JOB GAINS AND LOSSES

Massachusetts jobs reach new high of 3.4 million

Setting a record high, Massachusetts more than regained Great Recession losses by adding 17,100 jobs since the previous peak in February 2001.

Commonwealth job growth over the thirteen year period between 2001 and 2014, as well as throughout the Great Recession to present was sustained by key Service Producing industries which have continuously annually added jobs despite the recession.

Education and Health Services, *Leisure and Hospitality*, *Professional, Scientific and Business Services,* as well as *Other Services* represent the majority of Commonwealth job growth.

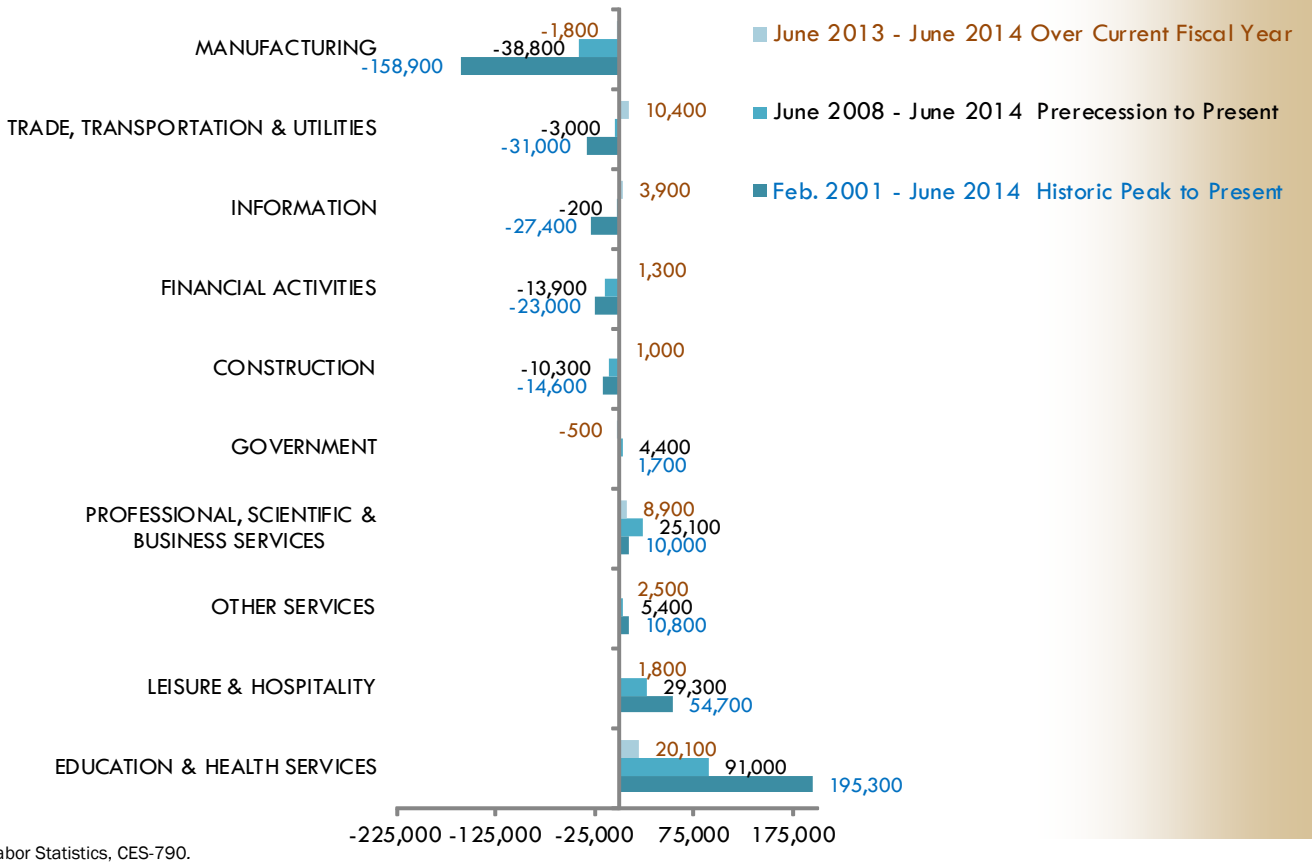
While Massachusetts advances in Service Producing job creation, private sector Goods Producing jobs, those in *Construction, Manufacturing and Mining*, have declined; In total, shrinking 174,000 and shifting from 16 to 11 percent of all jobs since 2001.

Notably, *Construction* declined 14,600 jobs and *Manufacturing* decreased 39 percent, with a loss of 158,900 jobs. However, in the latest over the year period, *Construction* curtailed its losses and added 1,000 jobs.

In spite of significant declines, three quarters of the *Manufacturing* job losses were due to job restructuring within the Durable Goods sector.

While leaner in jobs, *Manufacturing* contributed 10.5 percent of the state's GDP —more than the Finance and Insurance or Information sectors, (8.4 and 5.1 respective contributions).[4]

FIGURE 3. Massachusetts Relative Job Gains/Losses by Key Industries, February 2001 - June 2014 (Seasonally Adjusted)[3]



[3]US. Bureau of Labor Statistics, CES-790.

[4]US. Bureau of Economic Analysis, Real Gross Domestic Product NAICS industry detail by state, Advance Statistics 2013.

MASSACHUSETTS LEADING INDUSTRIES

- *EDUCATION & HEALTH*
- *PROFESSIONAL SERVICES*
- *LEISURE & HOSPITALITY*

A major advantage of the Massachusetts economy is the state's concentration of innovation and knowledge intensive industries.

Led by *Education and Health Services,* the largest state sector at 751,800 jobs, accounts for 22 percent of all jobs.

Since the prior 2001 peak, the sector's jobs have increased by 195,300.

Three quarters of *Education and Health Services* growth is clustered in Healthcare and Social Assistance industries which have grown by 166,000 jobs, a 40 percent growth rate.

Another cornerstone of the state's economy is *Professional, Scientific, and Business Services,* the third largest sector with 515,400 jobs.

The majority of the sector's growth stems from Professional, Scientific and Technical Services which added 27,500 jobs since 2001 and accounts for more than half of the sector's jobs as of June 2014.

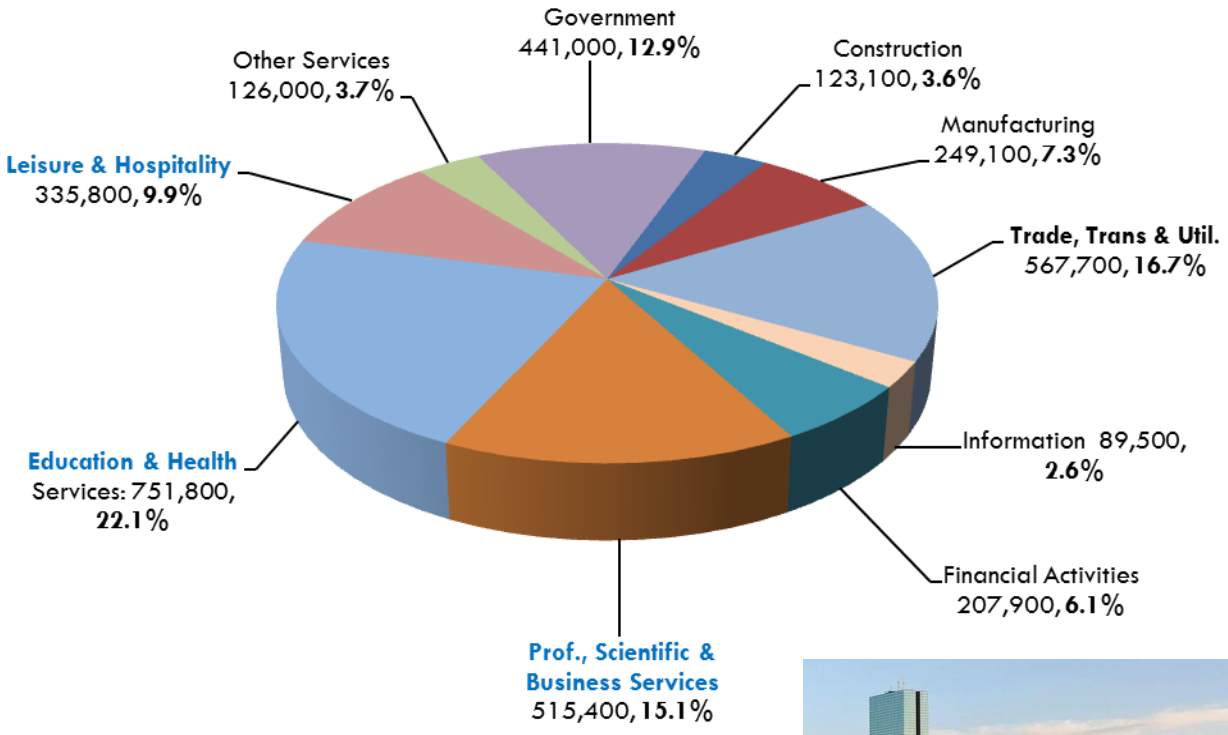
Over the last year, Computer Systems Design and Related jobs contributed three quarters of the gains.

Increasing 19.5 percent since 2001, at 335,800 jobs, *Leisure and Hospitality* is the second fastest growing sector.

Within the sector, the smaller but faster growing Arts, Entertainment, and Recreation, industry added 2,300 jobs over the year.

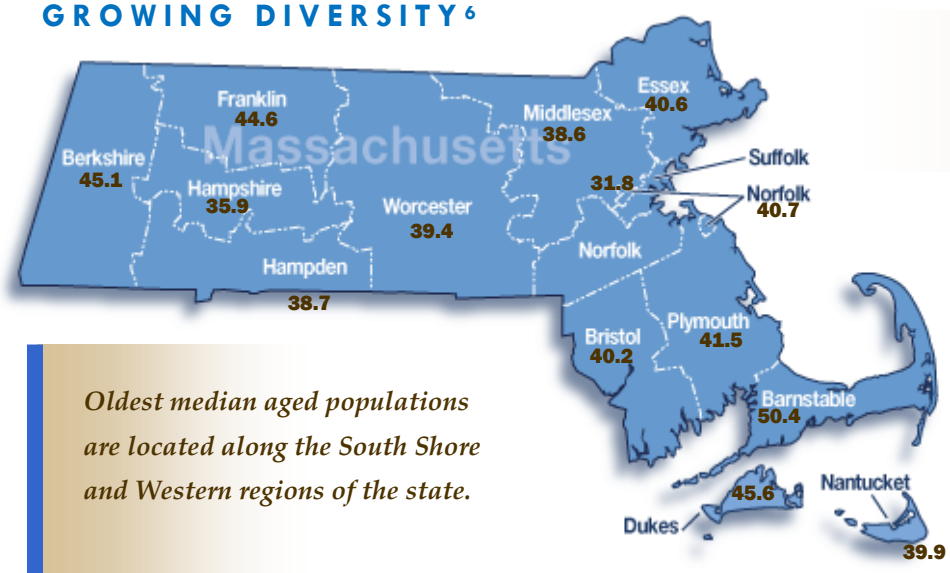
At the same time, growth in the larger Accommodations and Food Services has slowed since 2001 and begun to contract with a loss of 500 jobs over the year.

FIGURE 4. Massachusetts Job Composition by Industry, June 2014 (Seasonally Adjusted)[5]



[5]US. Bureau of Labor Statistics, CES-790, June 2014. Seasonally adjusted.

MOST EDUCATED IN THE NATION - AMONG THE OLDEST AND GROWING DIVERSITY[6]



Oldest median aged populations are located along the South Shore and Western regions of the state.

Youngest median aged populations are located in Suffolk, Hampshire, and Middlesex counties, where like the national trend, lower median age populaces correlate with larger Hispanic populations.

Massachusetts industries are sustained by the most educated population in the country, with 40% of all residents attaining at least a bachelors degree.

The state's highly educated population is also among the oldest in the nation, with the 10th highest median age.

Six of the New England states are among the top ten oldest in the country.

The experienced and highly educated residents of Massachusetts represent the largest age 45 and older population within the New England region.

According to the latest US Census American Community Survey, Massachusetts has earned the distinction of being the most educated state in the country.

Additionally, the state's predominant higher education sector contributes to the region's highest proportion of non-native college students in the country and affords the retention of a portion of college-educated domestic migrants once they graduate.

As the state continues to age retaining and attracting younger residents will become more vital to the Massachusetts and regional economies.

At the same time, education attainment and narrowing achievement gaps among Massachusetts' increasingly diverse population is key.

Suffolk, the lowest median age county is also the state's most diverse, with among the highest concentrations of Blacks, Hispanics, Asians, mixed race, and every other non-white census grouping.

Of the four counties with the highest percentage of population under 5 years of age, Hampden, Suffolk, and Essex also have the state's largest concentrations of Hispanic residents.

FIGURE 5. New England's Top Ten Nationally Ranked Oldest Populations by State and Median Age, 2009-2013 5-Year American Community Survey Estimates

Rank		Median Age	Tl. Pop. (000)	Under 18 (000)	18 to 44 (000)	45 to 64 (000)	65+ (000)
	United States	37.2	308,746	74,181	112,807	81,489	40,268
1	Maine	42.7	1,328	275	432	411	211
		(percent of population)		20.7	32.5	30.9	15.9
2	Vermont	41.5	626	129	213	193	91
		(percent of population)		20.7	34.0	30.8	14.6
4	New Hampshire	41.4	1,316	287	447	404	178
		(percent of population)		21.8	33.9	30.7	13.5
7	Connecticut	40.0	3,574	817	1,231	1,019	507
		(percent of population)		22.9	34.5	28.5	14.2
9	Rhode Island	39.4	1,053	224	384	293	152
		(percent of population)		21.3	36.5	27.8	14.4
10	Massachusetts	39.1	6,548	1,419	2,410	1,816	903
		(percent of population)		21.7	36.8	27.7	13.8

[6]US. Census Bureau, 2010 Census Summary File 1, CB2010BR-03; 2009 - 2013 5-Year American Community Survey county level median age estimates; Annual Estimates of Resident Population by Sex, Race, and Hispanic Origin: April 1, 2010 to July 1, 2013.

MASSACHUSETTS POPULATION PROJECTIONS[7]

INDUSTRY IMPLICATIONS

Population projections for Massachusetts anticipate a continuation of the long-term slowing in the state's growth rate.

Several factors have been cited as contributing to the slowed population growth. Among them, the continued deindustrialization of Northeastern economies, lower birthrates among Caucasian and multigenerational American families, disproportionately lower immigration among ethnicities with historically higher birthrates relative to other regions across the country, as well as historically lower birthrates among highly educated populaces.

In 2013, 13.8 percent of the state population, roughly 903,000 residents were age 65 and older.

By 2030, Massachusetts is projected to have 1.5 million residents or 21 percent of its population retirement age or older.

While it is anticipated that the state will lose some of its older population to warmer climates, the South Shore, Islands, and Western regions of the state are expected to disproportionately attract retiring residents.

Education & Health, Manufacturing, and Financial Activities had the highest worker median age as of 2011

These anticipated demographic shifts are expected to impact the state's labor market and economy.

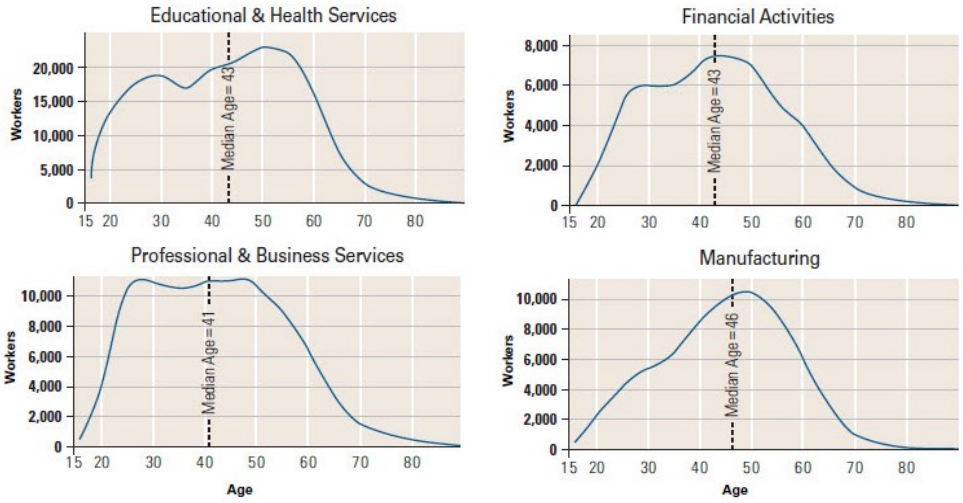
Key Massachusetts industries including: *Education and Health Services; Professional, Scientific, and Business Services; Financial Activities;* and *Manufacturing* have among the highest worker median ages, ranging between 41 and 46 years.

While the median ages are close, industry distinctions do exist. *Professional, Scientific, and Business Services,* with a median age of 41 is in a relatively stronger position as there is a large cohort of workers under the median age of 41 in this industry. The same pattern of worker age distribution is true of *Financial Activities* where the median is 43 years.

The opposite case is true of *Education and Health Services* where the largest cohort of workers are older than the median age of 43.

Manufacturing is in a somewhat similar position with a slightly larger portion of its workers over the median age of 46.

***FIGURE 6. 2007-2011 Five-Year Estimated Median Age and Age Distribution of Key Massachusetts Industries; US Census American Community Survey Public use Micro Sample Data**

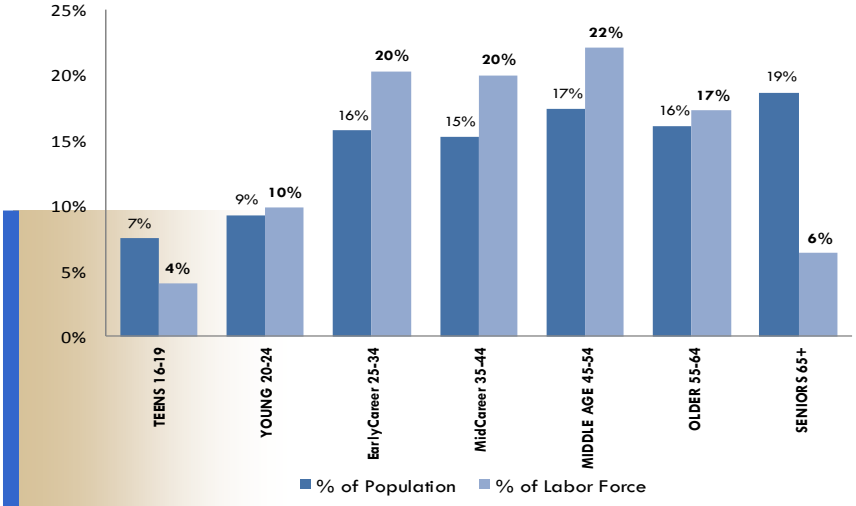


[7]Long-term Population Projections for Massachusetts Regions and Municipalities, Office of the Secretary of the Commonwealth of Massachusetts, prepared and interpreted by the University of Massachusetts Amherst Donahue Institute, November 2013.

*Figures created and published by Henry Renski, PhD, University of Massachusetts Amherst, reported in *MassBenchmarks*, (2014), volume 16, issue 1.

MASSACHUSETTS LABOR FORCE DYNAMICS[8]

FIGURE 7. Massachusetts Percentage of Working Age Population versus Labor Force by Age Cohort, June 2014



Younger and Older populations exhibit pivotal trends in Massachusetts' labor market.

Labor force estimates provide labor force status—employed or unemployed for Massachusetts residents.

Population trends directly impact the *working age population* and available *labor force*.

- The working age population is composed of Commonwealth residents age 16 and older not institutionalized or serving in the Armed Forces.
- The labor force is the subset of the working age population who are either employed or seeking employment.

When viewed by age cohorts, the working aged population and labor force exhibit distinct patterns.

At 19 percent, the largest age cohort is *Seniors* 65 years and older.

Of these 1,010,725 residents, 222,042 were in the labor force as of June 2014.

Expectantly, *Seniors* are among the smallest labor force cohorts at just 6% of the total labor force. Only *Teens* represent a smaller proportion at just 4% of the labor force. However, *Seniors* are nearly two times as likely to be employed than *Teens*, as *Teens* have the highest unemployment rate.

The number of unemployed is down among the state's *Seniors*, with the cohort's unemployment rate falling to 4.9 percent.

Consistent with national trends, Massachusetts' *Seniors* are remaining attached to the labor force longer than previous generations.

Over the latest twelve month averages ending in June 2014, *Seniors* have increased in population, number employed, and labor force participation rate (LFPR)—the percentage of the population engaged in the labor force either through employment or seeking employment.

Conversely, *Teens*, the smallest segment of the working age population, while growing in population, continue to exhibit high unemployment rates. Additionally, consistent with national trends, young people are entering the labor force later than prior generations. Those aged 16 to 19, had the second lowest labor force participation rate, in spite of having the largest employment and population growth rates of any age group, at 26.1 and 8.9 percent respectively.

More *Teens* were employed and their unemployment rate declined, yet at 19.1 percent, teen unemployment is still well above prerecession levels.

[8]US. Bureau of Labor Statistics, Current Population Survey, June 2014.

Massachusetts Labor Force in a Snapshot:

At 5,436,700 residents, as of June 2014, Massachusetts' working age population has grown by 255,600 or 5.4 percent since the prerecession high in 2008, while the labor force declined by 2.4 percent, representing 130,400 fewer residents attached to the labor force. The state's 64.4 percent labor force participation rate is composed of an estimated 3,310,400 employed and 191,300 unemployed and actively seeking work. The state's unemployment rate was 5.5 percent.

Slightly older *EarlyCareer* working age residents age 25 to 34 years, gained the most population, increasing 43,350. *EarlyCareer* labor force participants experienced the largest unemployment rate decline, dropping 2.4 percentage points to 5.4 percent.

MidCareer residents age 35 to 44 years had the largest losses in population, labor force, employed and unemployed. The large declines in the numbers employed and unemployed lowered this cohort's unemployment rate to 4.3 percent.

The second largest segment next to *Seniors* age 65 plus are *Middle Aged* workers from 45 to 54, who as a cohort experienced across the board declines in all labor force measures, including the unemployment rate which fell to 4.8 percent.

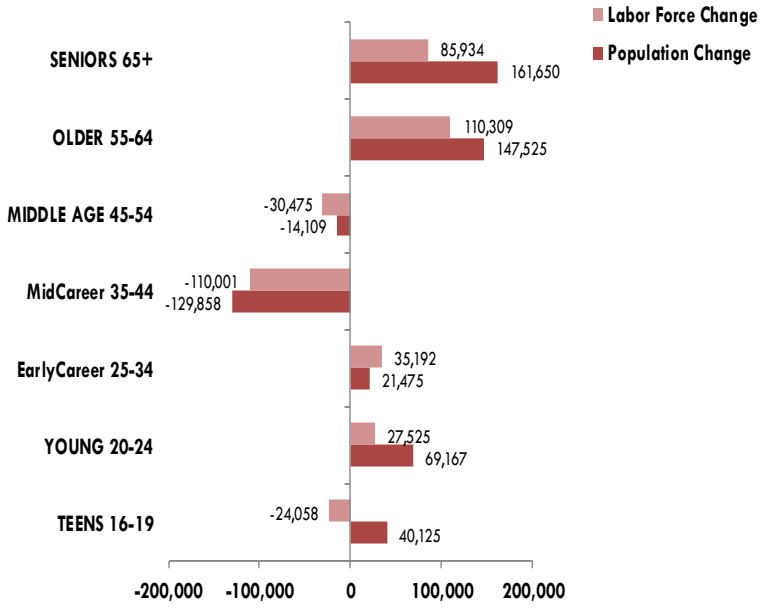
However, given labor force losses, the improved unemployment rate is the result of discouraged *Middle Aged* workers no longer looking for jobs.

Conversely, the population, labor force, and number employed of *Older* working aged residents between 55 to 64 increased, while the participation rate and number of unemployed decreased. The unemployment rate for this age cohort declined to 4.4 percent.

Over the most current year, the state's working age population under 35 expanded by 89,000, more than any other segment.

The state's sustained economic health is facilitated by growth in the labor force, especially those with the educational attainment needed for current and projected job openings.

FIGURE 8. Massachusetts June 2008 to June 2014 Change in Labor Force and Population by Age Cohort; June 2014 Unemployment Rate by Age Cohort



June 2014 by Age Cohort:	Unemployment Rate
SENIORS 65+	4.9%
OLDER 55-64	4.4%
MIDDLE AGE 45-54	4.8%
MidCareer 35-44	4.3%
EarlyCareer 25-34	5.4%
YOUNG 20-24	14.3%
TEENS 16-19	19.1%

[8]US. Bureau of Labor Statistics, Current Population Survey, June 2014.

MASSACHUSETTS LABOR FORCE EDUCATIONAL ATTAINMENT[9]

Massachusetts leads the nation in the proportion of residents with a *Bachelors degree or higher*. The availability of this skilled labor supply is key to many of the state's knowledge and innovation intensive industries.

Twelve month average labor force education attainment by residents age 25 plus for the last two years illustrates that both the majority of the population and the labor force possess a *Bachelors degree or higher*. This education segment grew by 34,100 residents, almost as much as those with *less than a High School diploma* and *some college or an Associates degree* combined.

However, the dominant *Bachelors degree or higher* population segment decreased by 7,600 in the labor force. Expectedly, the most educated segment has the lowest unemployment rate, at 3.3 percent. This segment also exhibited the largest decline in the number employed over the latest two year twelve month averages.

Conversely, the fastest growing in both the population and labor force are those with *less than a High School diploma,* adding 17,800 and 17,600, respectively. And, while this group has the highest unemployment rate, it also experienced the largest two year rate decline, dropping 4.6 points to 8.5 percent.

The only other education attainment segment to exhibit growth in both population and labor force are those with *some college or an Associates degree*, adding 18,600 in population and 5,900 in labor force. The segment is more than two times the size of the faster growing *less than a High School diploma* segment.

Both those with less than a High School diploma and some college or an Associates degree attached to the Massachusetts labor force in greater numbers compared to two years ago, while fewer residents with a Bachelors degree or higher were in the labor force.

FIGURE 9. Massachusetts Labor Force and Educational Attainment Patterns, June 2014; Twelve Month Averages June 2014 versus June 2012

	Less than High School Diploma	High School Graduate	Some College or Associates	Bachelors Degree or Higher
25 & Older Civilian Pop	397,300	1,218,000	953,200	1,935,400
Chg in Civ Pop	17,800	500	18,600	**34,100**
% Growth Rate Civ Pop	*4.7%*	*0.0%*	*2.0%*	*1.8%*
Labor Force	157,200	690,700	661,100	1,501,800
Chg in Labor Force	**17,600**	-5,900	5,900	**-7,600**
% Growth Rate LF	*12.6%*	*-0.8%*	*0.9%*	*-0.5%*
Employed Number	143,800	649,200	622,400	1,451,900
Chg in Number Employed	**22,400**	8,900	**15,400**	-4,700
% Growth Rate Emp.	*18.5%*	*1.4%*	*2.5%*	*-0.3%*
Unemp. Rate	**8.5**	**6.0**	**5.9**	**3.3**
Chg in Unemp. Rte	**-4.6**	-2.1	-1.5	-0.2

[9]US. Bureau of Labor Statistics, Current Population Survey, June 2014; twelve month averages ending in June 2014 and June 2012.

MASSACHUSETTS LABOR DEMAND & LABOR SUPPLY INDICATORS[10]

UNEMPLOYED LABOR SUPPLY TRENDS

FIGURE 10. Massachusetts Online Labor Demand Compared to Unemployed Labor Supply (Seasonally Adjusted)

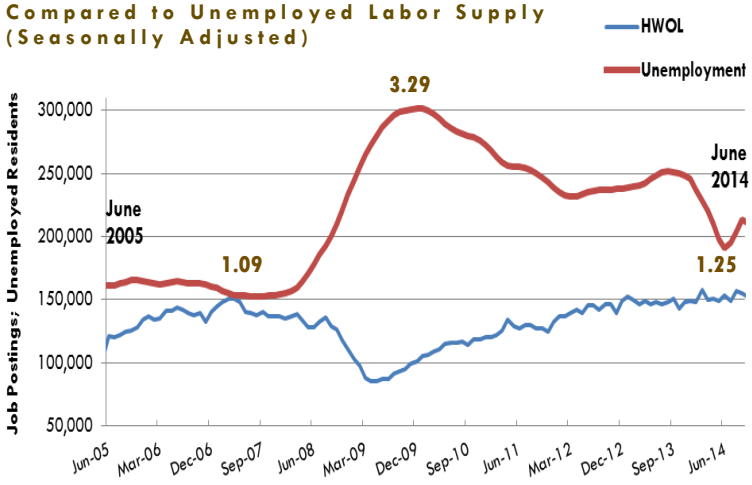


FIGURE 11. Ratio of Online Labor Demand Relative to Unemployed Labor Supply, June Comparisons

Year	Demand Relative to Unemployed Labor Supply: Available Unemployed Residents/ HWOL Demand (Ratio)
2005	1.33
2006	1.14
2007	**1.09**
2008	1.39
2009	3.29
2013	1.68
2014	1.25

Comparing Massachusetts' labor supply to online advertised job vacancies provides an indication of how well the labor pool aligns with the labor demands of employers.

The Conference Board's Help Wanted Online (HWOL) Analytics delivers a mid-month measure of labor demand via real-time online advertised job postings.

Dividing the estimated number of unemployed residents by the number of online vacancies conveys available supply in relation to demand.

The greater the ratio is above one the less favorable the labor market is for workers, as the number of unemployed exceeds the number of online job vacancies.

Conversely, a ratio less than one favors workers, indicating more online job vacancies than the number of unemployed job seekers.

In June 2014 the ratio of available labor to online job vacancies was 1.25, indicating a rather tight labor market with unemployed labor supply slightly outpacing online advertised labor demand.

However, the labor marker was much tighter during the first nine months of 2007 when the ratio of unemployed labor supply to HWOL job postings reached their lowest levels, between 1.02 and 1.10.

[10]US. Bureau of Labor Statistics and The Conference Board HWOL, June 2014.

MASSACHUSETTS LABOR DEMAND & LABOR SUPPLY INDICATORS[10]

EMPLOYED LABOR SUPPLY TRENDS

FIGURE 12. Massachusetts Online Labor Demand Compared to Employed Labor Supply (Seasonally Adjusted)

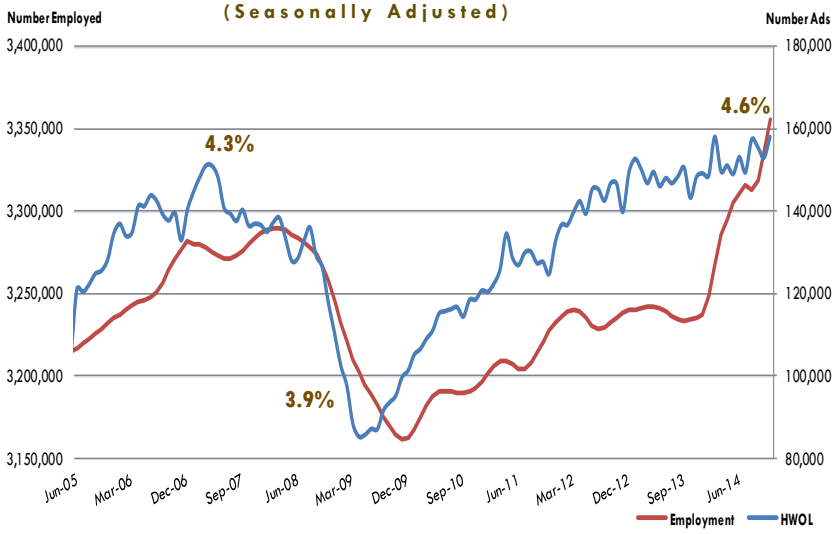


FIGURE 13. Online Labor Demand as a Percentage of Employed Labor Supply, June Comparisons

Year	Demand Relative to Employed Labor Supply: HWOL Postings/ Employed (Percent)
2005	3.8%
2006	4.4%
2007	4.3%
2008	3.9%
2009	2.7%
2013	4.6%
2014	4.6%

Another indicator of labor supply available to meet demand is conveyed by viewing HWOL job postings as a percent of the employed labor force. The higher the percent the greater opportunity an employed person conceivably has to change jobs.

During the first nine months of 2007 this measure was historically high, ranging from 4.2 to 4.6 percent.

In this competitive labor market, the available supply of unemployed workers in relation to the demand for labor was very low, (1.02 to 1.10) and the employed labor supply had multiple conceivable options to change jobs (4.2 to 4.6).

For the remaining three months of 2007, as the economy began to enter recession, HWOL vacancies in relation to the number employed and unemployed began to ease as the number of unemployed increased and firms reduced online postings.

[10]US. Bureau of Labor Statistics and The Conference Board HWOL, June 2014.

UNEMPLOYED LABOR SUPPLY & EMPLOYED LABOR SUPPLY TRENDS

FIGURE 14. Online Labor Demand as a Percentage of Employed Labor Supply and Ratio of Online Labor Demand Relative to Unemployed Labor Supply, June Comparison

Year	Online Labor Demand	Labor Supply		Labor Market Indicators	
				Demand Relative to Employed Labor Supply	Demand Relative to Unemployed Labor Supply
	HWOL Ads	Number Employed	Number Unemployed	HWOL Postings/ Employed (Percent)	Available Unemployed Residents/ Demand (Ratio)
2005	121,100	3,217,000	160,900	3.8%	1.33
2006	143,700	3,247,600	164,400	4.4%	1.14
2007	140,700	3,271,200	153,000	4.3%	**1.09**
2008	128,500	3,283,300	178,000	3.9%	1.39
2009	87,100	3,188,200	286,900	2.7%	3.29
2013	148,000	3,238,600	248,700	4.6%	1.68
2014	153,700	3,310,400	191,300	4.6%	1.25

One interpretation of Massachusetts' current labor market would be that the employed labor supply has more job opportunities than the unemployed labor supply, indicating a likely mismatch between the unemployed labor pool and employer requirements.

By June of 2008, HWOL postings as a percent of the number of employed had declined to 3.9 percent and the ratio of available unemployed labor to job vacancies rose to 1.39.

As we entered the Great Recession, the supply of unemployed workers grew larger relative to online demand and employed workers had fewer conceivable opportunities to change jobs.

By way of comparison, during the Great Recession the unemployed supply to demand ratio was 3.29 in June 2009 and peaked at 3.36 in July 2009.

By 2013, the labor market position for the employed labor supply had improved beyond pre-recession levels.

In 2014, HWOL postings relative to employed were again above 4.0 percent, ranging from 4.5 to 4.8 percent.

However, the ratio of available unemployed labor to job vacancies ranged from 1.25 to 1.60, indicating a slightly larger supply of unemployed labor relative to online advertised labor demand than was evident prior to the Great Recession.

[10]US. Bureau of Labor Statistics and The Conference Board HWOL, June 2014.

REGIONAL LABOR DEMAND & SUPPLY[10]

Notably, only Maine and Vermont, the two oldest median age populations in the nation saw labor force declines

	Labor Force June 2013	Labor Force June 2014	HWOL Ads June 2014	2013 Ads per 100 Persons in Labor Force	2014 Ads per 100 Persons in Labor Force	Number Unemp. June 2014	2013 Available Supply/ Demand Ratio	2014 Available Supply/ Demand Ratio	2013 Unemployment Rate	2014 Unemployment Rate	Chg in Unemp. Rate
Connecticut	1,862,300	1,878,500	72,000	3.50	3.83	125,500	2.24	1.74	**7.9**	**6.7**	-1.2
Rhode Island	556,700	559,600	20,600	3.35	3.67	44,200	2.85	2.15	**9.5**	**7.9**	-1.6
Maine	709,700	709,200	27,200	2.99	3.84	39,300	2.24	1.44	**6.7**	**5.5**	-1.2
Vermont	351,500	350,900	12,800	3.27	3.65	12,000	1.35	0.94	**4.4**	**3.4**	-1.0
New Hampshire	741,900	745,900	29,700	3.30	3.98	32,500	1.58	1.09	**5.2**	**4.4**	-0.8
Massachusetts	3,487,300	3,501,700	**153,700**	4.16	4.39	**191,300**	1.72	1.24	**7.1**	**5.5**	-1.6

As the largest New England economy, the Massachusetts labor market potentially competes with nearby states in the region.

Expressing HWOL online advertised labor demand as a percentage of a state's labor force equalizes population differences by revealing the number of ads for every 100 labor force members.

Massachusetts had 4.39 online advertised job postings for every 100 labor force members in June 2014.

All states in the region saw over the year gains, with Massachusetts still attracting more online labor demand than the rest of the region.

However, each state in the region closed in on the degree by which Massachusetts' online labor demand outpaced them, with New Hampshire becoming the most competitive, at 3.98 ads per 100 members of the labor force.

Over the same period, all New England states experienced a tightening of the labor market as the ratio of the supply of unemployed labor relative to online advertised labor demand narrowed, with Vermont favoring workers as online advertised demand exceeded supply (ratio = .94) and Rhode Island exhibiting the largest surplus supply of unemployed labor (ratio = 2.15).

[10]US. Bureau of Labor Statistics and The Conference Board HWOL, June 2013 and June 2014.

MASSACHUSETTS OCCUPATIONAL LABOR DEMAND[10]

Turning to specific occupations in demand as of June 2014, the top 50 advertised occupations comprise 55 percent of all job postings, with Science, Technology, Engineering, and Math (STEM) occupations comprising a third.

Concurrently, a third of the top 50 jobs require a Bachelors degree or work experience in a related occupation. However, over the last two years, the level of education required for occupations in demand has shifted slightly, as the share of job postings for occupations requiring a Bachelors degree has declined from 36.8 to 33.7 percent.

In comparison, as noted earlier, the growth segments of the age 25 plus labor force are those with *some college or an Associates degree* and those with *less than a High School diploma*.

HIGHEST WAGE QUARTILES AND BACHELORS OR HIGHER EDUCATIONAL REQUIREMENT CONTINUE TO DOMINATE

However, lesser education and lower wage occupational demand is advancing

Noting that the highest unemployment rate is among those with *less than a High School diploma*, on the surface a mismatch between the educational characteristics of the available labor supply and advertised job demand is evident.

Along with the shift in education requirements, advertised demand for lesser paying occupations has increased. While job postings do not contain salary information, the Bureau of Labor Statistics' Occupational Employment and Wage Statistics (OES) program provides an indication of occupation salaries.

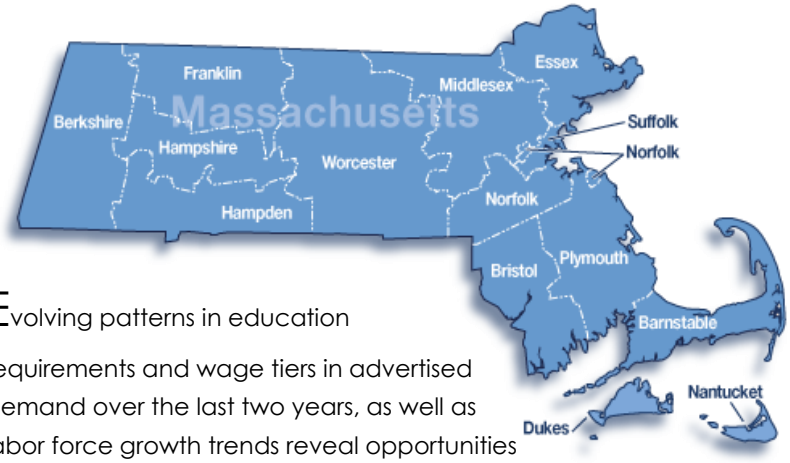
Viewing occupation demand by average wage quartiles, with the first quartile paying $77,600 to $240,700, the second between $54,600 and $77,600, the third between $39,000 and $54,600, and the fourth less than $39,000, illustrates that demand for lower paying occupations, the fourth and third quartiles, is growing faster than the remaining quartiles.

In June 2014, the lowest mean wage quartiles comprised 40 percent of all job postings, compared to 35 percent two years ago.

Job postings for the two highest paying quartiles still comprise the majority of postings but have slowed in growth.

[10]US. Bureau of Labor Statistics, OES, The Conference Board HWOL, June 2013 and June 2014. Seasonally adjusted.

MASSACHUSETTS OCCUPATIONAL LABOR DEMAND[10]



Evolving patterns in education requirements and wage tiers in advertised demand over the last two years, as well as labor force growth trends reveal opportunities for targeted alignment of unemployed job seekers with **less than** Bachelors degrees.

For instance, occupations with the largest increases in advertised vacancies over the last two years include: *Heavy and Tractor-Trailer Truck Drivers, First-Line Supervisors of Retail Salespersons, Retail Salespersons, First-Line Supervisors of Food Preparation and Serving Workers, Customer Service Representatives, Light Truck or Delivery Services Drivers, Maintenance and Repair Workers, Restaurant Cooks, and Landscaping and Grounds Keeping Workers*, none of which requires college or a Bachelors degree.

Combined, these eight occupations account for 33 percent of the gain in online advertised demand since 2012.

In total, the 100 most advertised jobs accounted for 74 percent of all online advertised demand in 2014. A third of which required only a high school diploma.

Of the top 100 most in demand jobs, 29 percent were in Science, Technology, Engineering, and Mathematics (STEM) related professions.

While more than half of STEM positions require college educations, not all do. Roughly 10 percent of the100 most in demand jobs require a minimum of an Associates degree—or higher. These include predominately STEM professions.

Top 10 **Science, Technology, Engineering, & Math** (**STEM**) Online Advertised Occupations & minimum required education

Registered Nurses	**Associates**
Software Developers, Applications	Bachelors
Web Developers	Bachelors
Network & Computer Systems Admins.	Bachelors
Accountants	Bachelors
Medical Scientists, Except Epidemiologists	Doctoral/professional
Computer Systems Analysts	Bachelors degree
Computer User Support Specialists	**Associates**
Medical and Health Services Managers	Bachelors
Information Technology Project Managers	**Associates**

Top 15 **High School Diploma** Online Advertised Occupations

- First-Line Supervisors for Retail Sales
- Heavy and Tractor-Trailer Truck Drivers
- Customer Service Representatives
- Exec. Secretaries & Exec. Admin. Assts.
- First-Line Supervisors Office & Administrative Support Workers
- Social and Human Service Assistants
- First-Line Supervisors of Food Preparation and Serving Workers
- Sales Reps, Wholesale & Manufacturing, Except Tech. & Scientific Products
- Managers, All Other
- Light Truck or Delivery Services Drivers
- Maintenance/Repair Workers, General
- Bookkeeping/Accounting/Auditing Clerks
- Sales Representatives, Services, All Other
- Secretaries & Administrative Assistants, Except Legal/Medical/Executive
- Medical Secretaries

***All** Top 100 **Associates** Degree Online Advertised Occupations*

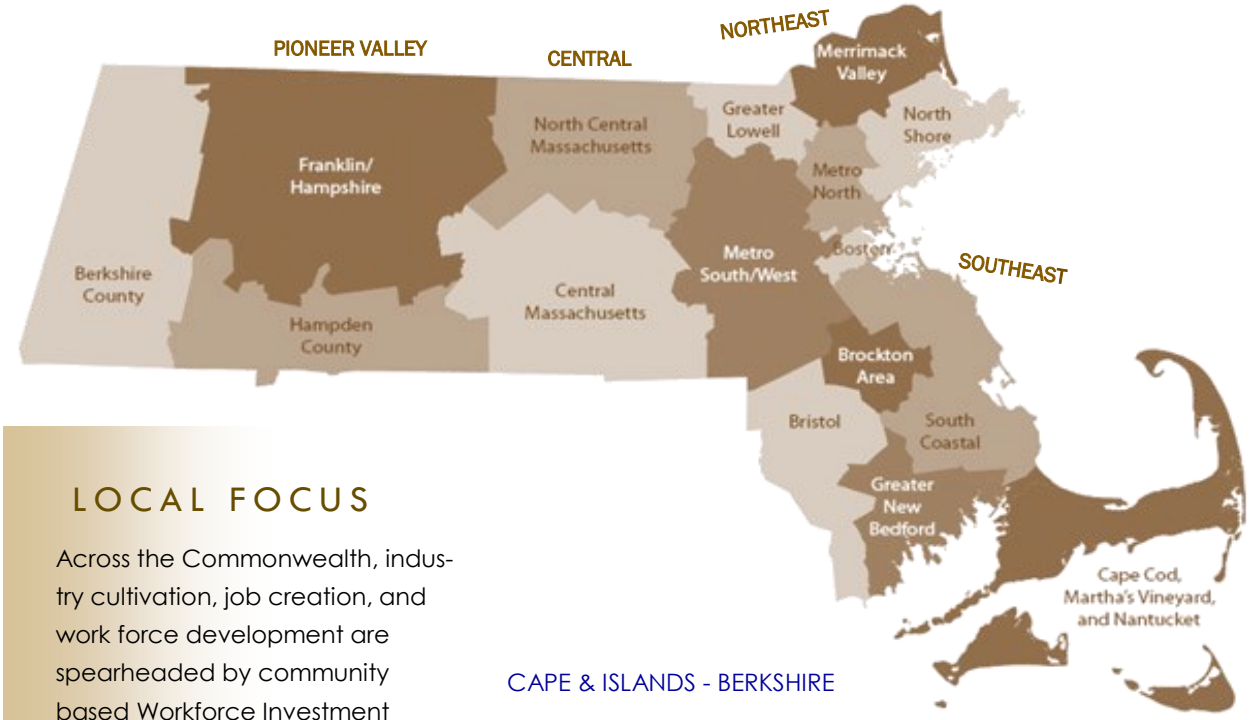
- Registered Nurses
- Computer User Support Specialists
- Information Technology Project Mngr.
- General/Operations Managers
- Software Quality Assurance Engineers/Testers
- Computer Systems Engineers / Architects
- Preschool Teachers, Except Spec. Ed.
- Critical Care Nurses

Top 10 **Bachelors** Degree Online Advertised Occupations

- Software Developers, Applications
- Marketing Managers
- Web Developers
- Network & Computer Systems Admins.
- Accountants
- Computer Systems Analysts
- Medical and Health Services Managers
- Management Analysts
- Industrial Engineers
- Market Research Analysts and Marketing Specialists

[10]US. Bureau of Labor Statistics and The Conference Board, June 2012 and June 2014.

MASSACHUSETTS WORKFORCE INVESTMENT AREAS



LOCAL FOCUS

Across the Commonwealth, industry cultivation, job creation, and work force development are spearheaded by community based Workforce Investment Areas (WIAs) and their boards.

Insight into the economic and labor market health of the state's sixteen local WIAs is derived by disaggregating eight regional areas.

Statewide all regions have a leading industry presence of *Education and Health Services* and disproportionately older populations, however, distinct regional patterns do exist.

CAPE & ISLANDS - BERKSHIRE

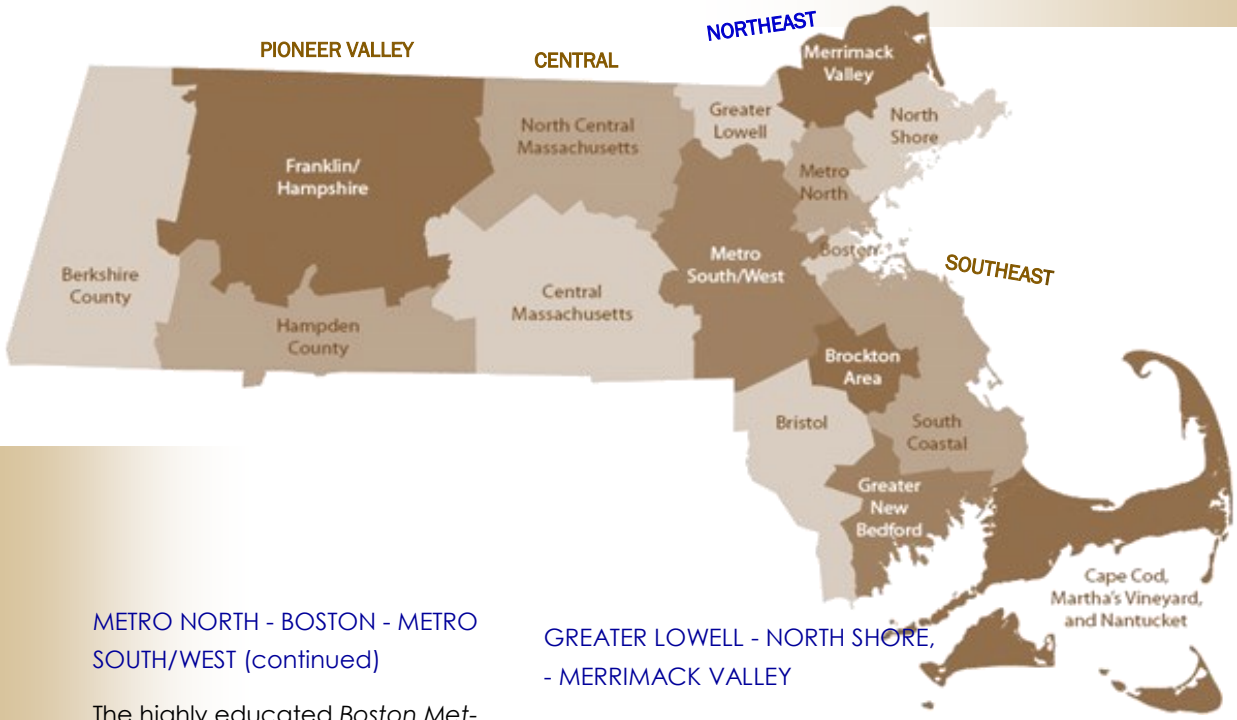
The *Cape & Islands* WIA on the southern coastal border and the *Berkshire* WIA on the western border have the highest *Leisure and Hospitality* employment in the state and are **expected to become population magnets for retiring workers**. Presently, these two WIAs have the oldest labor forces with roughly half age 45 and older. Over the four years between 2010 and 2014, the *Berkshires* was the only WIA to decline in the number of employed.

METRO NORTH - BOSTON - METRO SOUTH/WEST

The three WIAs that comprise the *Boston Metropolitan* regions (i.e., *Metro North, Boston, and Metro South/West*) boast the **greatest concentration of highly educated workers**, which sustains strong *Professional, Scientific, and Business Services* employment.

The eastern border Berkshires and southern coastal Cape & Islands are home to the oldest labor force members and are expected to attract retirees.

MASSACHUSETTS WORKFORCE INVESTMENT AREAS



METRO NORTH - BOSTON - METRO SOUTH/WEST (continued)

The highly educated *Boston Metropolitan* area workers are also among the state's oldest, indicating that educational attainment is facilitating longer labor force participation among some older Commonwealth residents. At the same time, recent trends–regional and statewide–indicate that mid-career and middle aged workers from 35 to 54 have been declining in population, as well as leaving the labor force.

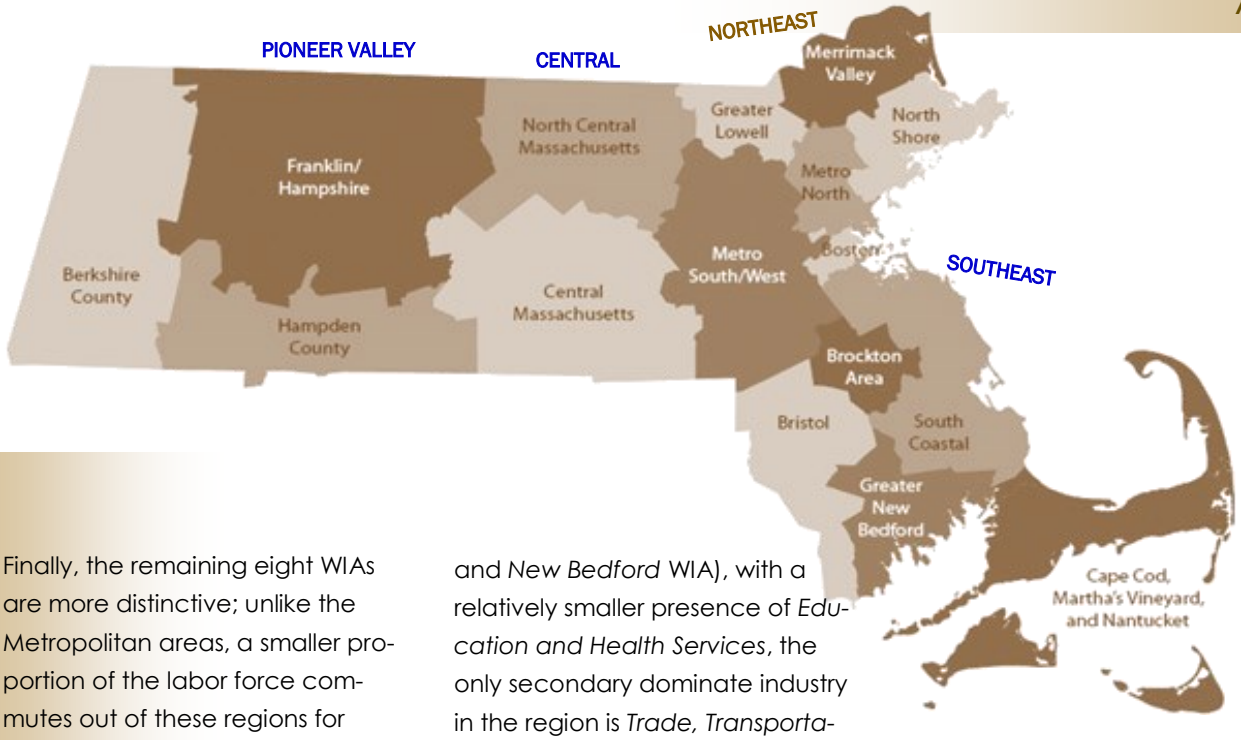
GREATER LOWELL - NORTH SHORE, - MERRIMACK VALLEY

The three WIAs that make up the *Northeast* region (i.e., *Greater Lowell, North Shore, & Merrimack Valley*) boast the **strongest concentration of manufacturing** jobs in the state, educational attainment is second only to the *Metropolitan* WIAs, and the labor force is relatively younger. At the same time, given structural changes in the Manufacturing sector highlighted on page 8, preparing workers for advanced manufacturing and/or other areas of job demand is key for these WIAs.

Professional Services and Manufacturing remain strong Metropolitan area and Northeast job creators

SOUTHEAST-PIONEER VALLEY-CENTRAL REGIONS

MASSACHUSETTS WORKFORCE INVESTMENT AREAS



Finally, the remaining eight WIAs are more distinctive; unlike the Metropolitan areas, a smaller proportion of the labor force commutes out of these regions for work, and regional-specific industries are not as pronounced as for instance, Manufacturing is in the *Northeast*. Additionally, immigration patterns and increasing diversity is more central to population growth in these parts of the state.

BROCKTON - BRISTOL - SOUTH-SHORE - NEW BEDFORD

Looking first to the four WIAs along the *Southeast* border just above the *Cape & Islands* (i.e., *Brockton* WIA, *Bristol* WIA, *South Shore* WIA, and *New Bedford* WIA), with a relatively smaller presence of *Education and Health Services*, the only secondary dominate industry in the region is *Trade, Transportation, and Utilities*. In spite of having the highest unemployment rates in the Commonwealth, according to the last US Census, **Black employment nearly doubled, improving more in the four *Southeast* WIAs than in any other part of the state**.

FRANKLIN/HAMPSHIRE - HAMPDEN-NORTH CENTRAL - CENTRAL

The last four WIAs are split between the mid-state regions known as *Pioneer Valley* just east of the *Berkshires* (i.e., *Franklin / Hampshire* WIA and *Hampden* WIA) and the *Central* region of the state (i.e., *North Central* WIA and *Central* WIA). All of the four mid-state WIAs are dominated by *Education and Health Services*, however the two *Central* region WIAs have the highest concentration of manufacturing jobs outside of the *Northeast*.

Presently, mid-state WIAs, as well as *Southeast* WIAs are improving educational attainment but they lag behind the rest of the state.

Younger more diverse and new immigrant residents in mid-state and Southeast WIAs are key to longer-term performance

Massachusetts

Labor Market and Economic Review

2013

COMMONWEALTH OF MASSACHUSETTS
Department of Unemployment Assistance
Economic Research Office

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