



UMASS DONAHUE INSTITUTE

**Quarterly Report
for the Massachusetts State Treasurer's Office of Debt Management**

Massachusetts Economic Due Diligence

Third Quarter FY 2016



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ECONOMIC INFORMATION - QUARTER 3, FY 2016

The information in this section was prepared by the Massachusetts State Data Center (MassSDC) at the University of Massachusetts Donahue Institute Economic and Public Policy Research group. It may be relevant in evaluating the economic and financial condition and prospects of the Commonwealth of Massachusetts. The State Data Center archives data about Massachusetts. The economic and demographic data, which have been obtained by the MassSDC from the sources indicated, do not necessarily present all factors that may have a bearing on the Commonwealth's fiscal and economic affairs.

All information is presented on a calendar-year basis unless otherwise indicated. **Information in the text, tables, charts, and graphs is current as of April 30, 2016.** Sources of information are indicated in the text or immediately following the charts and tables, and also in the *Sources* on the last page of the Exhibit A section. Although the Commonwealth considers the sources to be reliable, it makes no independent verification of the information presented herein and therefore does not warrant its accuracy.

Statistical Overview

Population (p. A-2)

	<u>Massachusetts</u>	<u>United States</u>
Estimated Percent Change in Population, July 1, 2010 - July 1, 2015	3.5%	3.9%

Personal Income, Consumer Prices, and Poverty (p. A-8)

Per Capita Personal Income, 2015	\$61,032	\$47,669
Average Annual Pay, All Industries, 2014	\$64,103	\$51,364
Percent Change in CPI-U*, 2014-2015	0.6%	0.1%
Percent Change in CPI-U*, January 2015 - January 2016	1.0%	1.4%
Poverty Rate, 2014	11.6%	15.5%
Average Weekly Earnings, Manufacturing Production Workers: 2015	\$892.98	\$832.42
Percent Change from previous year	1.8%	1.3%

Employment (p. A-18)

Percent Change in Nonfarm Payroll Employment (Not Seasonally Adjusted), February 2015 - February 2016p	1.9%	1.9%
Unemployment Rate, 2015	5.0%	5.3%
Unemployment Rate, March 2016 (seasonally adjusted)	4.4%	5.0%

Education (p. A-24)

Expenditure Per Pupil K-12 Public, 2013	\$14,515	\$10,700
Percent of Adults with a Bachelor's Degree or Higher, 2014	41.2%	30.1%

Economic Base and Performance (p. A-30)

Percent Change in Gross Domestic Product, 2013-2014	2.1%	2.4%
Percent Change in International Exports, 2014-2015	-7.9%	-7.3%
Percent Change in Housing Permits Authorized, 2014-2015	17.8%	12.6%

*NOTE: Percent changes in the Consumer Price Index for All Urban Consumers (CPI-U) are for the Boston-Worcester-Lawrence, MA-NH-ME-CT CMSA & the United States. p = preliminary. 2015 Annual State and Regional GDP data are not available from the BEA as of January 29, 2016.

Massachusetts is a densely populated state with a well-educated population, comparatively high income levels, and a relatively diversified economy. While the total population of Massachusetts has remained fairly stable in the last 25 years, significant changes have occurred in the age distribution of the population. Dramatic growth in residents between the ages of 20 and 44 since 1980 is expected to lead to a population distributed more heavily in the 65 and over age group in the next 25 years. Just as the working-age population has increased, income levels in Massachusetts since 1980 have grown significantly more than the national average, and a variety of measures of income show that Massachusetts residents have significantly higher amounts of annual income than the national average. These higher levels of income have been accompanied by a consistently lower poverty rate. State unemployment rates have typically remained below the national average with the exception of a slight increase during the recession of the early 1990s and a seventeen-month stretch between 2006 and 2007. More recently, Massachusetts unemployment has hovered closer to the national average and currently stands at 4.4 percent, compared to the national rate of 5.0 percent. In 2014, Massachusetts was ranked second in the U.S. according to the American Human Development Index, modeled after the United Nations Human Development Index, which compares health, income, and education outcomes.

The following five sections provide detailed information on population characteristics, personal income, employment, human resources, economic base and performance, and infrastructure.

POPULATION CHARACTERISTICS

Massachusetts is a relatively slow growing but densely populated state with a comparatively large percentage of its residents living in metropolitan areas. The population density of Massachusetts was estimated as of July 1, 2015 to be 866.6 persons per square mile, as compared to 90.9 for the United States as a whole. Among the 50 states, only Rhode Island and New Jersey have a greater population density. Massachusetts also ranked just behind the same two states, as well as Delaware, in percentage of residents living in metropolitan areas. According to the current county-based definition, 98.5 percent of the state's population live in metropolitan areas.

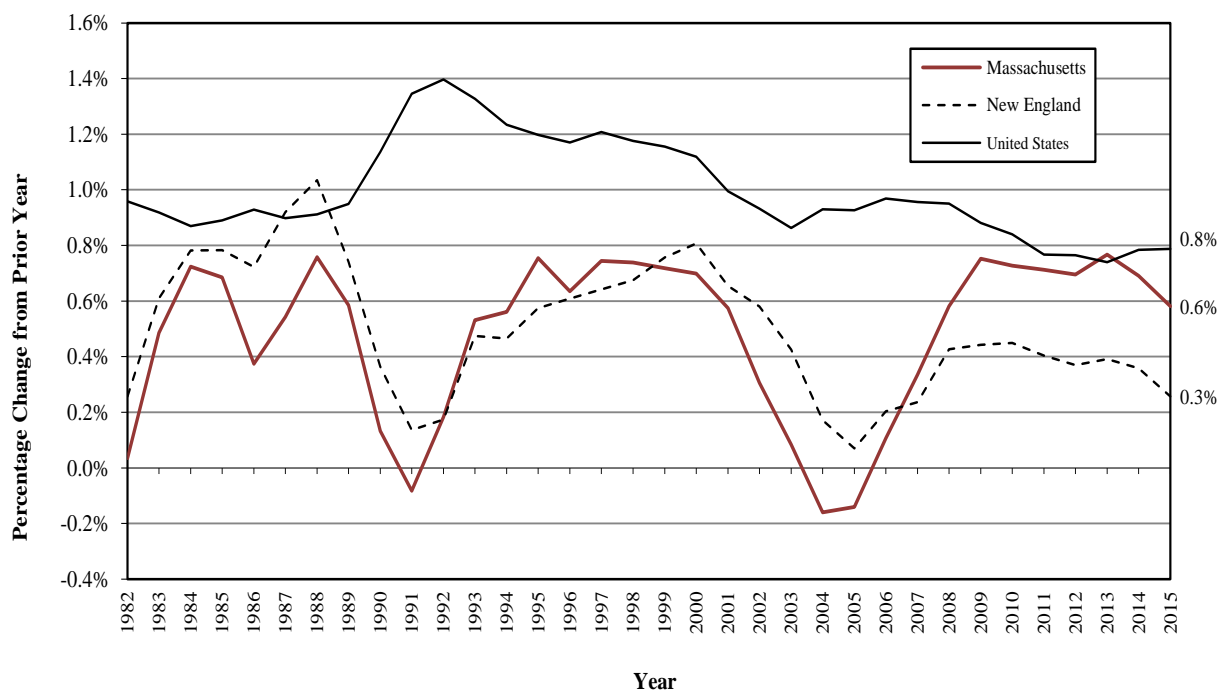
The state's population is concentrated in its eastern portion. The city of Boston is the largest city in New England, with a July 1, 2014 population estimated at 655,884 or 9.7 percent of the total state population. Boston is the hub of the seven-county Boston-Cambridge-Newton, MA-NH Metropolitan Statistical Area (MSA), which includes the two southeastern New Hampshire counties, and had a total population as of July 1, 2014 estimated at 4,732,161, or 32 percent of the total New England population. The Boston, MA Metropolitan division is the largest component of that MSA, with a total population as of July 1, 2014 estimated at 1,945,220.

The second largest MSA in the state is the Worcester, MA MSA, with a July 1, 2014 population estimated at 930,473. The city of Worcester, situated approximately 40 miles west of Boston with a July 1, 2014 estimated population of 183,016, is the second largest city, both in New England and the state. As a major medical and education center, the Worcester area is home to 18 patient care facilities and 13 colleges and universities, including the University of Massachusetts Medical School.

The third largest MSA in Massachusetts is the three-county Springfield, MA MSA, with a July 1, 2014 population estimated at 629,100. Springfield, the third largest city in the Commonwealth with a July 1, 2014 estimated population of 153,991, is located in the Connecticut River Valley in Western Massachusetts and enjoys a diverse body of corporate employers, the largest of which are Baystate Health Systems, Big Y Supermarkets, Hartford Hospital, and MassMutual Financial Group. In addition, Springfield is home to three independent colleges.

As the following graph and table indicate, the population in Massachusetts has generally grown at a rate similar to the population of New England and more slowly than the nation as a whole. From 2009 to 2013, Massachusetts' growth has more closely resembled that of the U.S. as a whole than that of New England, although growth has slowed somewhat since 2013. According to the Census Bureau's latest revised estimates released in December 2015, the Massachusetts population has only grown by 6.8 percent since Census 2000, while the U.S. has grown 13.9 percent.

Annual Percent Change in Total Population, 1982-2015



SOURCE: United States Department of Commerce, Bureau of the Census.

The following table compares the population level and percentage change in the population of Massachusetts to the six-state New England region and to the United States.

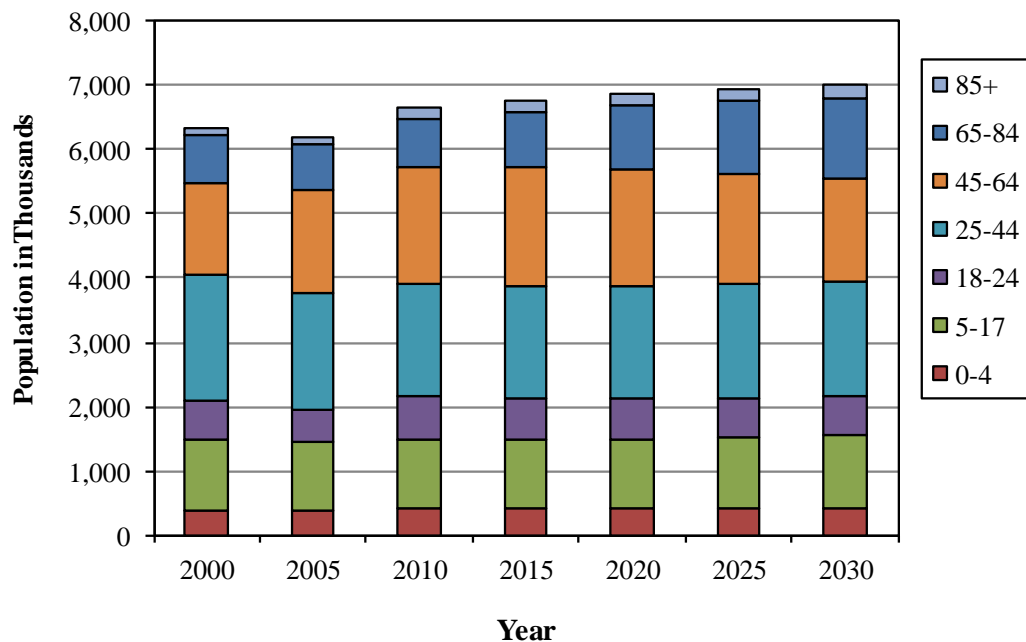
<i>Population, 1975-2015</i> (in thousands)						
Year	Massachusetts		New England		United States	
	Total	Percent Change	Total	Percent Change	Total	Percent Change
1975	5,758	-0.3%	12,163	0.1%	215,465	1.0%
1976	5,744	-0.2%	12,192	0.2%	217,563	1.0%
1977	5,738	-0.1%	12,239	0.4%	219,760	1.0%
1978	5,736	0.0%	12,283	0.4%	222,095	1.1%
1979	5,738	0.0%	12,322	0.3%	224,567	1.1%
1980	5,737	0.0%	12,348	0.2%	226,546	0.9%
1981	5,769	0.6%	12,436	0.7%	229,466	1.3%
1982	5,771	0.0%	12,468	0.3%	231,664	1.0%
1983	5,799	0.5%	12,544	0.6%	233,792	0.9%
1984	5,841	0.7%	12,642	0.8%	235,825	0.9%
1985	5,881	0.7%	12,741	0.8%	237,924	0.9%
1986	5,903	0.4%	12,833	0.7%	240,133	0.9%
1987	5,935	0.5%	12,951	0.9%	242,289	0.9%
1988	5,980	0.8%	13,085	1.0%	244,499	0.9%
1989	6,015	0.6%	13,182	0.7%	246,819	0.9%
1990	6,023	0.1%	13,230	0.4%	249,623	1.1%
1991	6,018	-0.1%	13,248	0.1%	252,981	1.3%
1992	6,029	0.2%	13,271	0.2%	256,514	1.4%
1993	6,061	0.5%	13,334	0.5%	259,919	1.3%
1994	6,095	0.6%	13,396	0.5%	263,126	1.2%
1995	6,141	0.8%	13,473	0.6%	266,278	1.2%
1996	6,180	0.6%	13,555	0.6%	269,394	1.2%
1997	6,226	0.7%	13,642	0.6%	272,647	1.2%
1998	6,272	0.7%	13,734	0.7%	275,854	1.2%
1999	6,317	0.7%	13,838	0.8%	279,040	1.2%
2000	6,361	0.7%	13,950	0.8%	282,162	1.1%
2001	6,398	0.6%	14,041	0.7%	284,969	1.0%
2002	6,417	0.3%	14,122	0.6%	287,625	0.9%
2003	6,423	0.1%	14,182	0.4%	290,108	0.9%
2004	6,412	-0.2%	14,207	0.2%	292,805	0.9%
2005	6,403	-0.1%	14,217	0.1%	295,517	0.9%
2006	6,410	0.1%	14,246	0.2%	298,380	1.0%
2007	6,432	0.3%	14,279	0.2%	301,231	1.0%
2008	6,469	0.6%	14,340	0.4%	304,094	1.0%
2009	6,518	0.8%	14,404	0.4%	306,772	0.9%
2010	6,565	0.7%	14,468	0.4%	309,347	0.8%
2011	6,612	0.7%	14,527	0.4%	311,719	0.8%
2012	6,658	0.7%	14,580	0.4%	314,103	0.8%
2013	6,709	0.8%	14,637	0.4%	316,427	0.7%
2014	6,755	0.7%	14,690	0.4%	318,907	0.8%
2015	6,794	0.6%	14,728	0.3%	321,419	0.8%

SOURCE: United States Department of Commerce, Bureau of the Census.
NOTE: Figures for all years shown are estimates as of July 1.

The next 15 years are expected to bring about a continued change in the age distribution of the Massachusetts population. As the following table and chart show, the share of the 65 and over age group and especially the 85 and over age group will continue to grow. The chart, table, and population pyramids (below, and on the following page) show the projected population by age for Massachusetts for 2000 through 2030. Census has not updated these projections to reflect the 2010 Census.

<i>Projected Massachusetts Population by Age Group 2000-2030 (in thousands)</i>									Median
Year	0-4	5-17	18-24	25-44	45-64	65-84	85+	All Ages	Age
2000	397.3	1,102.8	579.3	1,989.8	1,419.8	743.5	116.7	6,349.1	36.5
2005	395.1	1,055.6	488.9	1,844.0	1,602.5	693.1	103.7	6,182.9	38.2
2010	400.7	1,083.1	670.2	1,769.7	1,817.1	750.6	158.0	6,649.4	38.8
2015	409.7	1,064.2	656.0	1,746.1	1,857.1	856.5	168.9	6,758.6	39.2
2020	422.3	1,070.9	617.5	1,775.8	1,809.3	987.8	172.0	6,855.5	39.5
2025	431.0	1,087.7	616.2	1,782.5	1,703.3	1,137.8	180.1	6,938.6	39.7
2030	430.6	1,115.0	610.7	1,783.9	1,608.7	1,251.2	211.9	7,012.0	40.2

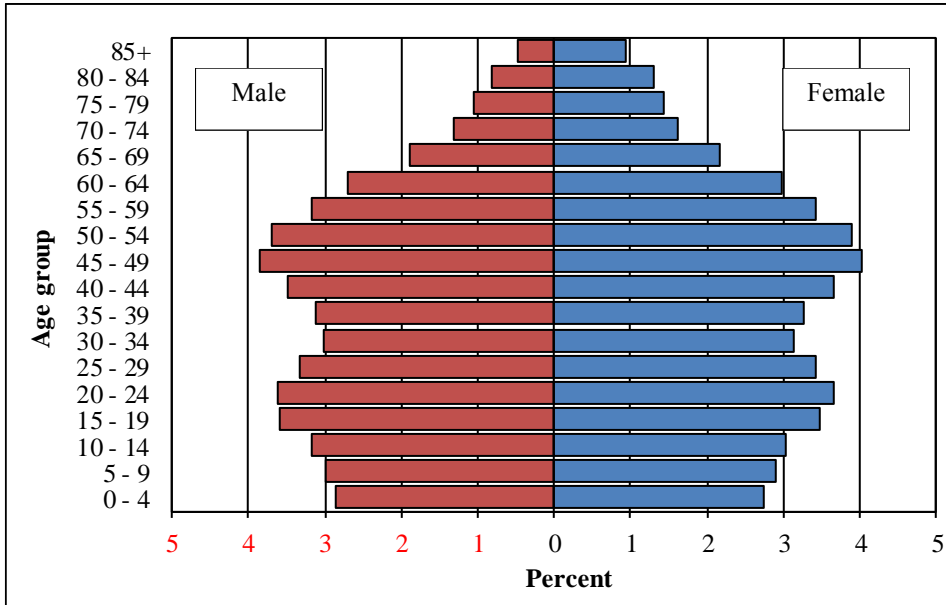
*Projected Massachusetts Population by Age Group
2000-2030*



SOURCE: Interim Population Projections through 2030 released April 21, 2005 by the Population Division, Bureau of the Census, United States Department of Commerce.
NOTE: Actual Census 2000 counts as of April 1; Population Estimates for 2005 as of July 1; all other figures are projections as of July 1 of the indicated year.

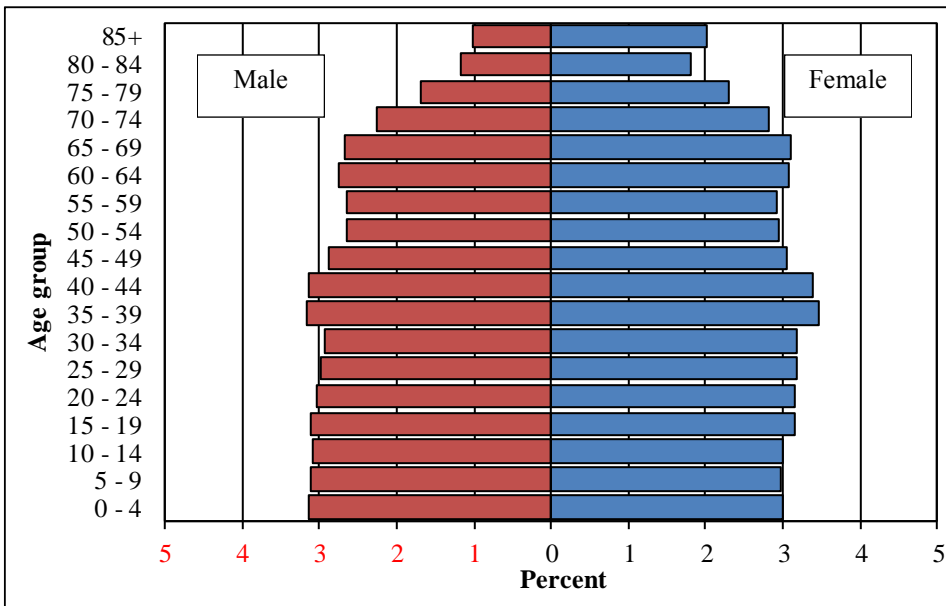
Population Pyramids of Massachusetts *Percent of Total Population*

2010



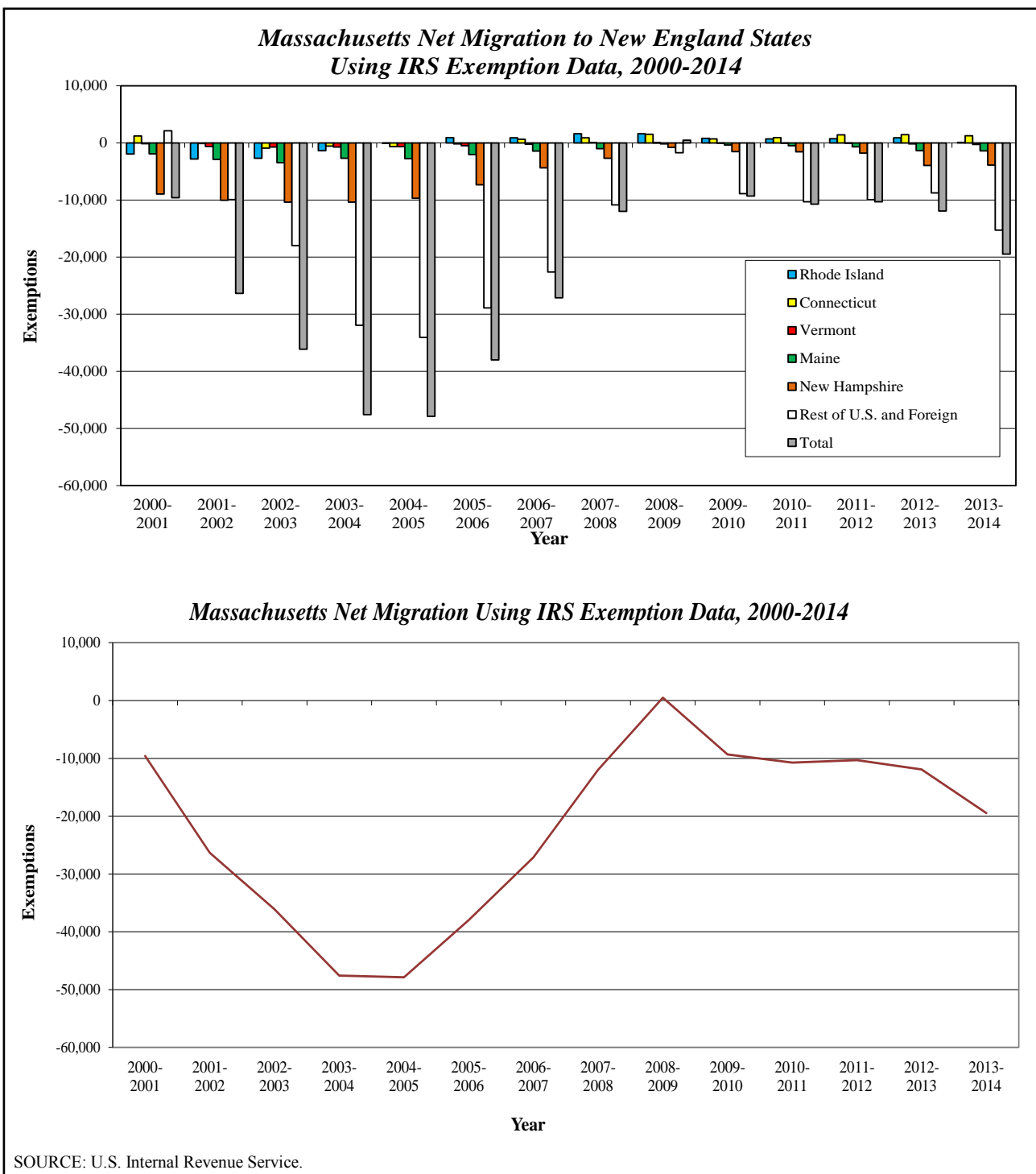
SOURCE: U.S. Census Bureau, 2010 Census.

2030



SOURCE: U.S. Census Bureau, Population Division, Interim State Population Projections, 2005.
 Internet Release Date: April 21, 2005.

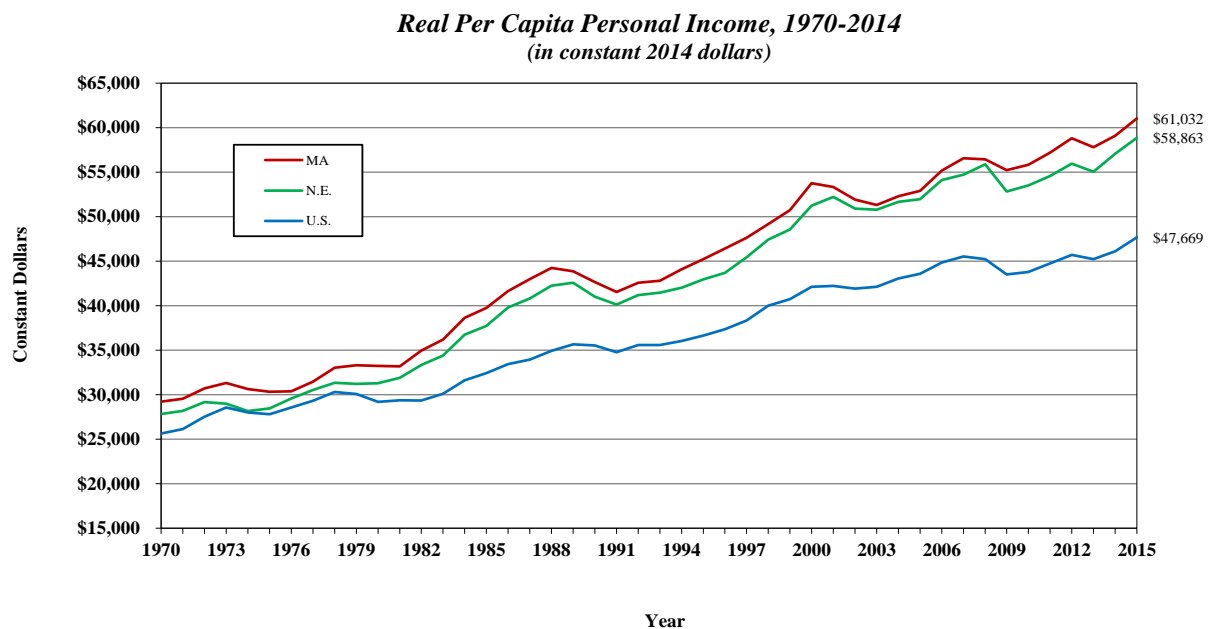
Migration. Migration is one of several components of annual population change in Massachusetts. The movement of people from place to place is often linked to economic opportunities or downturns. These data are derived from the filing addresses and number of exemptions submitted with federal tax returns. A tax filer is considered a migrant when he/she files a tax return with an address different from the previous year's filing address. Of the New England states, New Hampshire was the largest net loss for Massachusetts and Connecticut was the largest net gain for Massachusetts from 2000 through 2014. Massachusetts also sends many more migrants to the majority of U.S. states than it gains. Its largest net losses outside of New England are to Florida, California, Texas, and North Carolina, while its largest net gains are from New York, New Jersey, and Pennsylvania. The charts below illustrate the net migration for Massachusetts to and from the New England states and the rest of the country using IRS data.



PERSONAL INCOME, CONSUMER PRICES, AND POVERTY

Personal Income. Real per capita income levels in Massachusetts increased faster than the national average between 1992 and 1997. In 2000, Massachusetts had its highest per capita income growth in 16 years, exceeding the national growth rate by 2.5 percentage points. From 2001 to 2003, real income declined in Massachusetts while staying roughly flat for the nation. However, real income levels in Massachusetts remained well above the national average. Following a significant decline in 2009, Massachusetts, New England, and the U.S. steadily increased until 2012. However, from 2006 to 2012, Massachusetts personal income either declined more slowly, or grew more quickly, than the nation during the recession and its aftermath. Only the District of Columbia and Connecticut have had higher levels of per capita personal income. In 2013, Massachusetts, New England and the U.S. all experienced a slight decline in real income. Most recently, the 2015 Massachusetts Per Capita Personal Income remains higher than New England and the nation as a whole.

The following graph illustrates these changes in real per capita personal income in Massachusetts, New England, and the United States since 1970.



SOURCE: United States Department of Commerce, Bureau of Economic Analysis.

The following table compares per capita personal income in Massachusetts, New England, and the United States for the period 1970-2015.

<i>Per Capita Personal Income, 1970-2015</i>									
Year	Nominal Income (in current dollars)			Real Income (in 2015 dollars)			Percent Change in Real Income		
	MA	N.E.	U.S.	MA	N.E.	U.S.	MA	N.E.	U.S.
1970	\$4,575	\$4,547	\$4,196	\$29,216	\$27,843	\$25,632	2.8%	-0.6%	3.5%
1971	\$4,859	\$4,795	\$4,468	\$29,559	\$28,195	\$26,148	1.2%	1.3%	2.0%
1972	\$5,228	\$5,156	\$4,853	\$30,712	\$29,160	\$27,518	3.9%	3.4%	5.2%
1973	\$5,647	\$5,589	\$5,352	\$31,310	\$29,002	\$28,570	1.9%	-0.5%	3.8%
1974	\$6,108	\$6,056	\$5,824	\$30,625	\$28,172	\$28,000	-2.2%	-2.9%	-2.0%
1975	\$6,592	\$6,516	\$6,312	\$30,327	\$28,470	\$27,808	-1.0%	1.1%	-0.7%
1976	\$7,098	\$7,061	\$6,856	\$30,369	\$29,568	\$28,559	0.1%	3.9%	2.7%
1977	\$7,733	\$7,701	\$7,494	\$31,461	\$30,521	\$29,310	3.6%	3.2%	2.6%
1978	\$8,547	\$8,527	\$8,338	\$33,044	\$31,328	\$30,311	5.0%	2.6%	3.4%
1979	\$9,500	\$9,501	\$9,212	\$33,317	\$31,216	\$30,074	0.8%	-0.4%	-0.8%
1980	\$10,695	\$10,716	\$10,153	\$33,239	\$31,286	\$29,204	-0.2%	0.2%	-2.9%
1981	\$11,868	\$11,914	\$11,262	\$33,188	\$31,898	\$29,365	-0.2%	2.0%	0.6%
1982	\$13,005	\$12,939	\$11,947	\$34,959	\$33,330	\$29,343	5.3%	4.5%	-0.1%
1983	\$14,067	\$13,896	\$12,652	\$36,184	\$34,387	\$30,108	3.5%	3.2%	2.6%
1984	\$15,755	\$15,472	\$13,860	\$38,630	\$36,734	\$31,617	6.8%	6.8%	5.0%
1985	\$16,938	\$16,591	\$14,719	\$39,746	\$37,719	\$32,422	2.9%	2.7%	2.5%
1986	\$18,197	\$17,795	\$15,459	\$41,635	\$39,809	\$33,431	4.8%	5.5%	3.1%
1987	\$19,608	\$19,182	\$16,265	\$42,986	\$40,808	\$33,936	3.2%	2.5%	1.5%
1988	\$21,403	\$20,900	\$17,426	\$44,239	\$42,248	\$34,913	2.9%	3.5%	2.9%
1989	\$22,437	\$22,218	\$18,653	\$43,868	\$42,586	\$35,654	-0.8%	0.8%	2.1%
1990	\$23,080	\$22,764	\$19,591	\$42,656	\$41,009	\$35,527	-2.8%	-3.7%	-0.4%
1991	\$23,468	\$23,056	\$19,985	\$41,549	\$40,128	\$34,778	-2.6%	-2.1%	-2.1%
1992	\$24,639	\$24,360	\$21,060	\$42,565	\$41,173	\$35,578	2.4%	2.6%	2.3%
1993	\$25,487	\$25,152	\$21,698	\$42,792	\$41,454	\$35,590	0.5%	0.7%	0.0%
1994	\$26,603	\$26,092	\$22,538	\$44,089	\$42,013	\$36,045	3.0%	1.3%	1.3%
1995	\$27,933	\$27,394	\$23,568	\$45,213	\$42,955	\$36,654	2.5%	2.2%	1.7%
1996	\$29,523	\$28,763	\$24,728	\$46,411	\$43,686	\$37,355	2.7%	1.7%	1.9%
1997	\$31,152	\$30,401	\$25,950	\$47,631	\$45,434	\$38,321	2.6%	4.0%	2.6%
1998	\$32,875	\$32,260	\$27,510	\$49,153	\$47,423	\$40,002	3.2%	4.4%	4.4%
1999	\$34,783	\$33,853	\$28,627	\$50,735	\$48,546	\$40,727	3.2%	2.4%	1.8%
2000	\$38,438	\$36,904	\$30,602	\$53,745	\$51,228	\$42,121	5.9%	5.5%	3.4%
2001	\$39,774	\$38,222	\$31,540	\$53,319	\$52,222	\$42,211	-0.8%	1.9%	0.2%
2002	\$39,742	\$38,347	\$31,815	\$51,920	\$50,901	\$41,916	-2.6%	-2.5%	-0.7%
2003	\$40,744	\$39,328	\$32,692	\$51,298	\$50,783	\$42,112	-1.2%	-0.2%	0.5%
2004	\$42,674	\$41,435	\$34,316	\$52,291	\$51,649	\$43,057	1.9%	1.7%	2.2%
2005	\$44,596	\$43,157	\$35,904	\$52,904	\$51,968	\$43,573	1.2%	0.6%	1.2%
2006	\$47,940	\$46,271	\$38,144	\$55,163	\$54,113	\$44,845	4.3%	4.1%	2.9%
2007	\$50,103	\$48,568	\$39,821	\$56,560	\$54,708	\$45,520	2.5%	1.1%	1.5%
2008	\$51,742	\$49,977	\$41,082	\$56,434	\$55,878	\$45,225	-0.2%	2.1%	-0.6%
2009	\$50,296	\$48,585	\$39,376	\$55,231	\$52,827	\$43,502	-2.1%	-5.5%	-3.8%
2010	\$51,643	\$49,994	\$40,277	\$55,834	\$53,508	\$43,779	1.1%	1.3%	0.6%
2011	\$54,327	\$52,463	\$42,453	\$57,186	\$54,562	\$44,732	2.4%	2.0%	2.2%
2012	\$56,752	\$54,796	\$44,266	\$58,810	\$55,955	\$45,697	2.8%	2.6%	2.2%
2013	\$56,549	\$54,582	\$44,438	\$57,805	\$55,042	\$45,212	-1.7%	-1.6%	-1.1%
2014	\$58,737	\$56,798	\$46,049	\$59,089	\$57,059	\$46,104	2.2%	3.7%	2.0%
2015	\$61,032	\$58,863	\$47,669	\$61,032	\$58,863	\$47,669	3.3%	3.2%	3.4%

SOURCE: United States Department of Commerce, Bureau of Economic Analysis.

NOTES: Using midyear population estimates from the Census Bureau and two CPI-U series from the U.S. Bureau of Labor Statistics for price inflation.

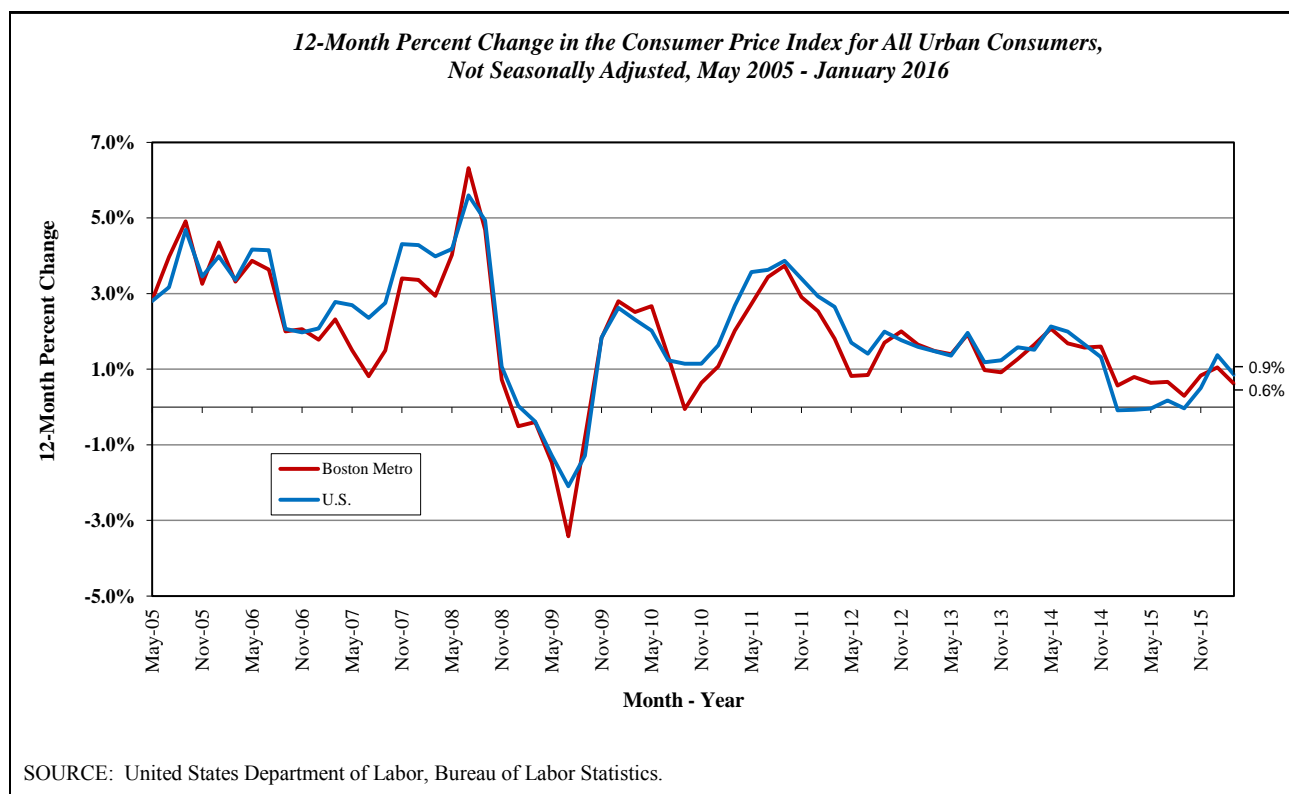
Annual Pay in Nominal Dollars. Massachusetts saw steady growth in average annual pay for most of the past decade, lost ground in 2009, but resumed growth in 2010. Average annual pay is computed by dividing the total annual payroll of employees covered by Unemployment Insurance programs by the average monthly number of employees. Data are reported by employers covered under the Unemployment Insurance programs. Since 2004, average annual wages in the state have grown at an annual rate of 2.8 percent, compared to 2.7 percent for the nation. The level of average annual pay in Massachusetts in 2014 was 24.8 percent higher than the national average: \$64,103 compared to \$51,364.

Wage and Salary Disbursements. Wage and salary disbursements by place of work is a component of personal income and measures monetary disbursements to employees. This includes compensation of corporate officers, commissions, tips, bonuses, and receipts in-kind. Although the data are recorded on a place-of-work basis, they are then adjusted to a place-of-residence basis so that the personal income of the recipients whose place of residence differs from their place of work will be correctly assigned to their state of residence. The table below details Wage and Salary Disbursements since 1990. Between 1998 and 2000, the Massachusetts share of the New England and overall U.S. totals increased. In subsequent years, the Massachusetts share of New England and the U.S. decreased slightly until 2006 when it began to rise again, reaching 52.4 and 3.0 percent respectively in 2015.

<i>Annual Wage and Salary Disbursements, 1990-2015</i> (in millions of dollars)					
Year	U.S.	N.E.	MA	MA as a pct. of N.E.	MA as a pct. of U.S.
1990	\$ 2,730	\$170	\$82	48.4%	3.0%
1991	\$ 2,802	\$169	\$82	48.3%	2.9%
1992	\$ 2,965	\$177	\$85	48.3%	2.9%
1993	\$ 3,070	\$182	\$88	48.5%	2.9%
1994	\$ 3,226	\$189	\$92	48.8%	2.9%
1995	\$ 3,414	\$201	\$98	49.0%	2.9%
1996	\$ 3,612	\$212	\$105	49.3%	2.9%
1997	\$ 3,872	\$229	\$113	49.3%	2.9%
1998	\$ 4,177	\$246	\$122	49.5%	2.9%
1999	\$ 4,457	\$264	\$133	50.2%	3.0%
2000	\$ 4,824	\$292	\$149	51.2%	3.1%
2001	\$ 4,950	\$299	\$152	50.7%	3.1%
2002	\$ 4,993	\$297	\$149	50.1%	3.0%
2003	\$ 5,134	\$303	\$151	49.6%	2.9%
2004	\$ 5,417	\$320	\$159	49.6%	2.9%
2005	\$ 5,689	\$331	\$163	49.4%	2.9%
2006	\$ 6,052	\$349	\$173	49.5%	2.9%
2007	\$ 6,391	\$369	\$184	49.9%	2.9%
2008	\$ 6,529	\$378	\$190	50.2%	2.9%
2009	\$ 6,244	\$362	\$182	50.3%	2.9%
2010	\$ 6,369	\$371	\$188	50.6%	2.9%
2011	\$ 6,623	\$385	\$196	50.8%	3.0%
2012	\$ 6,922	\$398	\$204	51.2%	2.9%
2013	\$ 7,106	\$408	\$210	51.4%	3.0%
2014	\$ 7,469	\$428	\$222	51.8%	3.0%
2015	\$ 7,816	\$445	\$233	52.4%	3.0%

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

Consumer Prices. Higher income levels in Massachusetts relative to the rest of the United States are offset to some extent by the higher cost of living in Massachusetts. The following graph presents consumer price trends for the Boston metropolitan area and the United States for the period between May 2005 and March 2016. The latest available data for March 2016 show that the CPI-U for Boston area increased at a rate of 0.6 percent over March. The U.S. index increased at a rate of 0.9 percent over the same period.



In 2009, the Boston metropolitan area and U.S. experienced their first monthly year-over-year declines in the CPI-U since 1954 and 1955, respectively. The 2014 U.S. CPI-U increased 8.6 percent since 2010 while Boston's CPI-U only increased 7.5 percent during that period. However, the annual percent change from 2013 to 2014 shows that Boston and the U.S. increased at the same rate of 1.6 percent. In 2015, Boston's CPI increased by 0.6 percent while in the United States as a whole, CPI-U only increased by 0.1%, the smallest change since before the recession. The table on the following page shows the annual average of the Consumer Price Index for All Urban Consumers (CPI-U) and the percentage change in that average from the previous year from 1970 through the present.

Consumer Price Index for All Urban Consumers (CPI-U), 1970-2015
(not seasonally adjusted; 1982-1984 base period average=100)

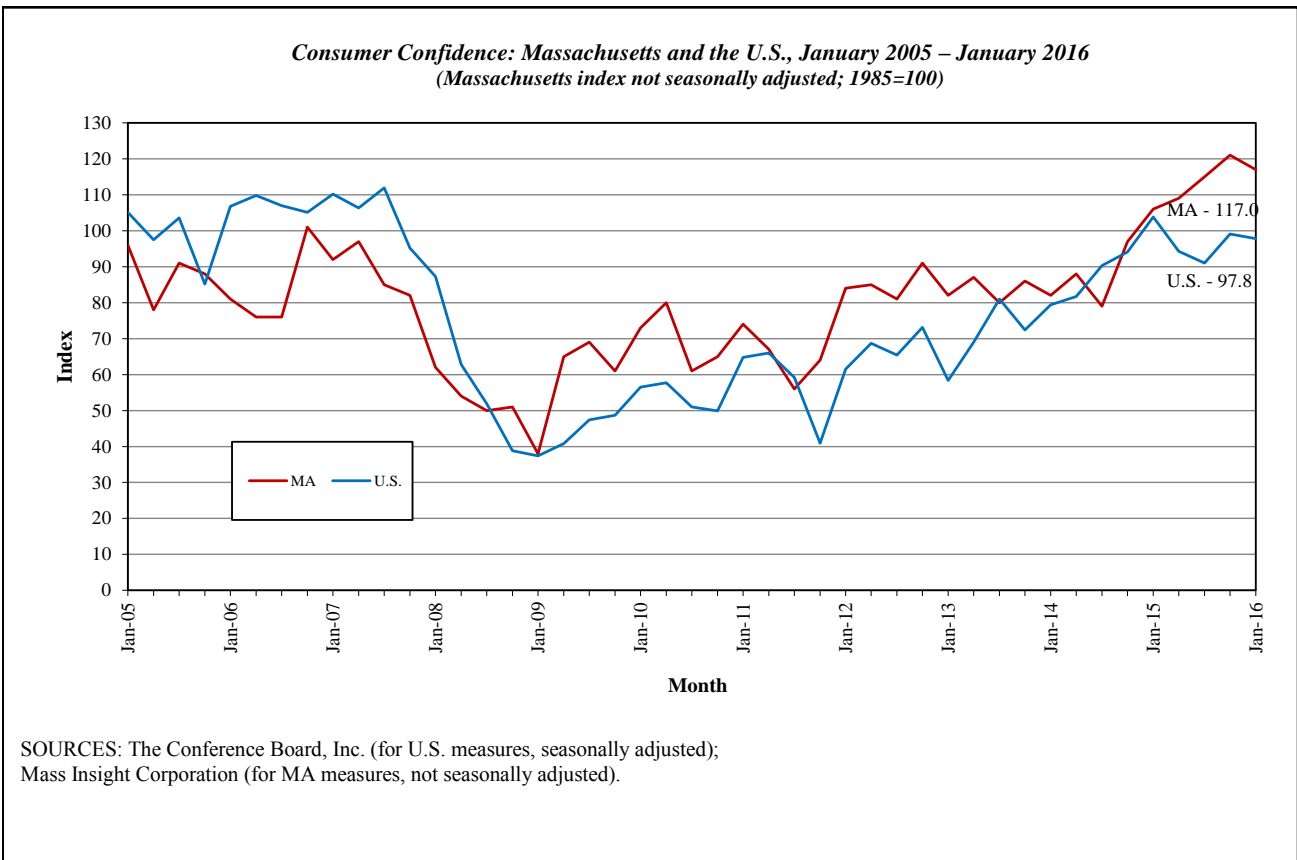
Year	Boston Metro Area		United States	
	CPI-U	Pct.Change	CPI-U	Pct. Change
1970	40.2		38.8	
1971	42.2	5.0%	40.5	4.4%
1972	43.7	3.6%	41.8	3.2%
1973	46.3	5.9%	44.4	6.2%
1974	51.2	10.6%	49.3	11.0%
1975	55.8	9.0%	53.8	9.1%
1976	60.0	7.5%	56.9	5.8%
1977	63.1	5.2%	60.6	6.5%
1978	66.4	5.2%	65.2	7.6%
1979	73.2	10.2%	72.6	11.3%
1980	82.6	12.8%	82.4	13.5%
1981	91.8	11.1%	90.9	10.3%
1982	95.5	4.0%	96.5	6.2%
1983	99.8	4.5%	99.6	3.2%
1984	104.7	4.9%	103.9	4.3%
1985	109.4	4.5%	107.6	3.6%
1986	112.2	2.6%	109.6	1.9%
1987	117.1	4.4%	113.6	3.6%
1988	124.2	6.1%	118.3	4.1%
1989	131.3	5.7%	124.0	4.8%
1990	138.9	5.8%	130.7	5.4%
1991	145.0	4.4%	136.2	4.2%
1992	148.6	2.5%	140.3	3.0%
1993	152.9	2.9%	144.5	3.0%
1994	154.9	1.3%	148.2	2.6%
1995	158.6	2.4%	152.4	2.8%
1996	163.3	3.0%	156.9	3.0%
1997	167.9	2.8%	160.5	2.3%
1998	171.7	2.3%	163.0	1.6%
1999	176.0	2.5%	166.6	2.2%
2000	183.6	4.3%	172.2	3.4%
2001	191.5	4.3%	177.1	2.8%
2002	196.5	2.6%	179.9	1.6%
2003	203.9	3.8%	184.0	2.3%
2004	209.5	2.7%	188.9	2.7%
2005	216.4	3.3%	195.3	3.4%
2006	223.1	3.1%	201.6	3.2%
2007	227.4	1.9%	207.3	2.8%
2008	235.4	3.5%	215.3	3.8%
2009	233.8	-0.7%	214.5	-0.4%
2010	237.4	1.6%	218.1	1.6%
2011	243.9	2.7%	224.9	3.2%
2012	247.7	1.6%	229.6	2.1%
2013	251.1	1.4%	233.0	1.5%
2014	255.2	1.6%	236.7	1.6%
2015	256.7	0.6%	237.0	0.1%
Mar-15	257.0		236.1	
Mar-16	258.6	0.6%	238.1	0.9%

SOURCE: United States Department of Labor, Bureau of Labor Statistics.

Consumer Confidence, Present Situation, and Future Expectations. These three measures offer multiple insights into consumer attitudes. The U.S. measures are compiled from a national monthly survey of 5,000 households and are published by The Conference Board, Inc. The survey for Massachusetts is conducted in a similar manner and the results are published by Mass Insight, based on quarterly polling of 450 adult residents of Massachusetts. The "Present Situation" index measures consumers' appraisal of business and employment conditions at the time of the survey. The "Future Expectations" index focuses on consumers' expectations for six months hence regarding business and employment conditions, as well as expected family income. The overall "Consumer Confidence" index is a weighted average of the two sub-indices. Although the U.S. measures are compiled by a different source than the Massachusetts measures, according to the Federal Reserve Bank of Boston, the numbers are generally comparable. A score of 100 is considered neutral.

According to the Conference Board, national consumer confidence reached a six-year high of 111.9 in July 2007, followed by an all-time low of 38.0 in February 2009. The Massachusetts index has generally been higher than the U.S. index since sharing lows in January 2009, except for a brief period when they tracked closely together in 2011 and then experienced slight dips in July 2013 and July 2014.

In the first quarter of 2016, Consumer Confidence for Massachusetts reached 117.0, down from a 15-year high of 121.0 one quarter before. At the same time, the U.S. had yet to recover to its 2007 levels and stood at 97.8. The following graph and table detail the recent record of these measures.

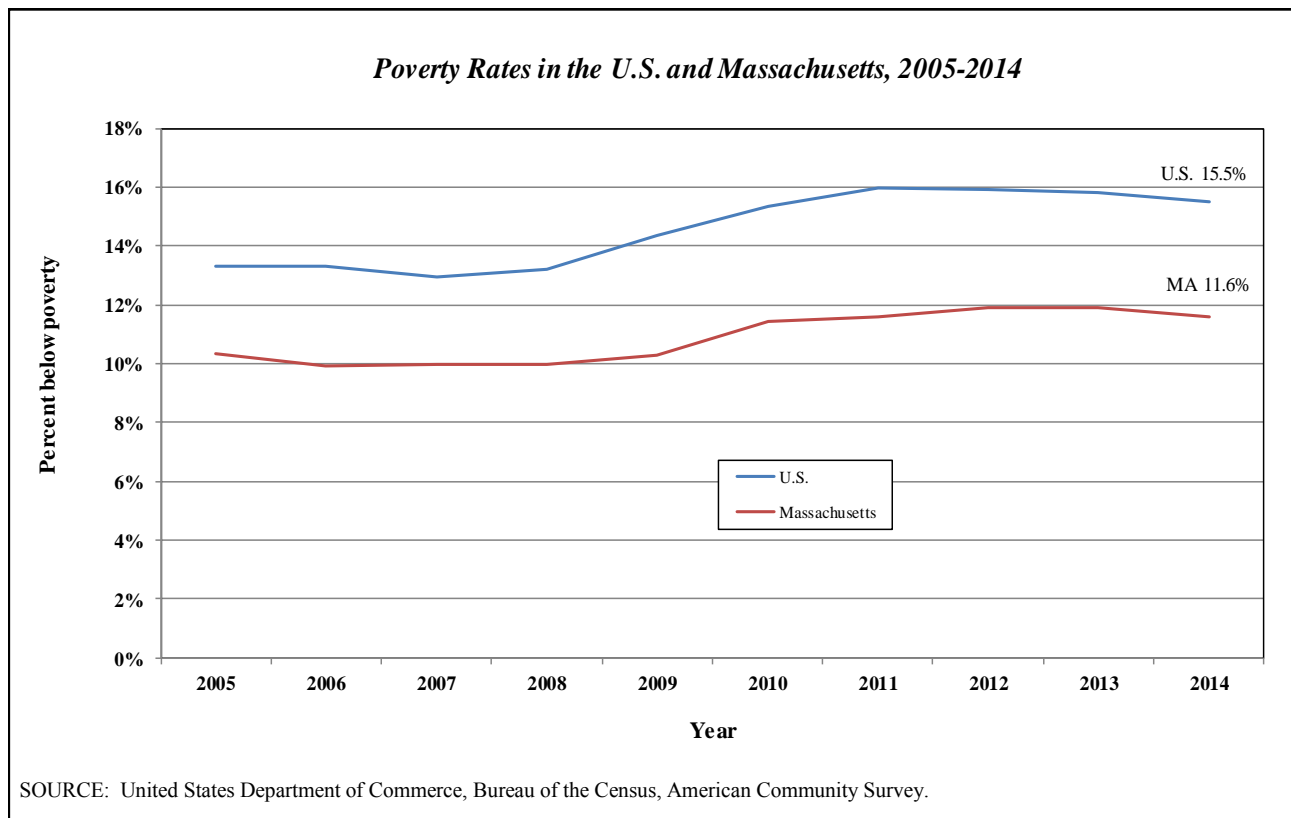


***Consumer Confidence, Present Situation, and Future
Expectations for Massachusetts and the U.S.
(1985=100)***

	Consumer Confidence		Present Situation		Future Expectations	
	MA	U.S.	MA	U.S.	MA	U.S.
Jul-05	91.0	103.6	80.0	119.3	99.0	93.2
Oct-05	88.0	85.2	80.0	107.8	95.0	70.1
Jan-06	81.0	106.8	71.0	128.8	87.0	92.1
Apr-06	76.0	109.8	77.0	136.2	76.0	92.3
Jul-06	76.0	107.0	68.0	134.2	81.0	88.9
Oct-06	101.0	105.1	86.0	125.1	111.0	91.9
Jan-07	92.0	110.2	74.0	133.9	104.0	94.4
Apr-07	97.0	106.3	89.0	133.5	102.0	88.2
Jul-07	85.0	111.9	80.0	138.3	90.0	94.4
Oct-07	82.0	95.2	76.0	118.0	86.0	80.0
Jan-08	62.0	87.3	49.0	114.3	71.0	69.3
Apr-08	54.0	62.8	35.0	81.9	67.0	50.0
Jul-08	50.0	51.9	24.0	65.8	68.0	42.7
Oct-08	51.0	38.8	27.0	43.5	66.0	35.7
Jan-09	38.0	37.4	9.0	29.7	58.0	42.5
Apr-09	65.0	40.8	24.0	25.5	92.0	51.0
Jul-09	69.0	47.4	16.0	23.3	105.0	63.4
Oct-09	61.0	48.7	14.0	21.1	93.0	67.0
Jan-10	73.0	56.5	14.0	25.2	112.0	77.3
Apr-10	80.0	57.7	22.0	28.2	119.0	77.4
Jul-10	61.0	51.0	16.0	26.4	91.0	67.5
Oct-10	65.0	49.9	15.0	23.5	99.0	67.5
Jan-11	74.0	64.8	17.0	31.1	112.0	87.3
Apr-11	67.0	66.0	24.0	40.2	96.0	83.2
Jul-11	56.0	59.2	20.0	35.7	80.0	74.9
Oct-11	64.0	40.9	24.0	27.1	91.0	50.0
Jan-12	84.0	61.5	34.0	38.8	118.0	76.7
Apr-12	85.0	68.7	41.0	51.2	114.0	80.4
Jul-12	81.0	65.4	40.0	45.9	109.0	78.4
Oct-12	91.0	73.1	48.0	56.7	120.0	84.0
Jan-13	82.0	58.4	48.0	56.2	105.0	59.9
Apr-13	87.0	69.0	54.0	61.0	109.0	74.3
Jul-13	80.0	81.0	56.0	73.6	97.0	86.0
Oct-13	86.0	72.4	64.0	72.6	101.0	72.2
Jan-14	82.0	79.4	55.0	77.3	99.0	80.8
Apr-14	88.0	81.7	66.0	78.5	103.0	83.9
Jul-14	79.0	90.3	69.0	87.9	86.0	91.9
Oct-14	97.0	94.1	76.0	94.4	111.0	93.8
Jan-15	106.0	103.8	84.0	113.9	120.0	97.0
Apr-15	109.0	94.3	94.0	105.1	119.0	87.1
Jul-15	115.0	91.0	115.0	104.0	115.0	82.3
Oct-15	121.0	99.1	118.0	114.6	123.0	88.7
Jan-16	117.0	97.8	122.0	116.6	114.0	85.3

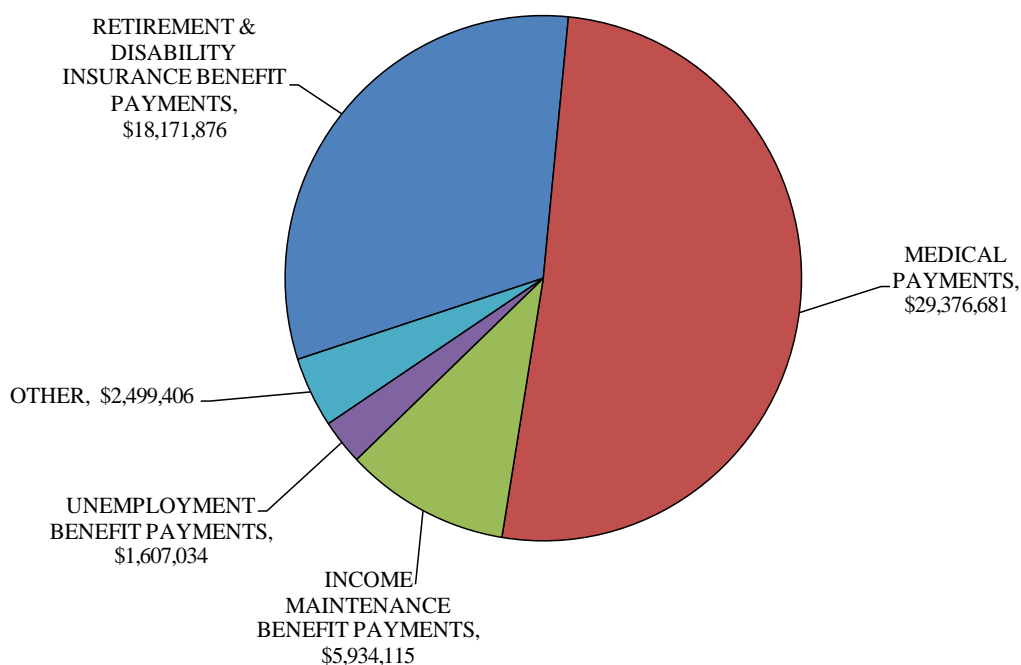
SOURCES: The Conference Board, Inc. (for U.S. measures, seasonally adjusted);
Mass Insight Corporation (for MA measures, not seasonally adjusted).

Poverty. Since 2005, the Massachusetts poverty rate, which was 11.6 percent in 2014, has been three to four percentage points lower than the national average, which was 15.5 percent in 2014. Massachusetts ranked 42nd out of the 50 states and the District of Columbia in 2014, for percent of persons whose ratio of income to the poverty level was below 100 percent in the past 12 months. Poverty status is not determined for all people. Institutionalized people, people in military quarters, people in college dormitories, and unrelated individuals under 15 years old are excluded.



Transfer Payments. Transfer payment income is payment to individuals from all levels of government and from businesses for which no current services are performed, including payments to nonprofit institutions serving individuals. These payments accounted for 14.9 percent of total personal income in Massachusetts in 2014, dropping from 15.0 percent in 2013. The chart below does not include transfer payments from business or payments to non-profit organizations. Total transfer payments to individuals in Massachusetts from governments and businesses totaled \$58.9 billion for 2014. Fifty-one percent of government transfer payments to individuals were medical payments, up from just over 48.4 percent in 2013.

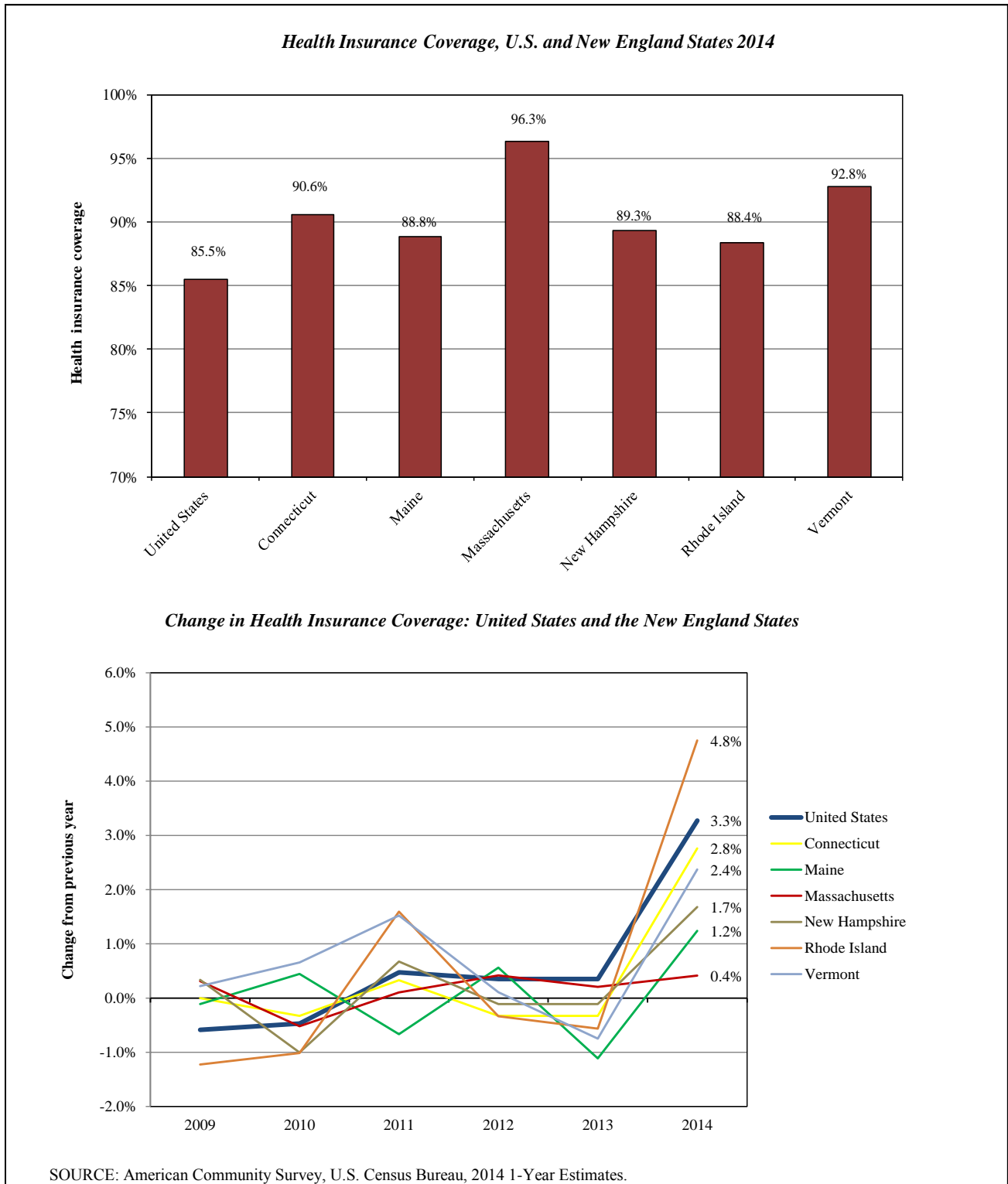
***Transfer Payments from Governments to Individuals in
Massachusetts in 2014
(From Annual State Personal Income Estimates)
(in thousands of current dollars)***



SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Annual State Personal Income Estimates.

NOTE: The category "other" includes veterans' benefit payments, federal education and training assistance payments, and a small residual of miscellaneous other payments to individuals.

Health Insurance Coverage. Massachusetts leads the nation in the percent of individuals with health insurance coverage. Massachusetts passed legislation in 2006 mandating universal coverage in the Commonwealth. In 2014, 96.3 percent of the civilian non-institutionalized population was covered in the state by either private or public insurance, compared with 85.5 percent nationwide. Massachusetts also leads the other New England states in coverage, with Vermont as the next closest at 92.8 percent. All of the New England states have higher rates of coverage than the nation. These data do not indicate the comprehensiveness of coverage, however.



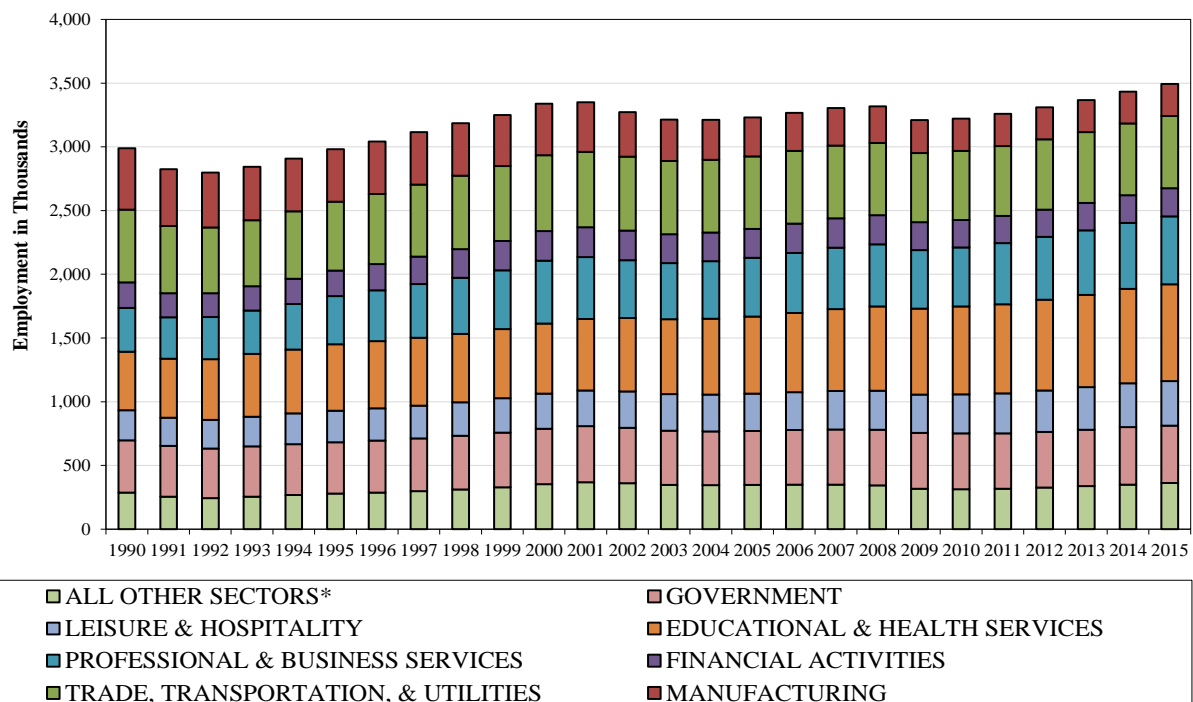
EMPLOYMENT

Employment by Industry. The chart on this page shows the annual level of non-agricultural payroll employment in Massachusetts based on the North American Industry Classification System (NAICS) for the seven largest NAICS supersectors starting with 1990, the earliest year for which NAICS data are available. The chart on the following page compares the super-sector shares for the 2014-2015 period with the corresponding shares for the 1992-1993 period. Like many industrial states, Massachusetts has seen a steady decline of its manufacturing jobs base over the last two decades, not only as a share of total employment, but in absolute numbers of jobs as well. Several NAICS service sectors, Education and Health Services, Professional and Business Services, and Leisure and Hospitality have grown to take the place of manufacturing in driving the Massachusetts economy and now account for almost half of total payroll employment, while Financial Activities, Government, Information, and Trade, Transportation & Utilities have remained relatively level or declined in share.

After significant declines from 2002 to 2004, total non-agricultural employment in Massachusetts eventually increased 0.6 percent in 2005 and continued to increase every year through 2008. After a large dip in 2009, employment has continued to grow steadily with non-farm employment increasing 2.1 percent in 2015. With an annual average just under 3.5 million non-farm employees, 2015 had the highest numbers to date.

After years of moderate but steady declines or near-zero growth in the late nineties and early 2000s, manufacturing employment in the state experienced steep annual declines in 2002 (10.2 percent) and 2003 (7.1 percent) before returning to more moderate declines in 2004 (3.5 percent). After a steep drop of 9.5 percent in 2009, the decline returned to a less dramatic 2.4 percent in 2010. Employment fell by 0.2 percent in 2011 and 2012 and has since been decreasing slightly each year. February 2016 saw manufacturing employment increase by 0.04 percent since February of 2015. The seasonally adjusted estimate for 2015 was slightly higher than the 2014 estimate (250.4 thousand compared to 250.2).

*Annual Average Employment in Massachusetts,
NAICS Super-Sectors, 1990-2015*

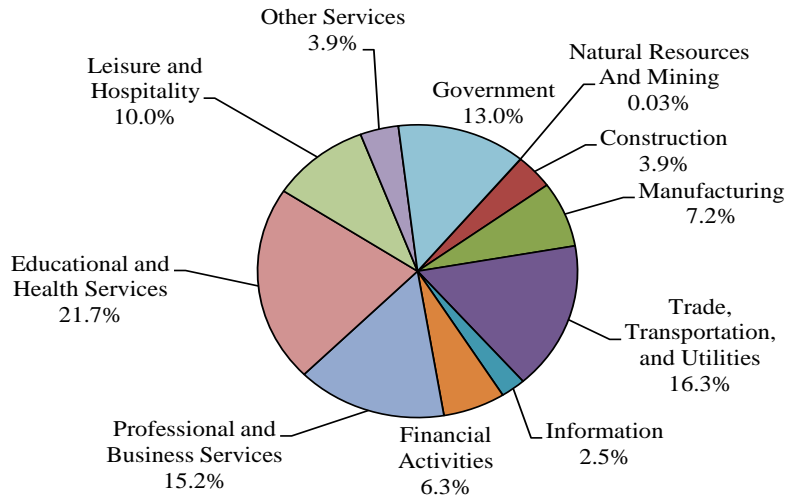


SOURCE: United States Department of Labor, Bureau of Labor Statistics.

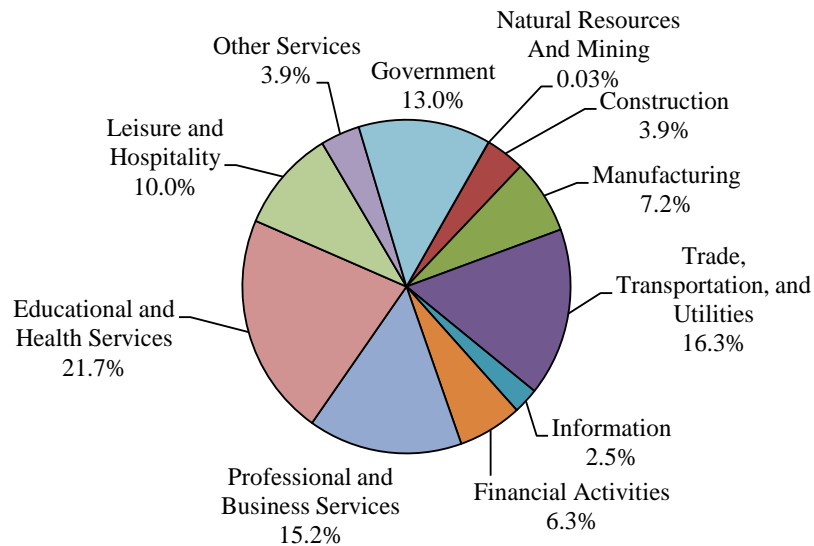
*Includes Mining & Natural Resources, Construction, Information, and Other Services.

Massachusetts Non-Farm Payroll Employment
(NAICS Industry basis)

NAICS Super-Sectors: 2014-2015 Average Share



NAICS Super-Sectors: 1992-1993 Average Share



Largest Employers in Massachusetts. The following inset lists the 25 largest private employers in Massachusetts based upon employment covered by the Unemployment Insurance system for March 2015. The 2015 list is identical in ranking to the 2014 list. As noted, the list may not include some employers who do business in the state under multiple legal names or register each facility as a separate employer.

Twenty-Five Largest Private Employers in Massachusetts in March 2015
(listed alphabetically)

Baystate Medical Center, Inc.	Raytheon Company
Beth Israel Deaconess Medical Center	Shaw's Supermarkets, Inc.
Boston Medical Center Corporation	Southcoast Hospitals Group, Inc.
Boston University	State Street Bank & Trust Company
Brigham & Women's Hospital, Inc.	Target Corporation
CVS Pharmacy, LLC	The Children's Hospital Corporation
Demoulas Super Markets, Inc.	The Stop & Shop Supermarkets Corporation
E.M.C. Corporation	Tufts University
General Hospital Corporation	UMass Memorial Medical Center
Harvard University	United Parcel Service, Inc.
Home Depot U.S.A., Inc.	Wal-Mart Associates, Inc.
Massachusetts Institute of Technology	Whole Foods Market Group
Partners Healthcare Systems, Inc.	

SOURCE: Massachusetts Executive Office of Labor & Workforce Development, Research Department, 8-18-2015

NOTES: This alphabetic listing includes private employers reporting large numbers of jobs covered by the MA unemployment insurance program. The information is based on the March 2015 employment for employers as registered for unemployment insurance. The list may not include those employers who do business in MA under multiple legal corporations and those who register each store, facility or franchisee as a separate employer.

Massachusetts Companies in the Fortune 500 List. The economic base of Massachusetts is anchored by the twelve 2015 Fortune 500 companies headquartered here, the same twelve as 2014. When comparing the 2015 Fortune 500 list to the 2014 list, seven Massachusetts companies lost and five gained rank. Biogen located in Weston, climbed 77 places on the list, the largest leap for a Massachusetts company.

Massachusetts Companies in the 2015 Fortune 500

Rank		Company (location)	Industry	2015 revenues (billions)
2015	2014			
78	76	Liberty Mutual Ins. Group (Boston)	Insurance: P & C (stock)	\$39.8
94	96	Mass. Mutual Life Ins. (Springfield)	Insurance: Life, Health (mutual)	\$33.5
103	108	TJX (Framingham)	Specialty Retailers: Apparel	\$29.1
121	128	EMC (Hopkinton)	Computer Peripherals	\$24.4
129	126	Raytheon (Waltham)	Aerospace and Defense	\$22.8
133	127	Staples (Framingham)	Specialty Retailers: Other	\$22.5
180	146	Global Partners (Waltham)	Wholesalers: Diversified	\$17.3
181	215	Thermo Fisher Scientific (Waltham)	Scientific, Photo, Control Equipment	\$17.1
278	275	State St. Corp. (Boston)	Commercial Banks	\$10.7
298	375	Biogen Idec (Weston)	Pharmaceuticals	\$9.7
367	359	Eversource (Springfield)	Utilities: Gas and Electric	\$7.7
378	367	Boston Scientific (Natick)	Medical Products & Equipment	\$7.4

SOURCE: *Fortune*, May 2015 issue.

Unemployment Insurance Trust Fund. The unemployment insurance system is a federal-state cooperative program established by the Social Security Act and the Federal Unemployment Tax Act to provide for the payment of benefits to eligible individuals when they become unemployed through no fault of their own. Benefits are paid from the Commonwealth's Unemployment Insurance Trust Fund, financed through employer contributions. The assets and liabilities of the Commonwealth Unemployment Insurance Trust Fund are not assets and liabilities of the Commonwealth.

As of February 29, 2016, the preliminary Massachusetts Unemployment Trust Fund had a balance of \$798.2 million. This balance is the sum of the private contributory account balance of \$681.7 million and the government contributory account balance of \$6.5 million. This compares to the December 31, 2015 balance of \$940 million with a private contributory portion of \$827 million. The February 2016 Unemployment Insurance Trust Fund report indicated that the private contributory account balance was estimated to be \$1.284 billion by the end of 2019 according to the Moody's-based outlook.

Unemployment. The unemployment rate in Massachusetts was consistently below the national average from mid-1995 through November 2005, with similar patterns of gradual improvement after the mid-2003 peak. The Massachusetts rate exceeded the U.S. rate for 17 months between January 2006 and May 2007, but only seven of those months exceeded a 0.2 percent change. Between June and December 2007 the Massachusetts rate was 4.6 percent, the lowest it had been since October 2001. From October 2009 to January 2010, the rate peaked at 8.8 percent. From June 2007 onward, the state rate remained below the comparable (seasonally adjusted) U.S. unemployment rate.

Since reaching 7.2 percent in August 2013, the Massachusetts unemployment rate has slowly declined to 4.4 percent in March of 2016, 0.6 percent below the national rate of 5.0 percent. The tables and graphs on the following two pages compare the unemployment rate in the state with those in New England and the U.S.

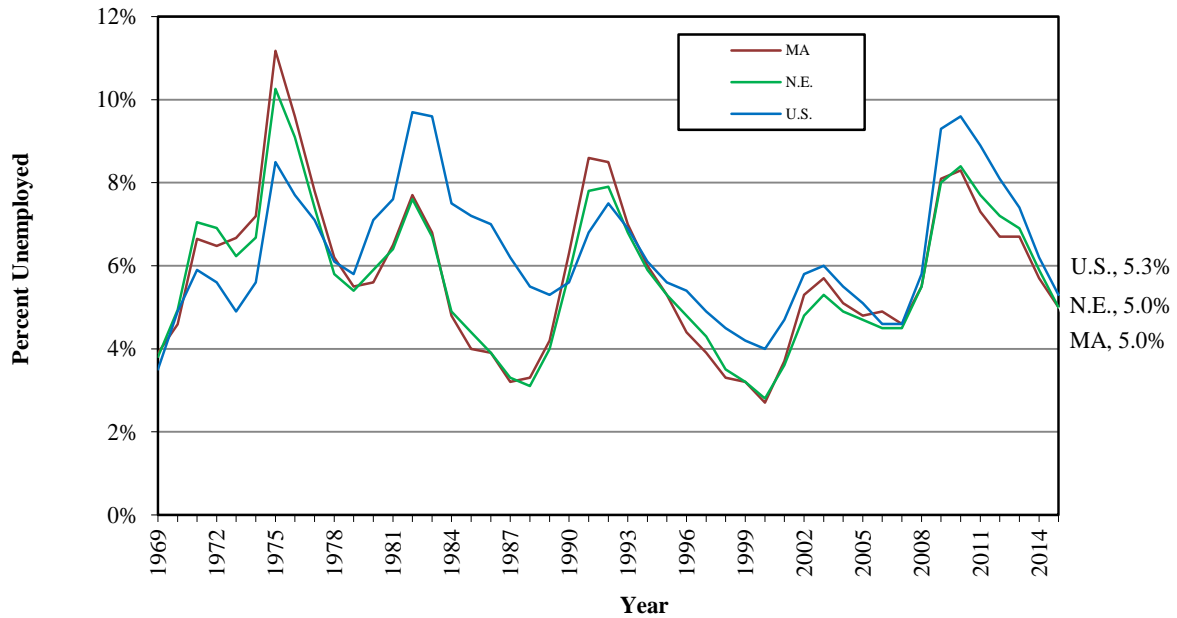
Annual Average Civilian Labor Force and Unemployment, 1969-2015

(in thousands)

Year	Civilian Labor Force			Unemployed			Unemployment Rate			MA Rate as
	MA	N.E.	U.S.	MA	N.E.	U.S.	MA	N.E.	U.S.	Pct. of U.S.
1969	2,581	5,201	80,734	100	198	2,832	3.9%	3.8%	3.5%	111.2%
1970	2,465	5,128	82,771	113	253	4,093	4.6%	4.9%	4.9%	93.7%
1971	2,459	5,157	84,382	163	364	5,016	6.6%	7.1%	5.9%	112.7%
1972	2,487	5,260	87,034	161	363	4,882	6.5%	6.9%	5.6%	115.6%
1973	2,557	5,387	89,429	171	336	4,365	6.7%	6.2%	4.9%	136.1%
1974	2,637	5,514	91,949	190	368	5,156	7.2%	6.7%	5.6%	128.5%
1975	2,725	5,633	93,775	305	578	7,929	11.2%	10.3%	8.5%	131.5%
1976	2,722	5,706	96,158	262	518	7,406	9.6%	9.1%	7.7%	124.7%
1977	2,763	5,821	99,009	215	433	6,991	7.8%	7.4%	7.1%	109.9%
1978	2,814	5,936	102,251	175	344	6,202	6.2%	5.8%	6.1%	101.6%
1979	2,853	6,071	104,962	157	328	6,137	5.5%	5.4%	5.8%	94.8%
1980	2,868	6,148	106,940	162	363	7,637	5.6%	5.9%	7.1%	78.9%
1981	2,942	6,259	108,670	190	403	8,273	6.5%	6.4%	7.6%	85.5%
1982	2,987	6,341	110,204	231	482	10,678	7.7%	7.6%	9.7%	79.4%
1983	2,997	6,392	111,550	202	428	10,717	6.8%	6.7%	9.6%	70.8%
1984	3,037	6,525	113,544	145	319	8,539	4.8%	4.9%	7.5%	64.0%
1985	3,051	6,633	115,461	121	289	8,312	4.0%	4.4%	7.2%	55.6%
1986	3,066	6,726	117,834	119	264	8,237	3.9%	3.9%	7.0%	55.7%
1987	3,094	6,825	119,865	100	227	7,425	3.2%	3.3%	6.2%	51.6%
1988	3,141	6,909	121,669	103	216	6,701	3.3%	3.1%	5.5%	60.0%
1989	3,176	7,007	123,869	132	277	6,528	4.2%	4.0%	5.3%	79.2%
1990	3,206	7,109	125,840	202	412	7,047	6.3%	5.8%	5.6%	112.5%
1991	3,195	7,117	126,346	275	554	8,628	8.6%	7.8%	6.8%	126.5%
1992	3,181	7,102	128,105	269	564	9,613	8.5%	7.9%	7.5%	113.3%
1993	3,174	7,051	129,200	222	481	8,940	7.0%	6.8%	6.9%	101.4%
1994	3,201	7,033	131,056	193	415	7,996	6.0%	5.9%	6.1%	98.4%
1995	3,215	7,049	132,304	170	374	7,404	5.3%	5.3%	5.6%	94.6%
1996	3,241	7,118	133,943	144	340	7,236	4.4%	4.8%	5.4%	81.5%
1997	3,306	7,220	136,297	130	312	6,739	3.9%	4.3%	4.9%	79.6%
1998	3,341	7,264	137,673	110	254	6,210	3.3%	3.5%	4.5%	73.3%
1999	3,354	7,327	139,368	107	234	5,880	3.2%	3.2%	4.2%	76.2%
2000	3,330	7,335	142,583	90	205	5,692	2.7%	2.8%	4.0%	67.5%
2001	3,381	7,394	143,734	126	267	6,801	3.7%	3.6%	4.7%	78.7%
2002	3,431	7,476	144,863	181	360	8,378	5.3%	4.8%	5.8%	91.4%
2003	3,422	7,504	146,510	195	401	8,774	5.7%	5.3%	6.0%	95.0%
2004	3,396	7,478	147,401	175	363	8,149	5.1%	4.9%	5.5%	92.7%
2005	3,384	7,521	149,320	164	352	7,591	4.8%	4.7%	5.1%	94.1%
2006	3,413	7,605	151,428	167	345	7,001	4.9%	4.5%	4.6%	106.5%
2007	3,426	7,648	153,124	158	344	7,078	4.6%	4.5%	4.6%	100.0%
2008	3,452	7,704	154,287	191	426	8,924	5.5%	5.5%	5.8%	94.8%
2009	3,470	7,729	154,142	281	620	14,265	8.1%	8.0%	9.3%	87.1%
2010	3,480	7,751	153,889	289	649	14,825	8.3%	8.4%	9.6%	86.5%
2011	3,469	7,738	153,617	252	597	13,747	7.3%	7.7%	8.9%	82.0%
2012	3,486	7,732	154,975	232	559	12,506	6.7%	7.2%	8.1%	82.7%
2013	3,514	7,744	155,389	236	533	11,460	6.7%	6.9%	7.4%	90.5%
2014	3,557	7,785	155,922	204	457	9,617	5.7%	5.9%	6.2%	91.9%
2015	3,570	7,778	157,130	178	385	8,296	5.0%	5.0%	5.3%	94.3%

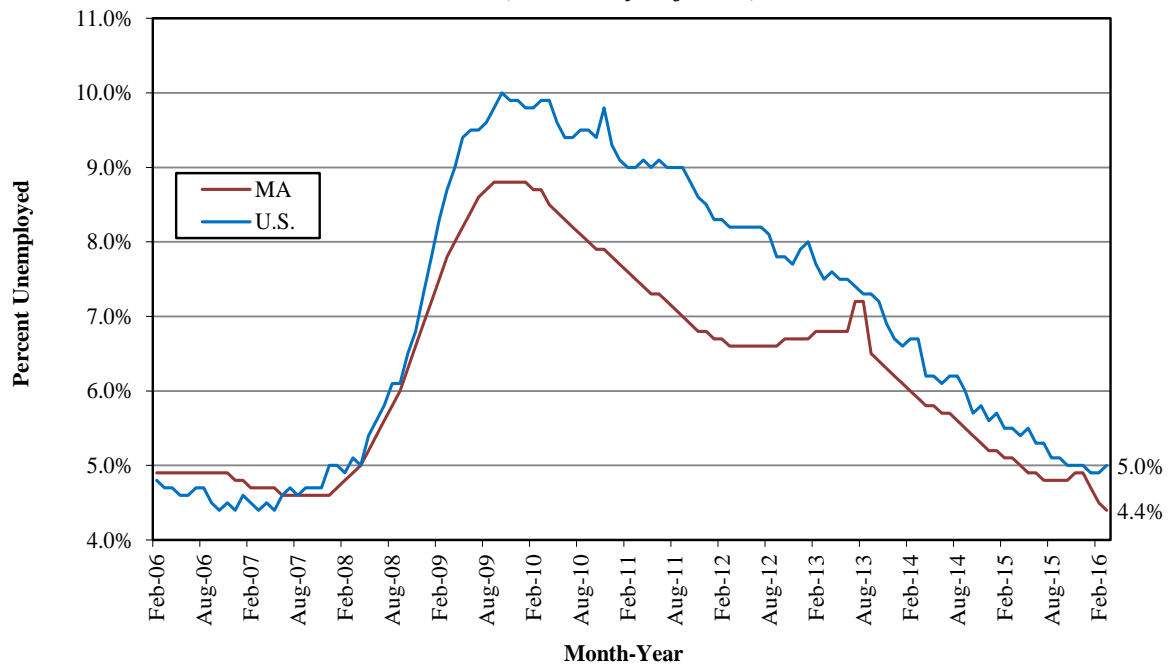
SOURCE: United States Department of Labor, Bureau of Labor Statistics.

***Annual Average Unemployment Rate, 1969-2015
Massachusetts, New England, and United States***



SOURCE: United States Department of Labor, Bureau of Labor Statistics.

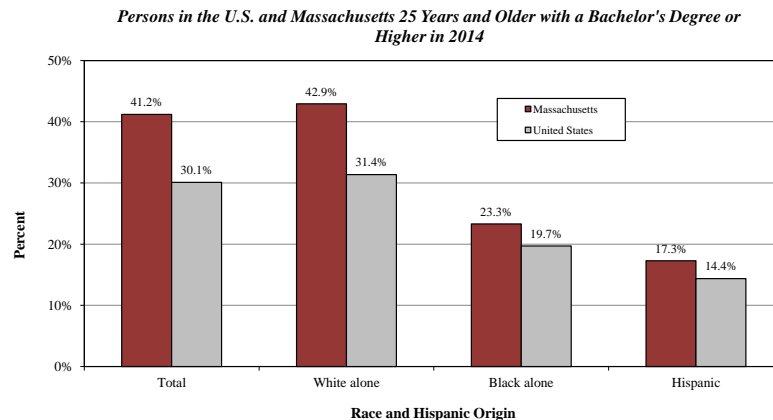
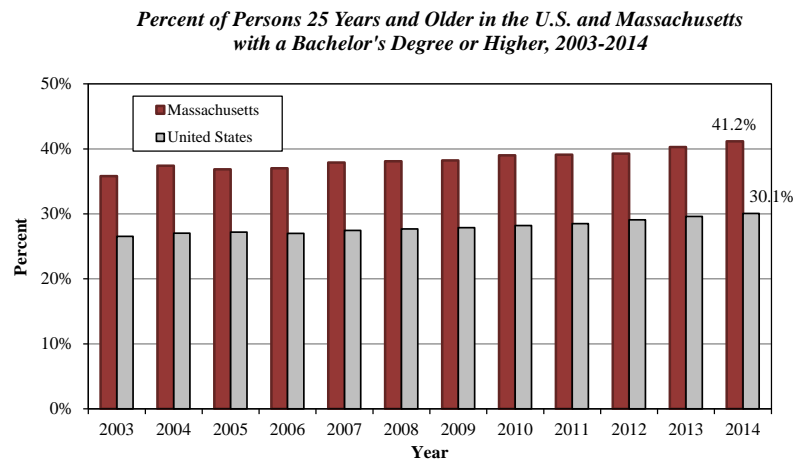
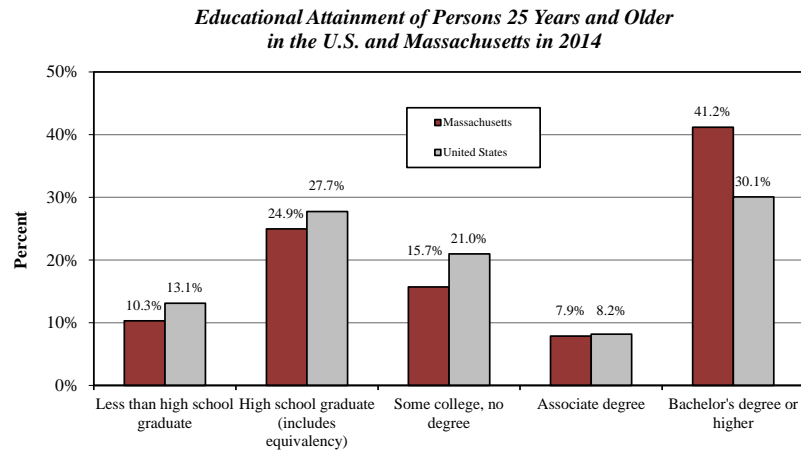
***Monthly Unemployment Rate, February 2006 - March 2016
Massachusetts and United States
(seasonally adjusted)***



SOURCE: MA Executive Office of Labor and Workforce Development, United States Department of Labor, Bureau of Labor Statistics.

EDUCATION AND TECHNOLOGY

Educational Attainment. The availability of a skilled and well-educated population is an important resource for the Commonwealth. Only the District of Columbia had a higher percentage of adults with a bachelor's degree or higher in 2014, according to the Census Bureau's American Community Survey (ACS). The Census also reported that Massachusetts ranked 30th in persons who had not completed high school, at 10.3 percent of the population aged 25 or more, less than the national average of 13.1. Massachusetts's black and Hispanic populations achieved college degrees at a lower rate than its white population but their rates were higher than their national averages. The most current ACS data are shown below.



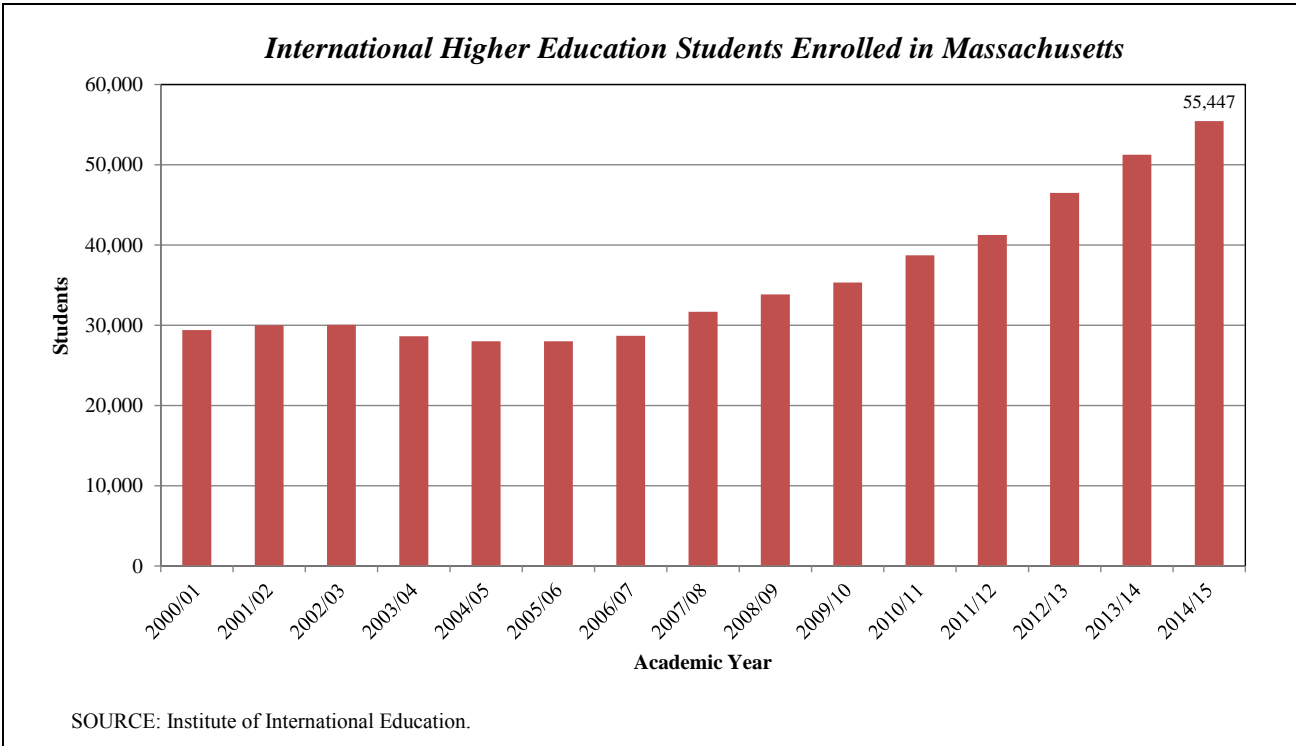
SOURCE: U.S. Census Bureau, American Community Survey, 1-year data.

Higher Education Data. The table below compares Massachusetts residents' higher education enrollment by race and Hispanic origin to the U.S. There were 0.3 percent fewer people enrolled in college in the U.S. in 2014 compared to 2013. This was a statistically significant change from 2013. Total enrollment in Massachusetts remained relatively unchanged.

<i>Higher Education Enrollment by Race and Hispanic Origin in 2014</i>						
	Total	White alone	Black alone	Asian alone	All other races	Hispanic or Latino
United States	22,994,851	67.8%	15.1%	8.2%	9.0%	16.4%
Massachusetts	588,870	72.7%	9.2%	10.4%	7.6%	10.4%

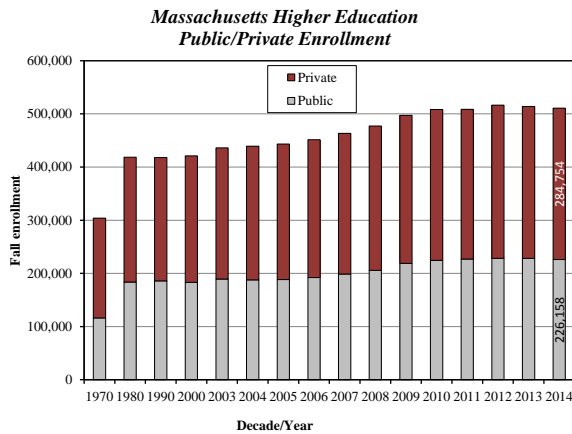
SOURCE: U.S. Census Bureau, American Community Survey 1-year data.

Survey data released by the Institute of International Education state that 55,447 foreign students were enrolled in Massachusetts colleges and universities in the 2014/2015 school year. This was an increase of 8.2 percent from the previous year. The national enrollment increased 10.0 percent. Massachusetts remains fourth ranked among states for foreign student enrollment.

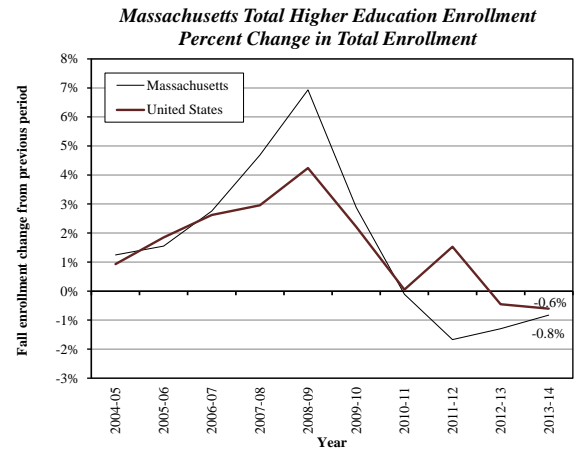


U.S. Department of Education data show that from 2013 to 2014, higher education enrollment decreased 0.8 percent in the United States and 0.6 percent at Massachusetts institutions. During the 2000-2014 period, enrollment in public higher education increased 25 percent in the United States and 23 percent at Massachusetts institutions. Enrollment in private institutions increased 56 percent in the United States and 20 percent at Massachusetts institutions.

Research and development expenditures at universities and colleges increased 41 percent in the United States and 61 percent in Massachusetts between 2005 and 2014.

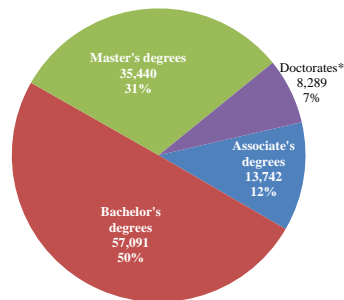


SOURCE: U.S. Department of Education, Digest of Education Statistics.



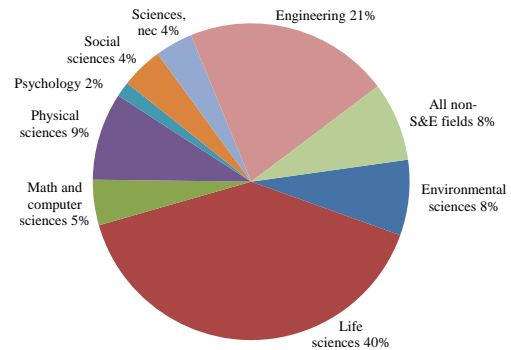
SOURCE: U.S. Department of Education, Digest of Education Statistics.

Degrees Conferred by Degree-Granting Institutions in Massachusetts 2012-13



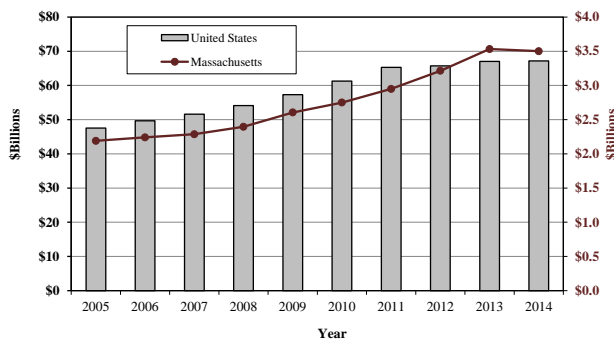
SOURCE: U.S. Department of Education, Digest of Education Statistics. *Includes Ph.D., Ed.D., and comparable degrees at the doctoral level.

R&D Expenditures at Massachusetts Universities and Colleges, by Science and Engineering Field: FY 2014



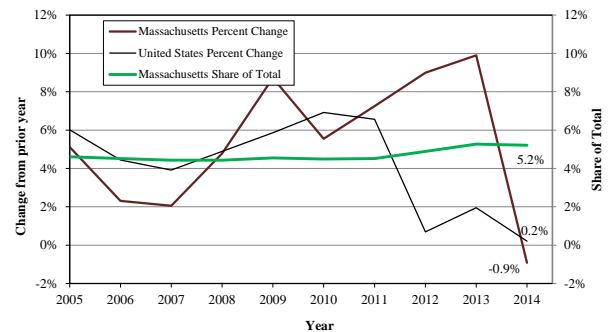
SOURCE: National Science Foundation. \$3.50 Billion in FY 2014.

Research and Development Expenditures at Universities and Colleges



SOURCE: National Science Foundation.

Research and Development Expenditures at Universities and Colleges



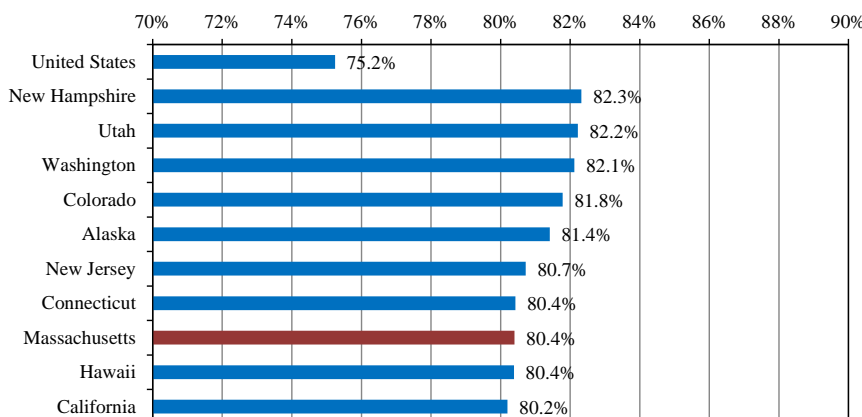
SOURCE: National Science Foundation.

Current Massachusetts Higher Education Rank Among States and the District of Columbia

Enrollment -2014	MA Rank	Degrees Awarded - 2013	MA Rank	Research & Development\$ - FY 2014	MA Rank
Total	13	Total	10	Total	5
Public	22	Associate's	25	Environmental sciences	2
Private	7	Bachelor's	10	Life sciences	7
		Master's	6	Math/computer sciences	6
		Professional/Doctorate	7	Physical sciences	2
				Psychology	8
				Social sciences	3
				Sciences, nec	2
				Engineering	5

Internet Access. Massachusetts is tied for seventh highest household internet subscription rate in the U.S. according to the Census Bureau's 2014 American Community Survey.

Top Ten States by Percent of Households with an Internet Subscription in 2014

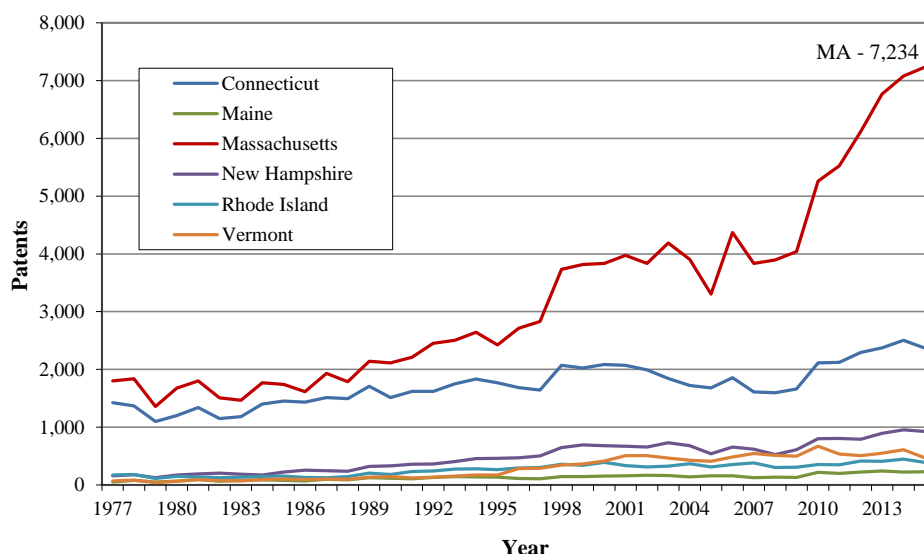


SOURCE: U.S. Census Bureau, 2014 American Community Survey 1-year data.

Patents. The U.S. Patent and Trademark Office notes: “This report shows the number of U.S. patent documents (i.e., utility patents, design patents, plant patents, reissue patents, defensive publications, and statutory invention registrations) granted since 1977, broken down by the state or country of origin (patent origin is determined by the residence of the first-named inventor).”

In 2015, Massachusetts was fourth among all states for the number of new patents issued. Only six nations originated more U.S. patents than Massachusetts, putting the state on par with Canada for origination of U.S. patents. Since 1977, Massachusetts has received more new patents than any other New England state. With 7,234 new patents in 2015, a 2.2 percent increase since 2014, Massachusetts innovators were responsible for 62 percent of the new patents in New England.

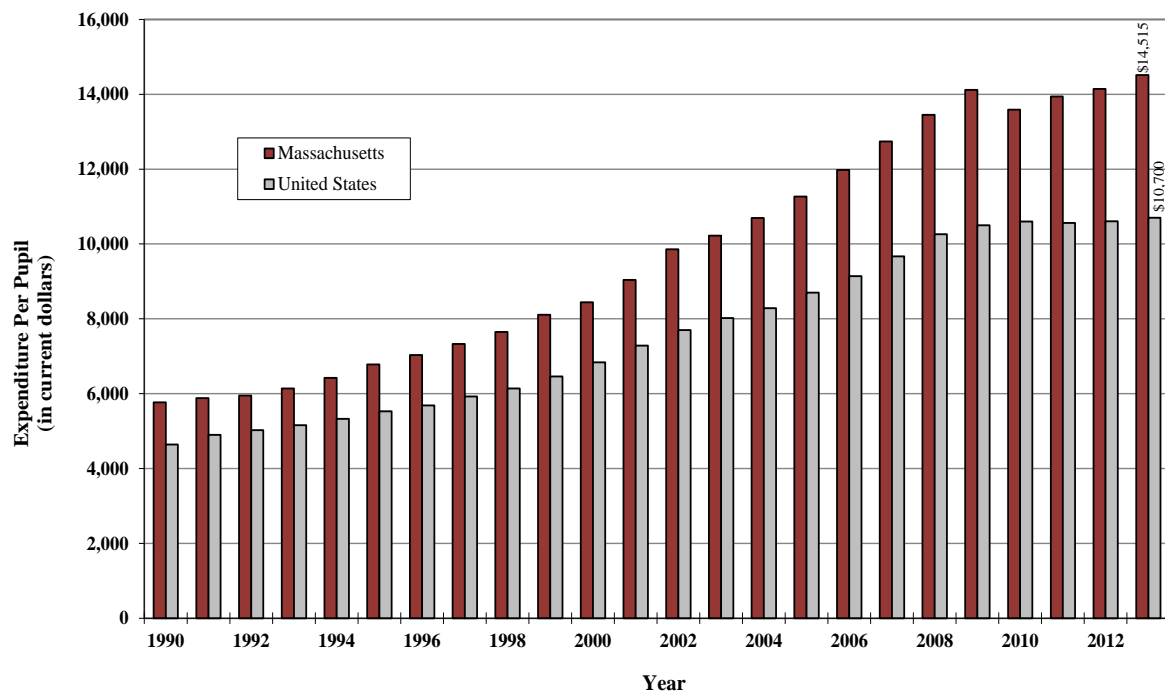
U.S. Patents for New England States, 1977-2013



SOURCE: U.S. Patent and Trademark Office, Patent Technology Monitoring Team (PTMT).

Primary and Secondary Education Expenditures. Massachusetts has spent from 12 to 36 percent more per pupil on primary and secondary education than the national average since 1981. During the 2012-2013 school year, the average Massachusetts per student expenditures increased 2.6 percent to \$14,515. Massachusetts was ranked 8th in the nation among states and the District of Columbia in 2013. The table and chart below show expenditures per pupil for Massachusetts and the U.S.

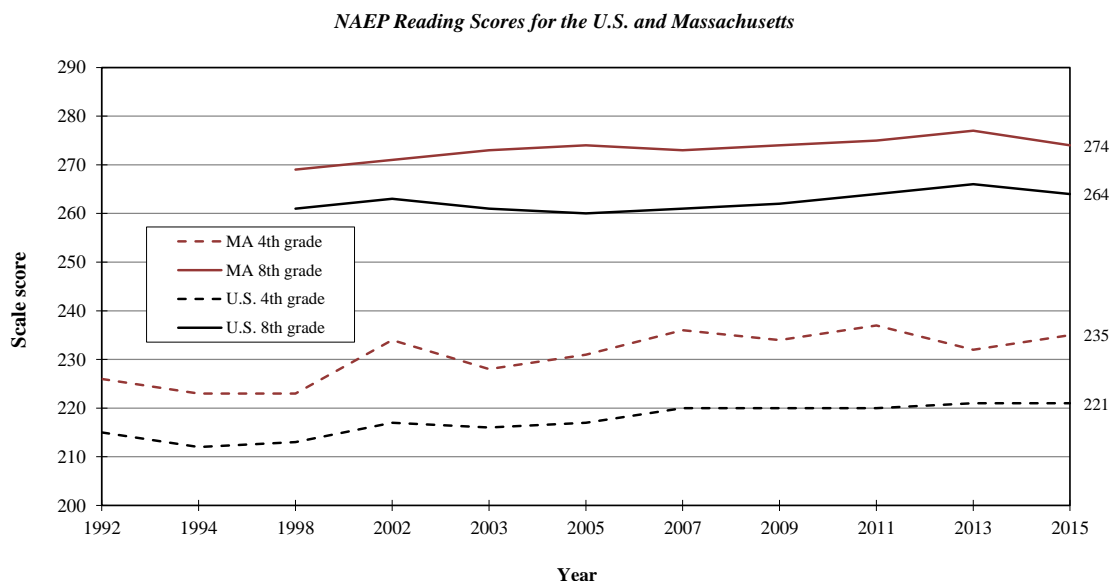
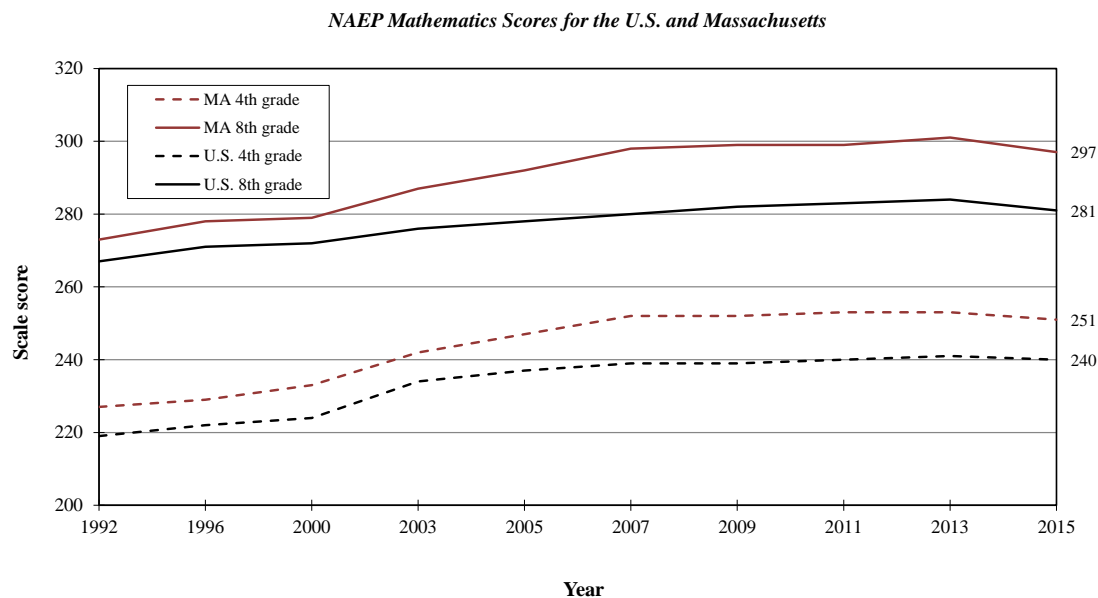
<i>Per Pupil Expenditure in Public Elementary and Secondary Schools</i> (in current, unadjusted dollars)				
Fiscal Year	Massachusetts	United States	Ratio (MA/U.S.)	MA change from previous year
1981	\$2,735	\$2,307	1.19	
1982	2,823	2,525	1.12	3.2%
1983	3,072	2,736	1.12	8.8%
1984	3,298	2,940	1.12	7.4%
1985	3,653	3,222	1.13	10.8%
1986	4,031	3,479	1.16	10.3%
1987	4,491	3,682	1.22	11.4%
1988	4,965	3,927	1.26	10.6%
1989	5,485	4,307	1.27	10.5%
1990	5,766	4,643	1.24	5.1%
1991	5,881	4,902	1.20	2.0%
1992	5,952	5,023	1.18	1.2%
1993	6,141	5,160	1.19	3.2%
1994	6,423	5,327	1.21	4.6%
1995	6,783	5,529	1.23	5.6%
1996	7,033	5,689	1.24	3.7%
1997	7,331	5,923	1.24	4.2%
1998	7,651	6,137	1.25	4.4%
1999	8,106	6,458	1.26	5.9%
2000	8,444	6,836	1.24	4.2%
2001	9,038	7,284	1.24	7.0%
2002	9,856	7,701	1.28	9.1%
2003	10,223	8,019	1.27	3.7%
2004	10,693	8,287	1.29	4.6%
2005	11,267	8,701	1.29	5.4%
2006	11,981	9,138	1.31	6.3%
2007	12,738	9,666	1.32	6.3%
2008	13,454	10,259	1.31	5.6%
2009	14,118	10,499	1.34	4.9%
2010	13,590	10,600	1.28	-3.7%
2011	13,941	10,560	1.32	2.6%
2012	14,142	10,608	1.33	1.4%
2013	14,515	10,700	1.36	2.6%



SOURCE: U.S. Census Bureau, <http://www.census.gov/govs/www/school.html>.

National Assessment of Educational Progress (NAEP) scores. The National Assessment of Educational Progress (NAEP), also known as "the Nation's Report Card," is the only nationally representative and continuing assessment of what America's students know and can do in various subject areas. Since 1969, assessments have been conducted periodically in reading, mathematics, science, writing, U.S. history, civics, geography, and the arts. Under the current structure, the Commissioner of Education Statistics, who heads the National Center for Education Statistics in the U.S. Department of Education, is responsible by law for administering the NAEP project.

Since 1990, NAEP assessments have also been conducted to give results for participating states. Those that choose to participate receive assessment results that report on the performance of students in that state. In its content, the state assessment is identical to the assessment conducted nationally. However, because the national NAEP samples were not and are not currently designed to support the reporting of accurate and representative state-level results, separate representative samples of students are selected for each participating jurisdiction/state. The graphs below compare the data available for Massachusetts to the nation.



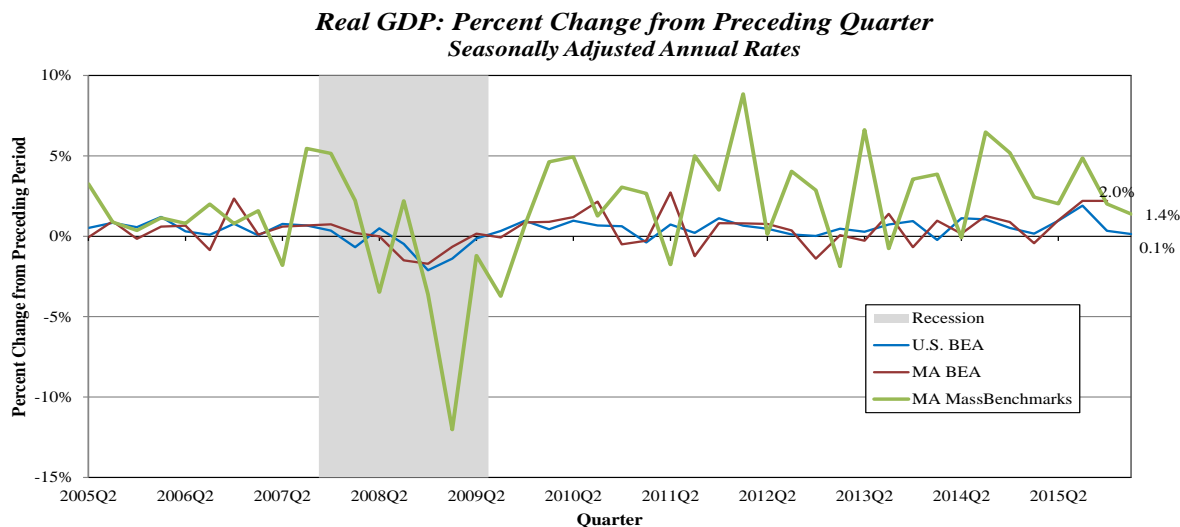
SOURCE: National Center for Education Statistics.

ECONOMIC BASE AND PERFORMANCE—STATE OVERVIEW

Comparing BEA GDP for the U.S., the region, and Massachusetts. The U.S. Bureau of Economic Analysis (BEA) defines Gross Domestic Product by State (GDP) as “the value added in production by the labor and property located in a state. GDP for a state is derived as the sum of the gross state product originating in all industries in a state. In concept, an industry’s GDP, referred to as its ‘value added’, is equivalent to its gross output (sales or receipts and other operating income, commodity taxes, and inventory change) minus its intermediate inputs (consumption of goods and services purchased from other U.S. industries or imported).”

The BEA provides national (in January) and state (in June) annual and quarterly GDP estimates. *MassBenchmarks* releases quarterly estimates of Massachusetts economic activity. This is reported in the following section. While we do not have access to many of the components that BEA uses to calculate state GDP in advance of its release, we provide an overview of our state’s components when they are available. Additionally, we provide state economic indexes and industrial sector data that are released more frequently and in some cases, are among the components used to calculate state GDP.

<i>State Gross Domestic Product - Annual Change</i> (billions of chained 2009 dollars)						
Year	Massachusetts		New England		United States	
	GDP	Annual change	GDP	Annual change	GDP	Annual change
2000	\$348		\$720		\$12,560	
2001	\$352	1.0%	\$728	1.1%	\$12,682	1.0%
2002	\$353	0.5%	\$734	0.8%	\$12,909	1.8%
2003	\$362	2.5%	\$754	2.6%	\$13,271	2.8%
2004	\$369	2.1%	\$781	3.6%	\$13,774	3.8%
2005	\$375	1.6%	\$793	1.5%	\$14,234	3.3%
2006	\$381	1.6%	\$809	2.0%	\$14,614	2.7%
2007	\$391	2.6%	\$826	2.1%	\$14,874	1.8%
2008	\$391	0.1%	\$815	-1.3%	\$14,830	-0.3%
2009	\$382	-2.4%	\$792	-2.8%	\$14,419	-2.8%
2010	\$395	3.4%	\$812	2.5%	\$14,784	2.5%
2011	\$404	2.3%	\$820	1.0%	\$15,021	1.6%
2012	\$412	1.9%	\$830	1.1%	\$15,355	2.2%
2013	\$411	-0.3%	\$827	-0.4%	\$15,583	1.5%
2014	\$419	2.1%	\$839	1.6%	\$15,962	2.4%
2015					\$16,349	2.4%



SOURCES: U.S. Bureau of Economic Analysis, MA *MassBenchmarks* calculations by Dr. Alan Clayton-Matthews. 2015 State and Regional GDP data are not available as of May 2, 2016.

ECONOMIC BASE AND PERFORMANCE—ECONOMIC INDICATORS

State Coincident Indexes. To track more recent changes in the state and national economies, we use the Federal Reserve Bank of Philadelphia's Coincident Indexes. It:

...produces a monthly coincident index for each of the 50 states. The indexes are released a few days after the Bureau of Labor Statistics (BLS) releases the employment data for the states.

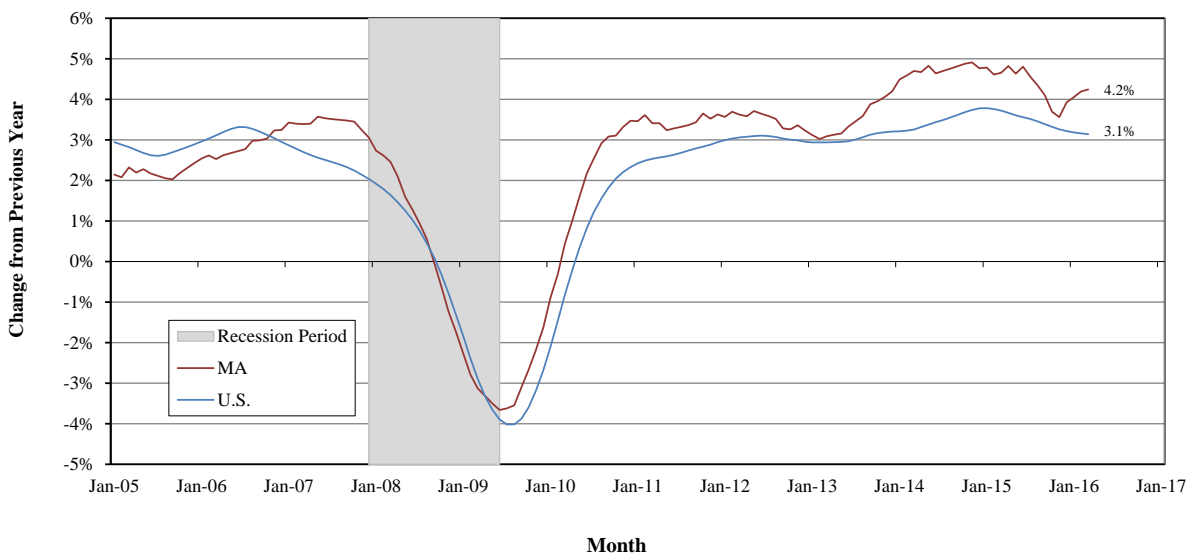
The coincident indexes combine four state-level indicators to summarize current economic conditions in a single statistic. The four state-level variables in each coincident index are nonfarm payroll employment, average hours worked in manufacturing, the unemployment rate, and wage and salary disbursements deflated by the consumer price index (U.S. city average). The trend for each state's index is set to the trend of its gross domestic product (GDP), so long term growth in the state's index matches long term growth in its GDP. (<https://www.phil.frb.org/research-and-data/regional-economy/indexes/coincident/>)

The graph below indicates the state and national index change from 12 months prior. Recent revisions to BLS data the Philadelphia Federal Reserve Bank uses to construct its indexes resulted in an improved trend for Massachusetts since the recession ended in 2009. The table below compares the Massachusetts index to its New England neighbors and the U.S.

Comparing the U.S. and New England States Coincident Indexes

Area	March 2016	1-Month Change	3-Month Change	12-Month Change
U.S.	178.3	0.2%	0.7%	3.1%
Massachusetts	200.0	0.5%	1.4%	4.2%
Connecticut	170.2	0.2%	0.7%	3.1%
Maine	151.3	0.5%	1.5%	4.3%
New Hampshire	211.8	0.3%	1.3%	3.9%
Rhode Island	174.6	0.2%	0.7%	4.0%
Vermont	172.8	0.5%	1.3%	3.7%

Comparing the U.S. and Massachusetts Coincident Indexes

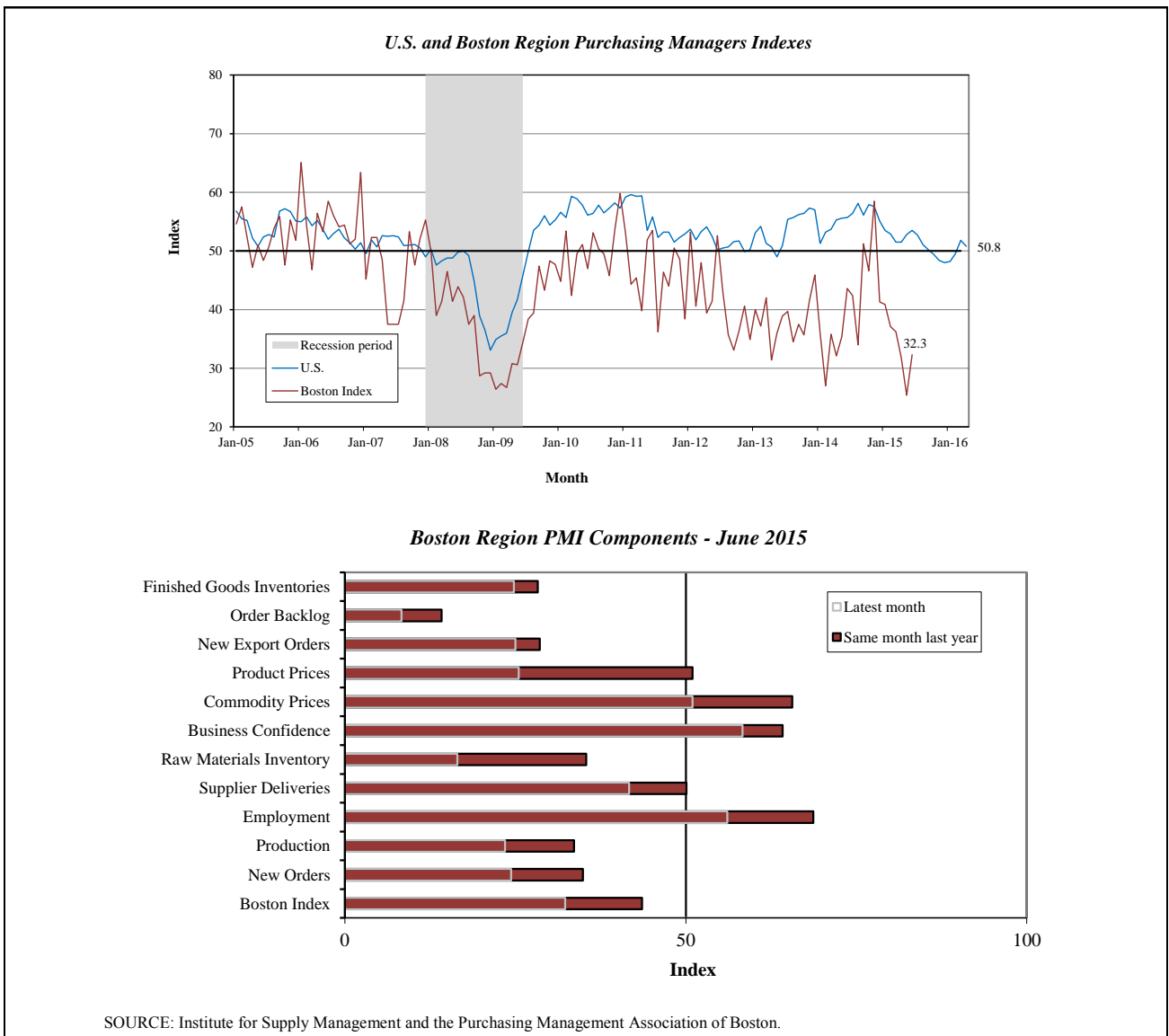


SOURCE: Federal Reserve Bank of Philadelphia. April, 2016. Shaded areas are recession periods.
Note: Indexes are set to 100 at July 1992.

Institute for Supply Management Purchasing Manager Indexes (PMI). These indexes are compiled using survey data from purchasing and supply executives and are used as a leading business indicator. While the national index is based on a survey of manufacturers, the Boston region's is based on a survey of "companies representing industries as diverse as the banking and financial services, pharmaceuticals and biotechnology, software development and communication, medical products and equipment, computers, chemicals, consumer products, education, and the public sector." **It should be noted that the Boston survey has been suspended, and consequently, data from it are not currently being updated.**

Index readings above 50 indicate the economy is generally expanding. Readings below 50 indicate the economy is generally contracting, although a reading above 42 for a period of time indicates the economy is generally expanding. Components of the national index include new orders, production, employment, supplier deliveries, inventories, customer inventories, prices, backlog of orders, exports and imports. The Boston region's components are slightly different and include new orders, production, employment, supplier deliveries, raw monthly materials inventory, business confidence, commodity prices, product prices, new export orders, order backlog and finished goods inventories. These components show which segments of the business supply chain are expanding or contracting.

The September 2015 national index indicated that the manufacturing sector has been expanding since May 2009. The Boston region's June 2015 index of 32.3 indicated that overall business conditions were contracting after hitting a four-year high of 58.5 in November 2014. Eight of the eleven Boston region index components were contracting in the June 2015 survey but the business confidence, employment components, and commodity prices were expanding.



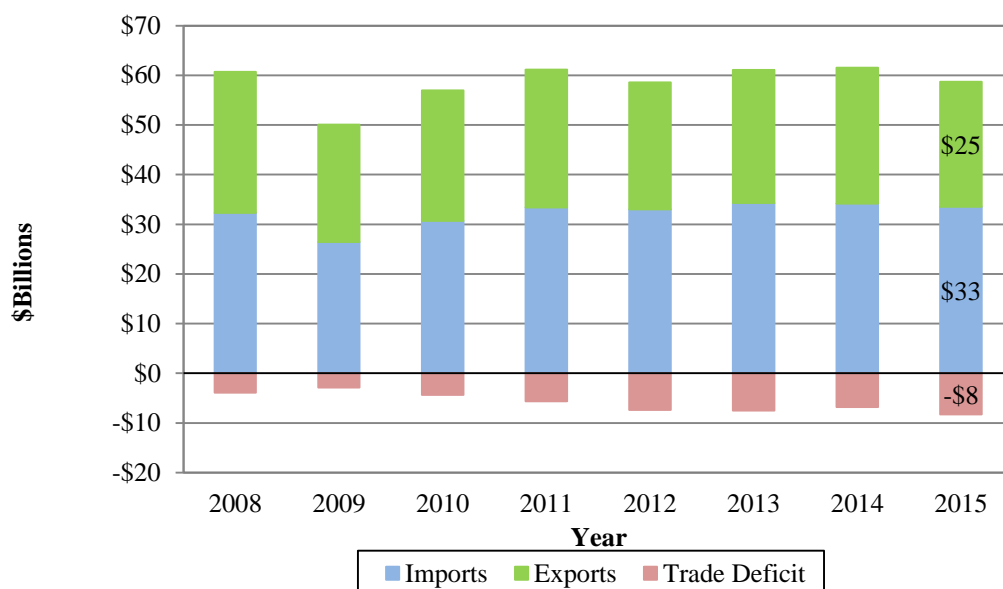
ECONOMIC BASE AND PERFORMANCE—INTERNATIONAL TRADE

Total Trade Volume. Total trade volume, exports and imports, decreased 4.6 percent from 2014 to \$58.7 billion in 2015. Canada trade volume was \$10.7 billion and at 18.0 percent of the total state trade, was by far our most valuable trading partner. Massachusetts trade deficit, \$8.3 billion, grew 21.6 percent in 2015. See appendix 8 for more trade data.

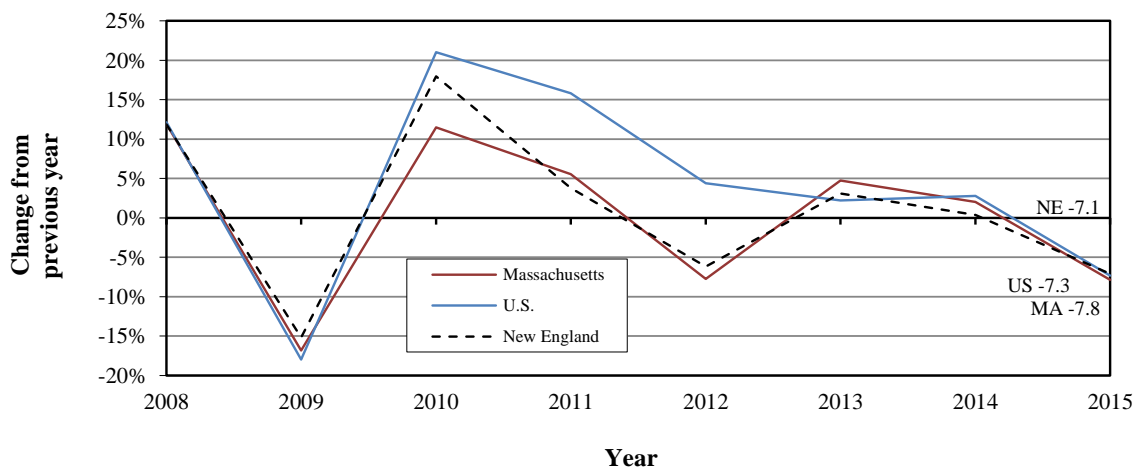
Exports. Massachusetts ranked 19th in the United States in 2015 and first in New England with \$25.2 billion in exports. This was a 7.9 percent decrease from the previous year's export value, while national exports decreased by 7.3 percent. Total exports from New England decreased by 7.1 percent. Canada was again our top export destination in 2015 with \$3.1 billion.

Imports. Imports decreased 2.0 percent to \$33.5 billion in 2015. Canada was also the largest source for Massachusetts imports in 2015, from which we imported \$7.6 billion or 22.8 percent of our total.

Massachusetts Imports, Exports and Trade Deficit

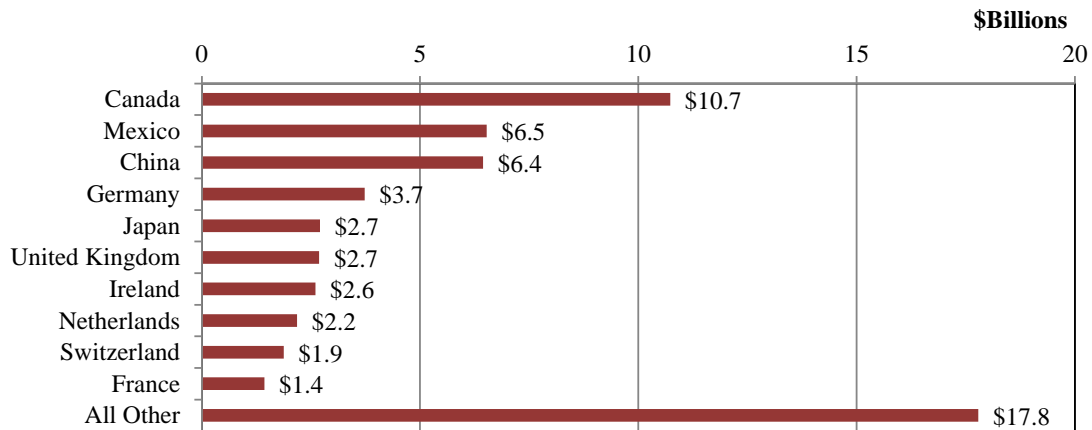


Export Growth for Massachusetts, U.S. and New England

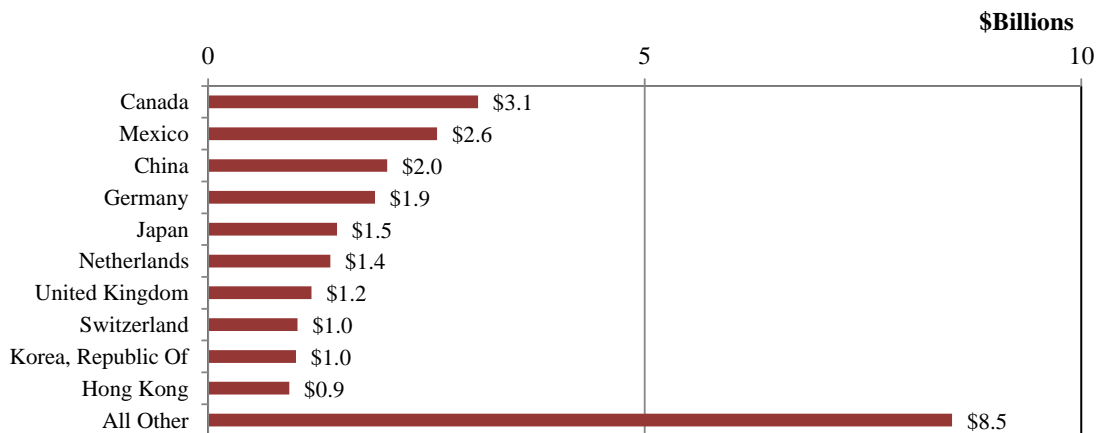


SOURCE: United States Department of Commerce and WISERTrade.org.

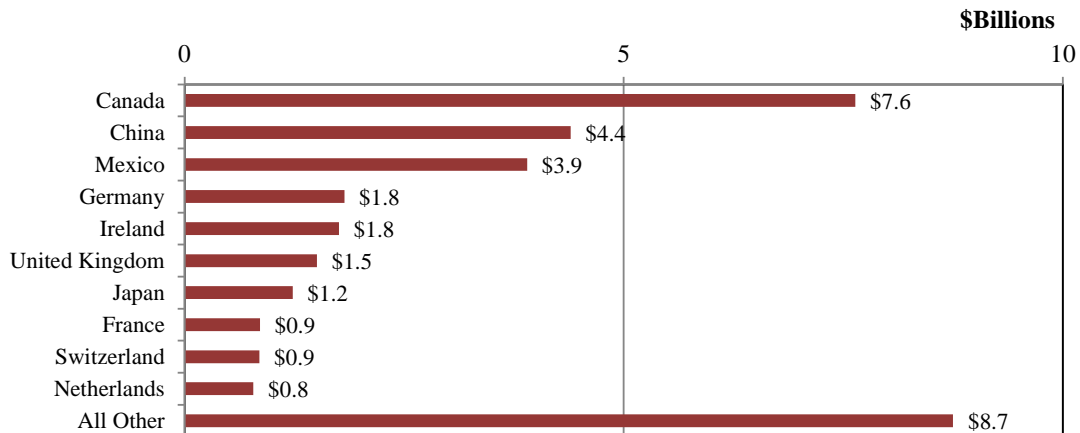
Massachusetts 2015 Top Ten Trade Partners



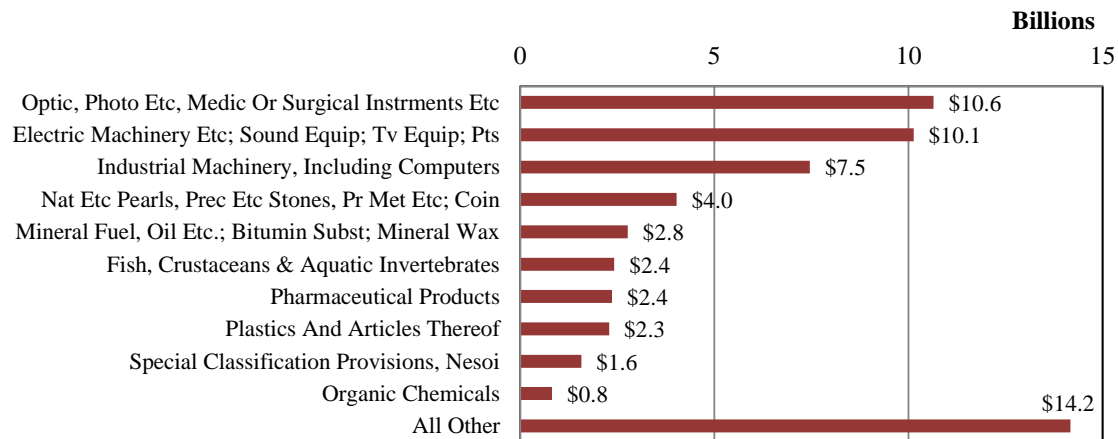
Massachusetts 2015 Top Ten Export Partners



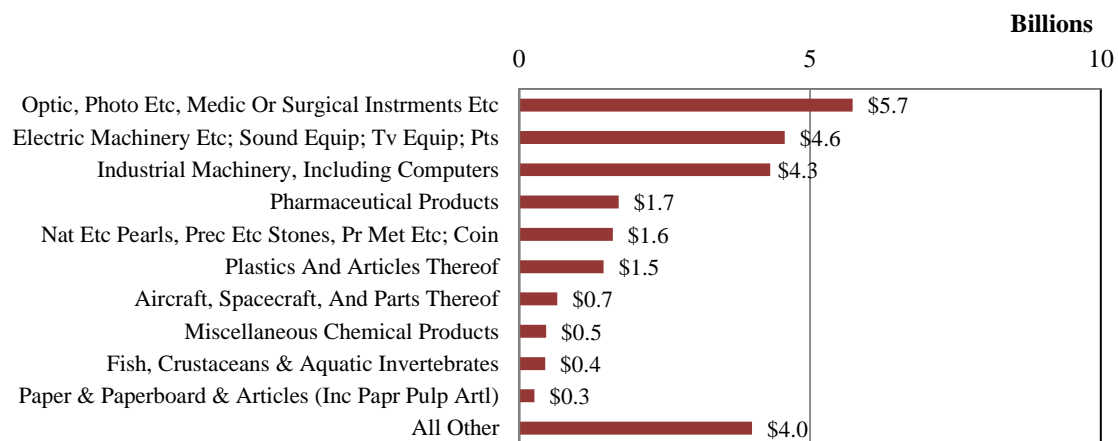
Massachusetts 2015 Top Ten Import Partners



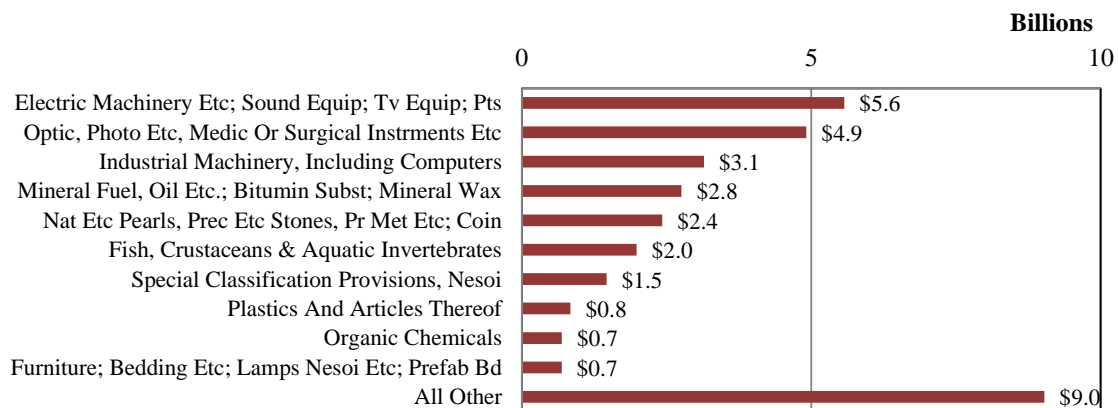
Massachusetts 2015 Top Commodities Imported and Exported



Massachusetts 2015 Top Ten Commodities Exported



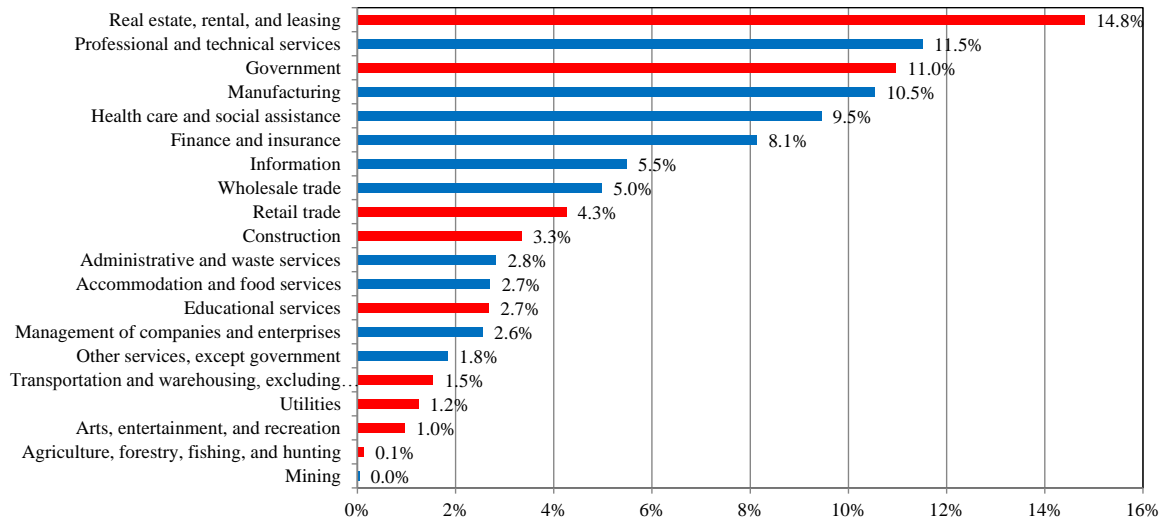
Massachusetts 2015 Top Ten Commodities Imported



ECONOMIC BASE AND PERFORMANCE—INDUSTRY SECTOR DETAIL (NAICS BASIS)

The Massachusetts economy remains diversified among several industrial and non-industrial sectors. The four largest sectors of the economy, real estate, rental and leasing, professional and technical services, government, and manufacturing, contributed 47.8 percent of the GDP in 2014. The real estate, rental and leasing sector remained the largest contributor in 2014. The following bar chart displays the latest sector contributions to the Massachusetts GDP.

NAICS Sector Composition of Massachusetts Gross Domestic Product 2014*
(as a percent of total GDP in chained 2009 dollars)



SOURCE: United States Department of Commerce, Bureau of Economic Analysis.

NOTE: Blue bar indicates positive change from previous year and red is a negative change. Transportation and warehousing excludes U.S. Post Office.

GDP Subsectors. When measured in chained 2009 dollars, the change in Massachusetts total GDP grew 14.8 percent between 2003 and 2013. Between 2003 and 2013 (the latest data available for subsector data), several industries grew much faster than the state average. Industry subsectors that experienced substantial cumulative growth or reduction are listed in the following chart.

Industry Subsectors with a Substantial Growth or Reduction
(chained 2009 dollars)

NAICS* Industry Subsector	Percent change 2004-2014
Computer systems design and related services	131%
Motion picture and sound recording industries	80%
Computer and electronic products manufacturing	74%
Publishing industries, except Internet (includes software)	65%
Legal services	-17%
Electrical equipment, appliance, and components manufacturing	-23%
Plastics and rubber products manufacturing	-23%
Other transportation equipment manufacturing	-53%

SOURCE: United States Department of Commerce, Bureau of Economic Analysis. Updated January 2016.

NOTE: Subsector represents at least a half percent of Massachusetts GDP in the latest year.

*North American Industry Classification System.

Gross Domestic Product by Industry in Massachusetts
(millions of chained 2009 dollars)

NAICS* Industry Sector	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total Gross Domestic Product by State	\$369,323	\$375,171	\$381,151	\$390,968	\$391,243	\$381,866	\$394,975	\$404,185	\$411,752	\$410,522	\$419,038
Private industries	\$326,067	\$331,595	\$336,984	\$345,699	\$345,148	\$335,769	\$349,415	\$356,383	\$366,214	\$365,154	\$373,151
Agriculture, forestry, fishing, and hunting	\$657	\$720	\$795	\$684	\$670	\$712	\$745	\$617	\$615	\$592	\$584
Mining	\$295	\$221	\$215	\$302	\$152	\$164	\$132	\$120	\$129	\$152	\$186
Utilities	\$4,877	\$4,507	\$5,085	\$5,095	\$5,124	\$4,866	\$5,237	\$5,286	\$5,410	\$5,221	\$5,203
Construction	\$18,594	\$17,794	\$16,387	\$15,272	\$14,181	\$12,563	\$12,369	\$12,715	\$13,409	\$13,894	\$14,016
Manufacturing	\$36,354	\$37,344	\$40,370	\$45,017	\$42,343	\$40,052	\$44,379	\$43,706	\$44,198	\$43,211	\$44,185
Wholesale trade	\$21,939	\$21,477	\$22,395	\$22,725	\$22,812	\$20,196	\$20,348	\$20,430	\$19,790	\$20,321	\$20,895
Retail trade	\$19,005	\$19,251	\$18,367	\$17,498	\$16,834	\$16,725	\$17,342	\$17,310	\$17,371	\$17,627	\$17,850
Transportation and warehousing, excluding Postal Service	\$6,236	\$6,513	\$6,525	\$6,631	\$6,455	\$5,979	\$6,289	\$6,648	\$6,470	\$6,431	\$6,483
Information	\$16,654	\$18,358	\$18,316	\$19,875	\$21,209	\$19,751	\$22,000	\$22,024	\$22,044	\$22,188	\$23,002
Finance and insurance	\$31,940	\$31,653	\$32,711	\$32,322	\$29,167	\$32,749	\$32,254	\$32,227	\$35,267	\$33,240	\$34,102
Real estate, rental, and leasing	\$52,571	\$54,391	\$53,702	\$55,247	\$55,614	\$55,532	\$57,916	\$60,338	\$61,994	\$61,648	\$62,064
Professional and technical services	\$36,562	\$37,394	\$38,485	\$39,658	\$43,826	\$41,289	\$42,739	\$44,156	\$46,254	\$46,517	\$48,245
Management of companies and enterprises	\$9,359	\$9,408	\$9,292	\$9,032	\$8,891	\$8,371	\$8,525	\$9,828	\$9,911	\$10,276	\$10,715
Administrative and waste services	\$9,265	\$10,019	\$10,332	\$11,020	\$11,024	\$10,046	\$10,740	\$11,215	\$11,513	\$11,540	\$11,862
Educational services	\$10,155	\$9,888	\$9,889	\$10,270	\$10,545	\$10,820	\$11,030	\$11,149	\$11,212	\$11,102	\$11,242
Health care and social assistance	\$29,687	\$30,456	\$31,842	\$32,712	\$34,805	\$35,239	\$36,073	\$36,809	\$38,244	\$38,746	\$39,607
Arts, entertainment, and recreation	\$3,443	\$3,464	\$3,472	\$3,637	\$3,591	\$3,386	\$3,626	\$3,712	\$3,839	\$3,975	\$4,041
Accommodation and food services	\$10,576	\$10,450	\$10,388	\$10,332	\$10,075	\$9,652	\$10,200	\$10,643	\$10,920	\$11,108	\$11,341
Other services, except government	\$8,764	\$8,671	\$8,532	\$8,377	\$8,122	\$7,677	\$7,556	\$7,574	\$7,644	\$7,521	\$7,711
Government	\$43,276	\$43,571	\$44,158	\$45,257	\$46,093	\$46,097	\$45,583	\$47,796	\$45,609	\$45,441	\$45,970

Rank of Industry Contribution to GDP in Massachusetts
(millions of chained 2009 dollars)

NAICS* Industry Sector	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total Gross Domestic Product by State											
Private industries											
Agriculture, forestry, fishing, and hunting	19	19	19	19	19	19	19	19	19	19	19
Mining	20	20	20	20	20	20	20	20	20	20	20
Utilities	17	17	17	17	17	17	17	17	17	17	17
Construction	9	10	10	10	10	10	10	10	10	10	10
Manufacturing	4	4	3	3	4	4	3	4	4	4	4
Wholesale trade	7	7	7	7	7	7	8	8	8	8	8
Retail trade	8	8	8	9	9	9	9	9	9	9	9
Transportation and warehousing, excluding Postal Service	16	16	16	16	16	16	16	16	16	16	16
Information	10	9	9	8	8	8	7	7	7	7	7
Finance and insurance	5	5	5	6	6	6	6	6	6	6	6
Real estate, rental, and leasing	1	1	1	1	1	1	1	1	1	1	1
Professional and technical services	3	3	4	4	3	3	4	3	2	2	2
Management of companies and enterprises	13	14	14	14	14	14	14	14	14	14	14
Administrative and waste services	14	12	12	11	11	12	12	11	11	11	11
Educational services	12	13	13	13	12	11	11	12	12	13	13
Health care and social assistance	6	6	6	5	5	5	5	5	5	5	5
Arts, entertainment, and recreation	18	18	18	18	18	18	18	18	18	18	18
Accommodation and food services	11	11	11	12	13	13	13	13	13	12	12
Other services, except government	15	15	15	15	15	15	15	15	15	15	15
Government	2	2	2	2	2	2	2	2	3	3	3

SOURCE: United States Department of Commerce, Bureau of Economic Analysis.
*North American Industry Classification System.

Industry Sector Analysis. The following section contains a summary for each of the twenty major NAICS sectors. The data series start in 2001, the last time the state experienced a downturn, commonly referred to as “The Telecom Bubble”. We report the latest quarterly data at an annual rate where available. This may skew sectors that experience seasonal trends, such as construction. Graphs include data value labels for the latest annual and quarterly annualized points.

Not all datasets are reported for all of the major NAICS sectors. The Massachusetts Department of Workforce and Labor Development’s Employment and Wages (ES-202) data series are available for every sector and contain the number of establishments, average monthly employment, total annual wages and average weekly wages for the establishments with employees. The data are reported quarterly and annually for employees in the private, federal government, state government, and local government sectors. **NOTE:** Beginning with the first quarter 2013, a code change for employees from private households (NAICS 814110) into services for the elderly and persons with disabilities (NAICS 624120) moved 33,960 employees in Massachusetts in January 2013.

The next graph, nonemployer businesses and receipts, uses the U.S. Census Nonemployer Statistics series and is available for every sector except 55 - Management of Companies and Enterprises and 92 - Public Administration. Some sectors also lack subsector (we used four digit NAICS) detail. These are annual data, with a two-year reporting lag for businesses that do not have paid employees and are subject to federal income tax. Census reports that “Nonemployers account for a majority of all business establishments, but average less than four percent of all sales or receipts.” These can be second or part-time businesses and not the owner’s primary source of income.

State Gross Domestic Product is an annual series from the U.S. Bureau of Economic Analysis’s Regional Economic Accounts. **NEW:** U.S. and state GDP is inflation adjusted to 2009. U.S. GDP is available quarterly and beginning in August 2014, quarterly state GDP will be reported. The June 2014 release included a comprehensive revision of gross domestic product by state. For more information, please visit:

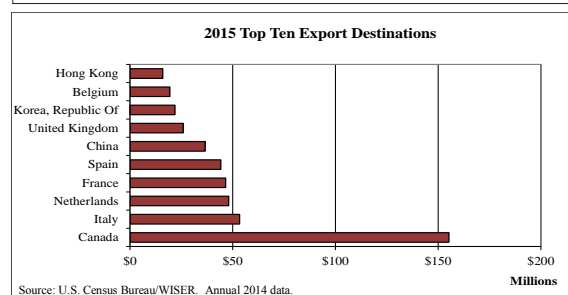
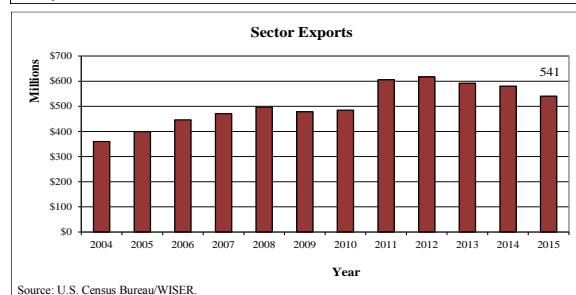
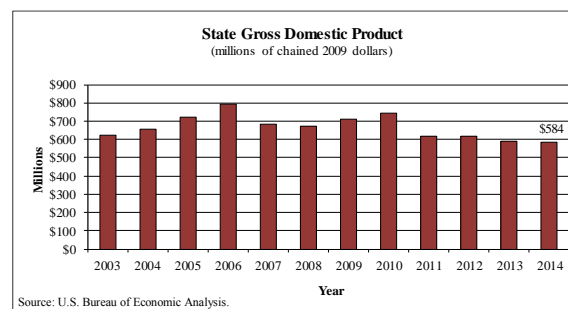
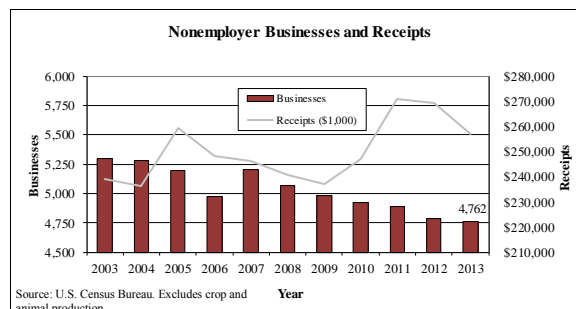
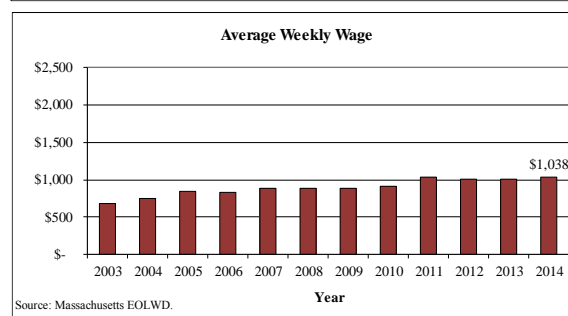
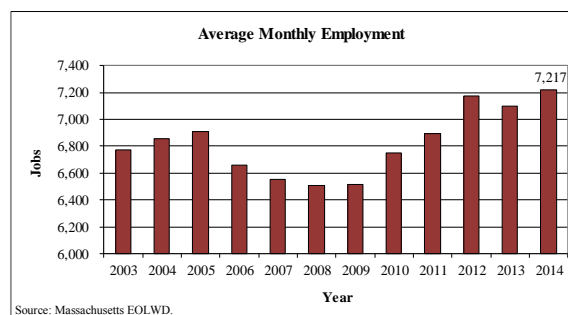
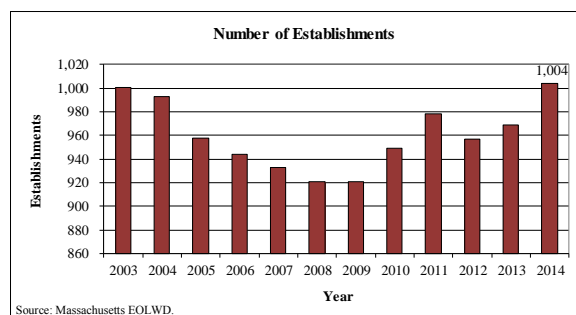
http://www.bea.gov/newsreleases/regional/gdp_state/gsp_newsrelease.htm.

Foreign exports from the U.S. Census Bureau’s Foreign Trade Division and WISERTrade, are available for four industries on a monthly basis. Total state exports are available on a monthly basis. Sector exports and the top ten export destinations for this industry sector are by dollar value.

Each sector analysis has a summary at the bottom of each page. The summary provides (when available):

1. GDP contribution to state total: this sector’s GDP divided by the state’s total GDP. A green figure in the text at the bottom of the page indicates it is larger than the previous year’s GDP contribution. Red indicates it is smaller than the previous year’s and black indicates no change from the previous year’s GDP contribution.
2. GDP rank: this sector’s GDP rank versus all state sectors. A green figure in the text at the bottom of the page indicates that it is higher than the previous year’s rank. Red indicates that it is lower than the previous year’s and black indicates that there was no change from the previous year’s GDP rank.
3. Nonemployer to employer establishment ratio: the number of nonemployer establishments divided by the number of establishments with employers. In general, a ratio greater than one means there are more small businesses. A number less than one means there are more large businesses.
4. Establishments with employees: the subsector with the largest number of establishments who have employees.
5. Nonemployer establishments: the subsector with the largest number of establishments that do not have employees.
6. Employees: the subsector with the largest number of employees, at establishments with employees.
7. Annual wages: the subsector with the largest total annual wages, at establishments with employees.
8. Average weekly wage: the subsector with the largest average weekly wage, at establishments with employees.
9. Annual receipts at nonemployer establishments: the subsector with the most receipts, at establishments that do not have employees.
10. Most valuable export: the subsector export with the highest dollar value.

NAICS 11 - Agriculture, Forestry, Fishing & Hunting. The Agriculture, Forestry, Fishing and Hunting sector comprises establishments primarily engaged in growing crops, raising animals, harvesting timber, and harvesting fish and other animals from a farm, ranch, or their natural habitats.



Summary.

GDP contribution to state total: **0.1%**

GDP rank: **19 of 20**

Nonemployer to employer establishment ratio: **4.9 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Fishing**

Nonemployer establishments: **Fishing**

Employees: **Greenhouse and nursery production**

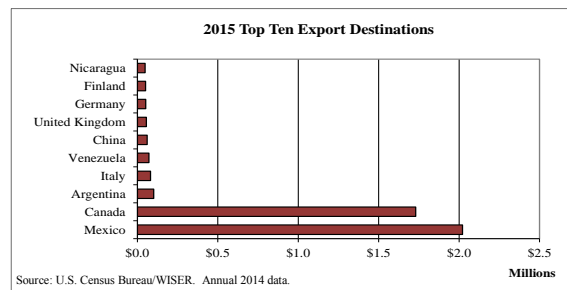
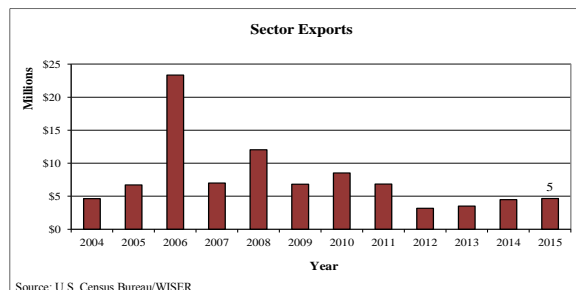
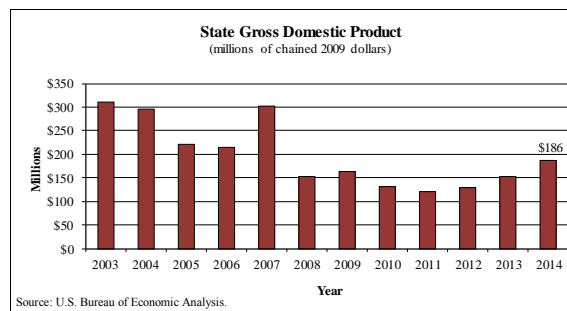
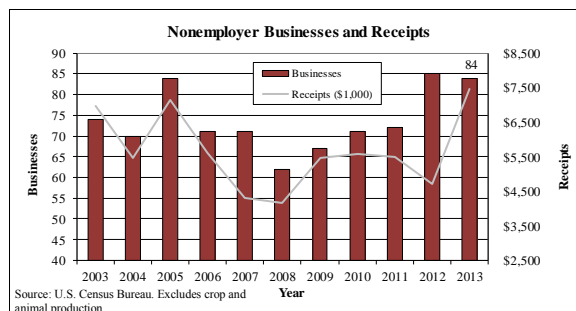
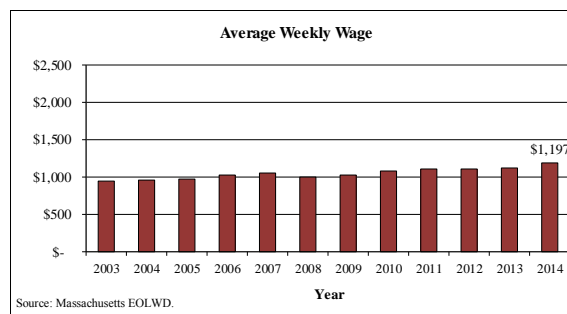
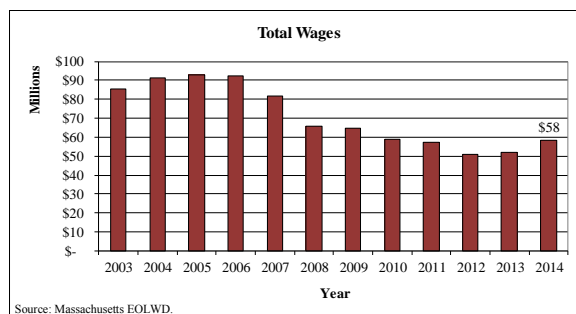
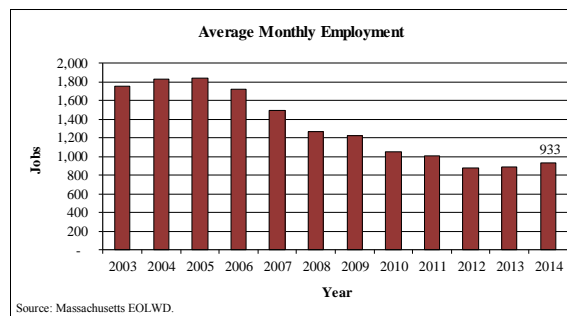
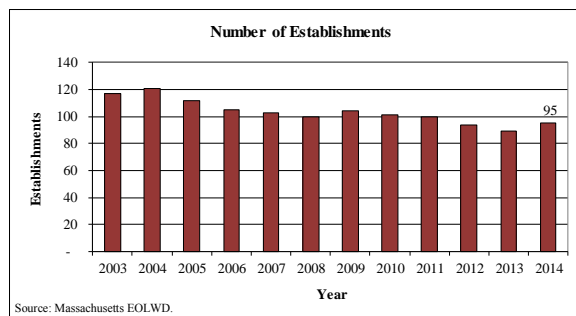
Annual wages: **Fishing**

Average weekly wage: **Fishing**

Annual receipts at nonemployer establishments: **Fishing**

Most valuable export: **Fish, fresh, chilled or other frozen marine products**

NAICS 21 – Mining. The Mining, Quarrying, and Oil and Gas Extraction sector comprises establishments that extract naturally occurring mineral solids, such as coal and ores; liquid minerals, such as crude petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and flotation), and other preparation customarily performed at the mine site, or as a part of mining activity.



Summary.

GDP contribution to state total: **0.04%**

GDP rank: **20 of 20**

Nonemployer to employer establishment ratio: **0.9 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Nonmetallic mineral mining and quarrying**

Nonemployer establishments: **Nonmetallic mineral mining and quarrying**

Employees: **Nonmetallic mineral mining and quarrying**

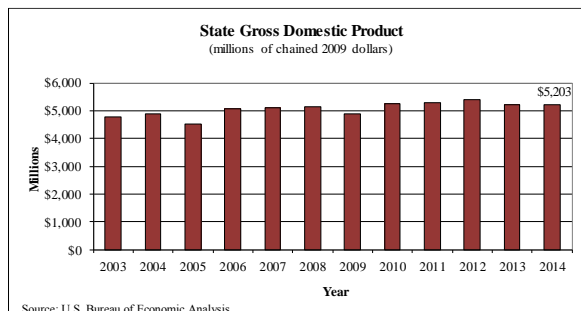
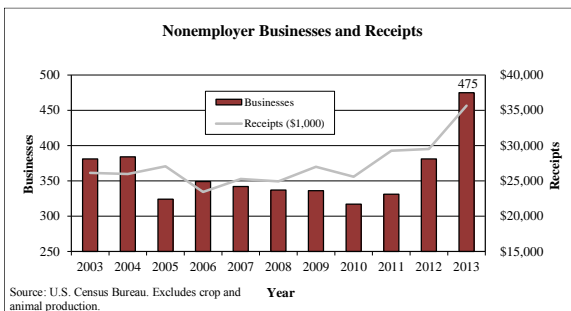
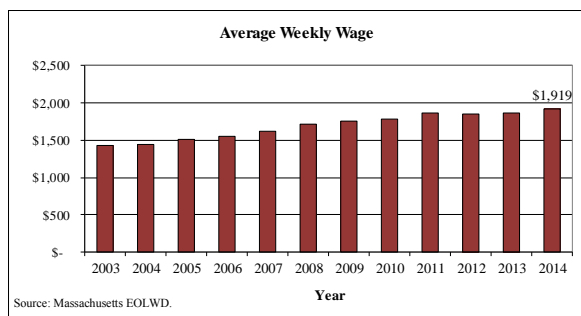
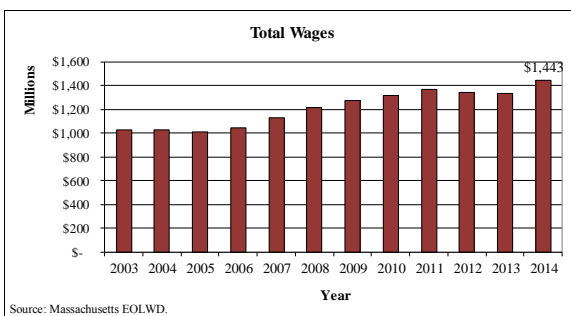
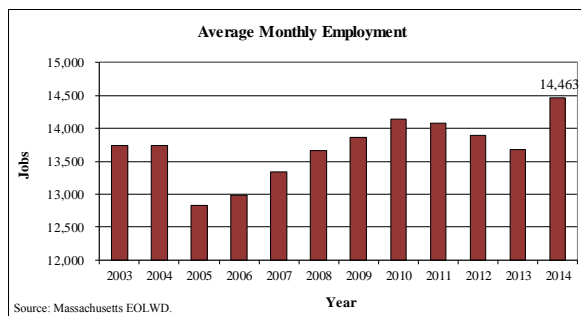
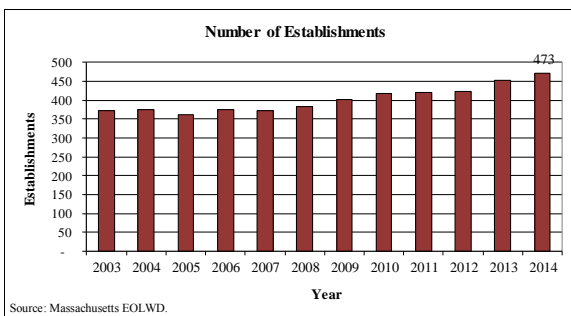
Annual wages: **Nonmetallic mineral mining and quarrying**

Average weekly wage: **Oil and gas extraction**

Annual receipts at nonemployer establishments: **Nonmetallic mineral mining and quarrying**

Most valuable export: **Minerals and ores**

NAICS 22 – Utilities. The Utilities sector comprises establishments engaged in the provision of the following utility services: electric power, natural gas, steam supply, water supply, and sewage removal. See the appendix, pages five and six for supplemental tables regarding electricity generation, supply and capacity.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **1.2%**

GDP rank: **17 of 20**

Nonemployer to employer establishment ratio: **1.1 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Power generation and supply**

Nonemployer establishments: Subsector detail N/A

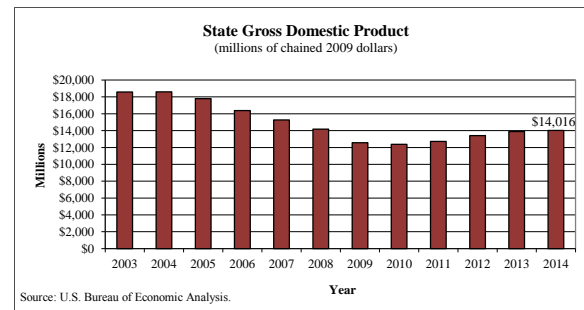
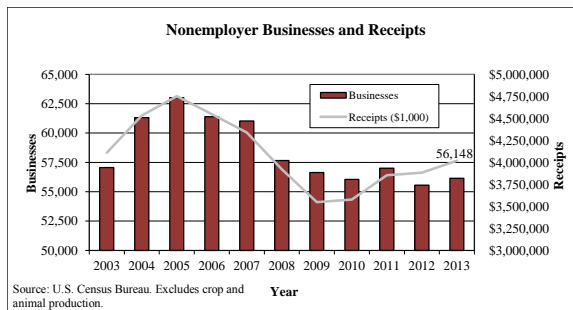
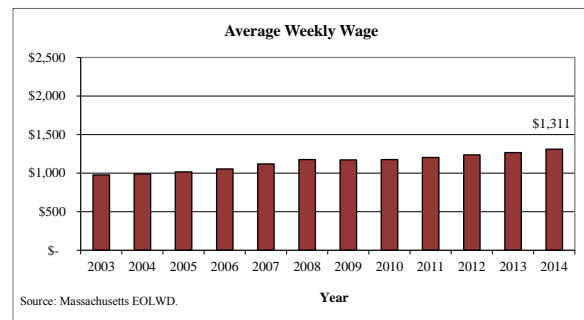
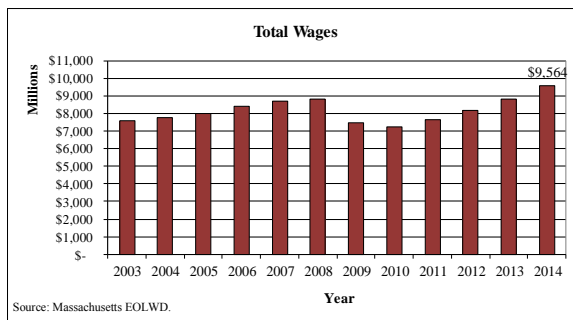
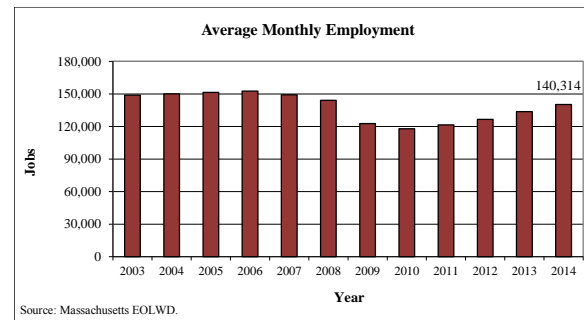
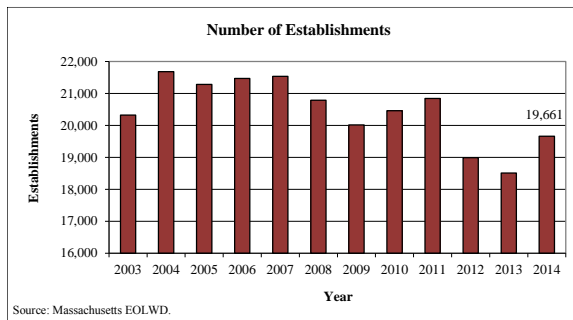
Employees: **Power generation and supply**

Annual wages: **Power generation and supply**

Average weekly wage: **Power generation and supply**

Annual receipts at nonemployer establishments: Subsector detail N/A

NAICS 23 – Construction. The Construction sector comprises establishments primarily engaged in the construction of buildings or engineering projects (e.g., highways and utility systems). Establishments primarily engaged in the preparation of sites for new construction and establishments primarily engaged in subdividing land for sale as building sites also are included in this sector. See the appendix pages two through four for housing permits, housing sales, and housing sale prices.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **3.3%**

GDP rank: **10 of 20**

Nonemployer to employer establishment ratio: **3.0 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Building equipment contractors**

Nonemployer establishments: **Building finishing contractors**

Employees: **Building equipment contractors**

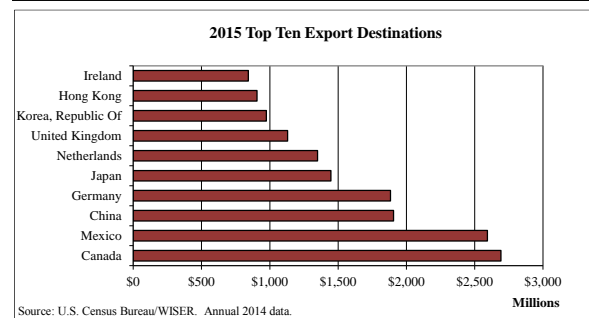
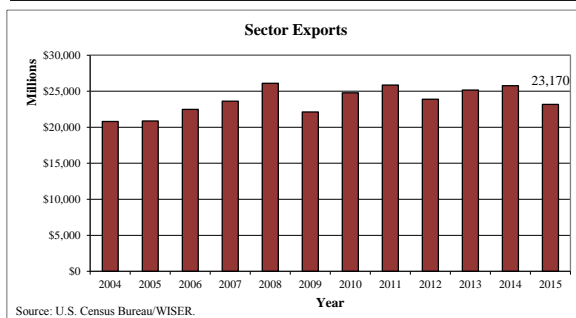
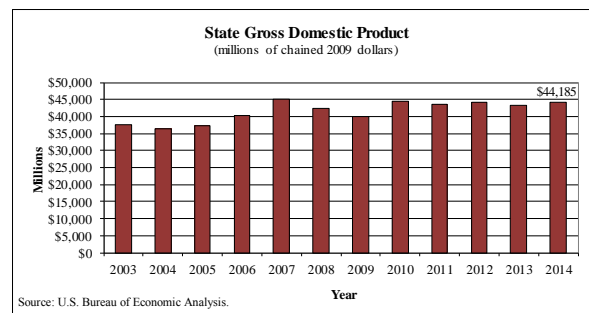
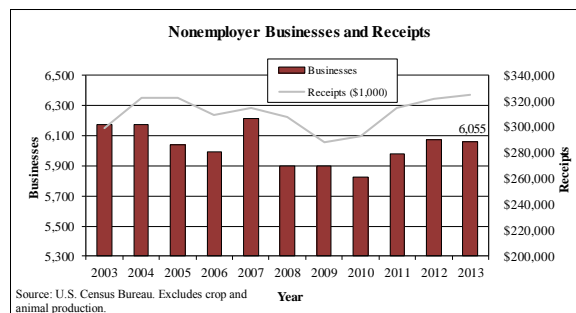
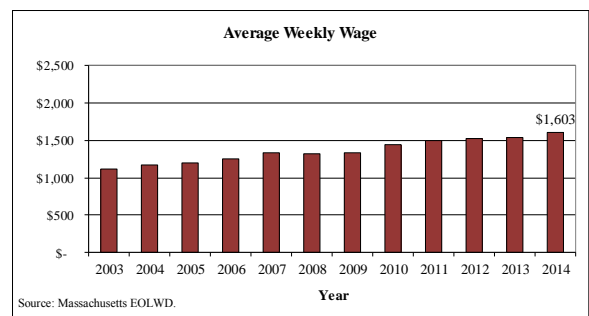
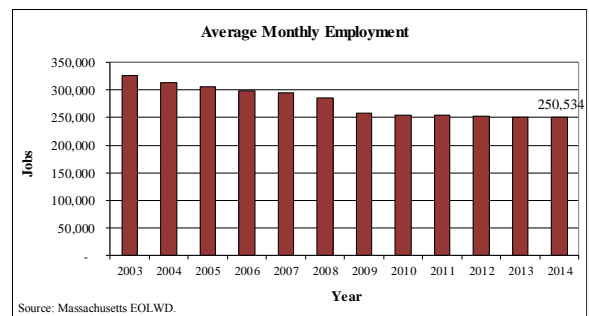
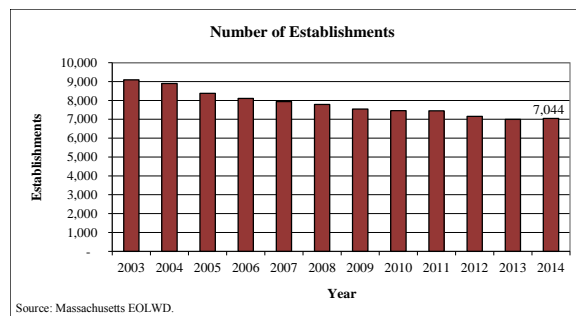
Annual wages: **Building equipment contractors**

Average weekly wage: **Utility system construction**

Annual receipts at nonemployer establishments: **Residential building construction**

Large employers in Massachusetts: **Suffolk Construction Company, J&S Electric Company, R.H. White Company and Interstate Electrical Services Group.**

NAICS 31-33 – Manufacturing. The Manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing, except in cases where the activity is appropriately classified in Sector 23, Construction.



Summary.

GDP contribution to state total: **10.5%**

GDP rank: **4 of 20**

Nonemployer to employer establishment ratio: **0.9 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Printing and related support activities**

Nonemployer establishments: **Other miscellaneous manufacturing**

Employees: **Electronic instrument manufacturing**

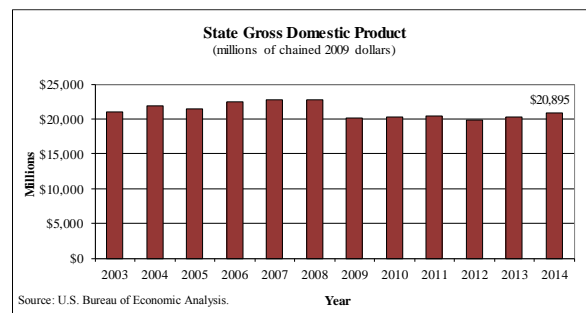
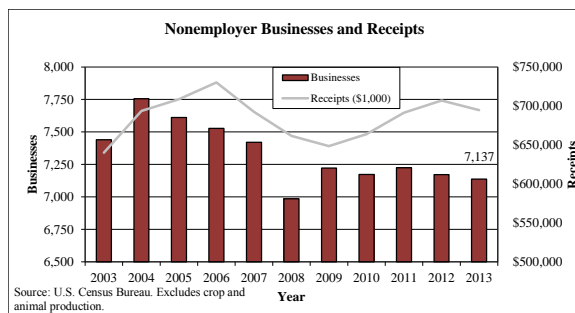
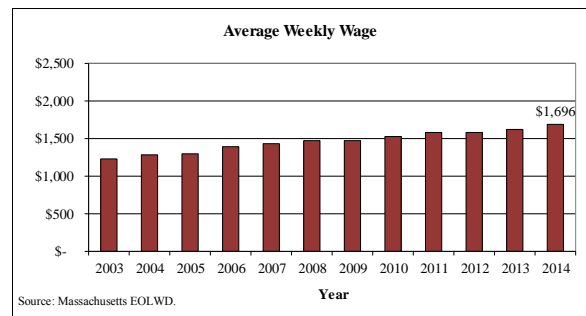
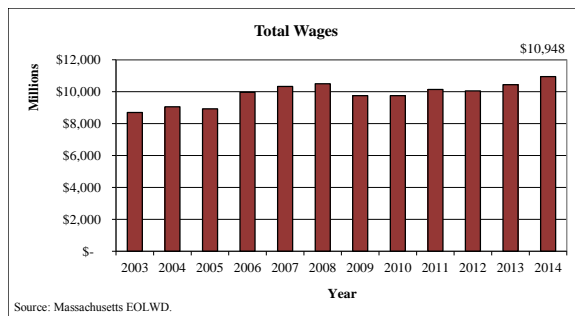
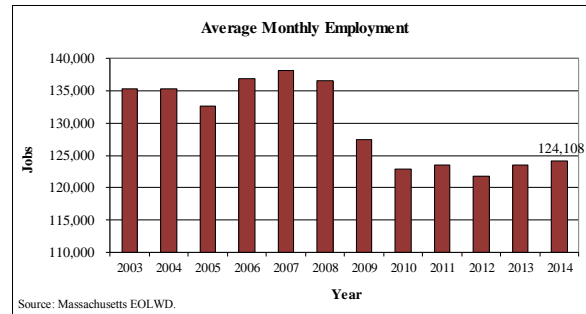
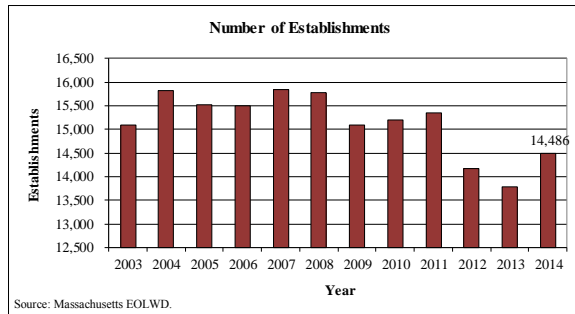
Annual wages: **Electronic instrument manufacturing**

Average weekly wage: **Computers and peripheral equipment**

Annual receipts at nonemployer establishments: **Other miscellaneous manufacturing**

Most valuable export: **Computers and electronic products**

NAICS 42 - Wholesale Trade. The Wholesale Trade sector comprises establishments engaged in wholesaling merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The merchandise described in this sector includes the outputs of agriculture, mining, manufacturing, and certain information industries, such as publishing. The wholesaling process is an intermediate step in the distribution of merchandise.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **5.0%**

GDP rank: **8 of 20**

Nonemployer to employer establishment ratio: **0.5 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Electronic markets and agents/brokers**

Nonemployer establishments: **Miscellaneous durable goods merchant wholesalers**

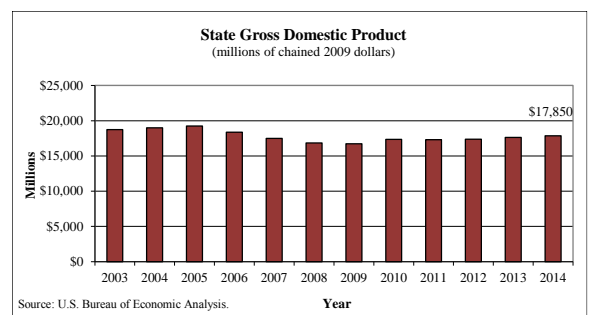
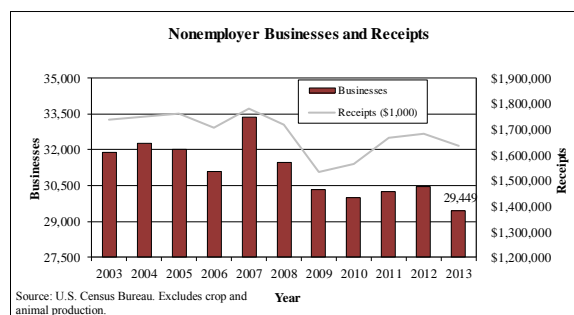
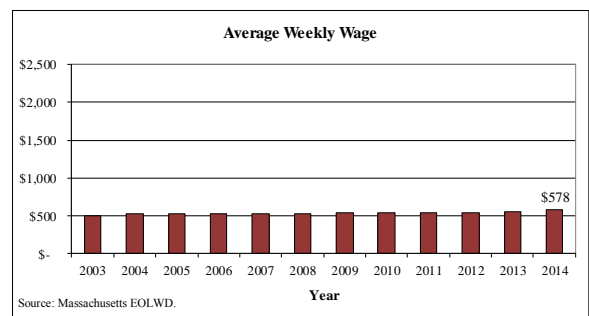
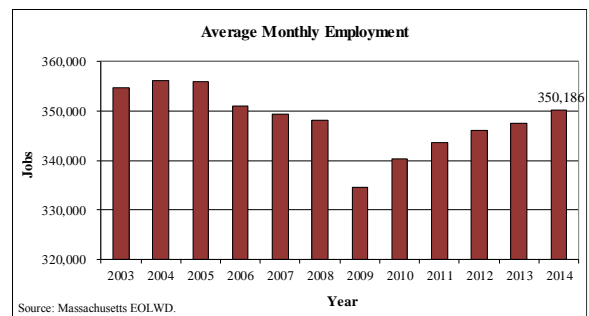
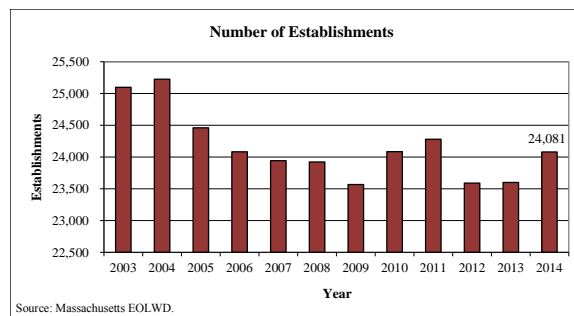
Employees: **Electronic markets and agents/brokers**

Annual wages: **Electronic markets and agents/brokers**

Average weekly wage: **Druggists' goods merchant wholesalers**

Annual receipts at nonemployer establishments: **Miscellaneous durable goods merchant wholesalers**

NAICS 44-45 - Retail Trade. The Retail Trade sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The retailing process is the final step in the distribution of merchandise; retailers are therefore organized to sell merchandise in small quantities to the general public. This sector comprises two main types of retailers: store and nonstore retailers.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **4.3%**

GDP rank: **9 of 20**

Nonemployer to employer establishment ratio: **1.2 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Grocery stores**

Nonemployer establishments: **Direct selling establishments**

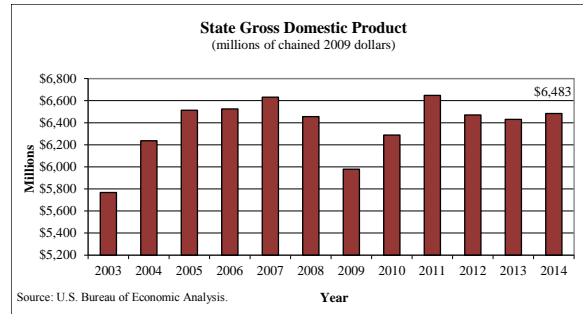
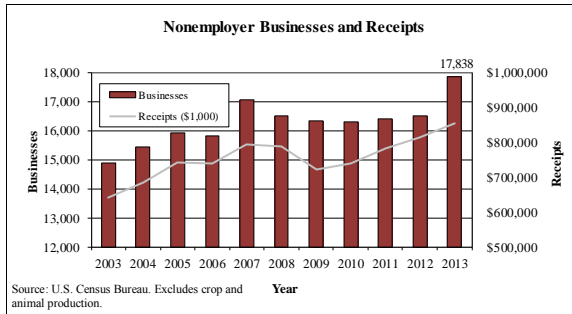
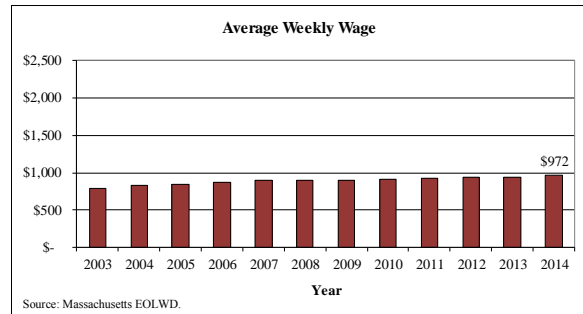
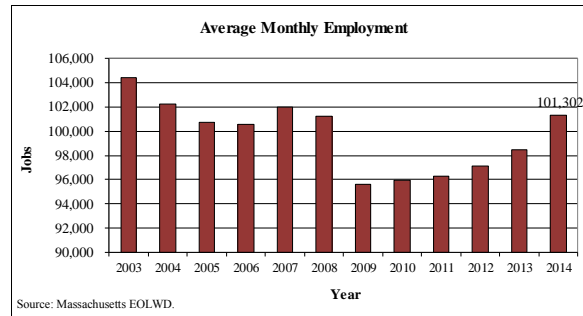
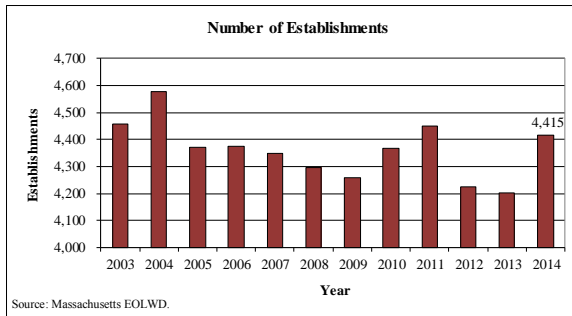
Employees: **Grocery stores**

Annual wages: **Grocery stores**

Average weekly wage: **Electronic shopping and mail-order houses**

Annual receipts at nonemployer establishments: **Direct selling establishments**

NAICS 48-49 - Transportation and Warehousing. The Transportation and Warehousing sector includes industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation. Establishments in these industries use transportation equipment or transportation related facilities as a productive asset. The type of equipment depends on the mode of transportation. The modes of transportation are air, rail, water, road, and pipeline. See pages six and seven of the appendix for more information regarding transportation and warehousing.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **1.5%**

GDP rank: **16 of 20**

Nonemployer to employer establishment ratio: **4.2 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **General freight trucking**

Nonemployer establishments: **Taxi and limousine service**

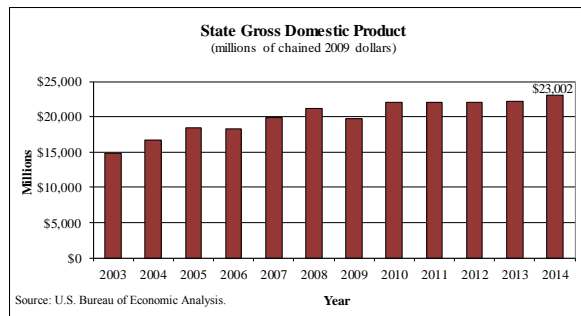
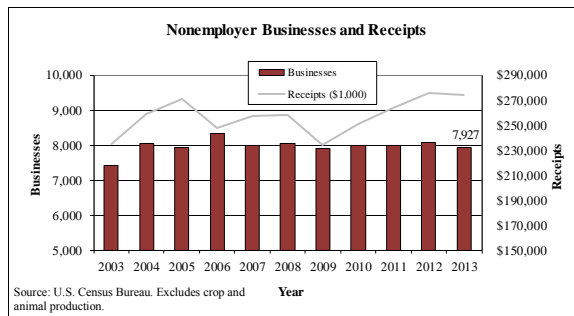
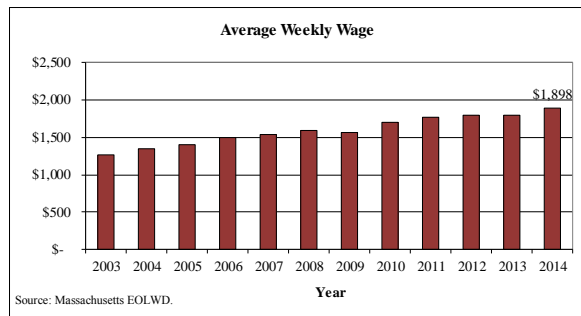
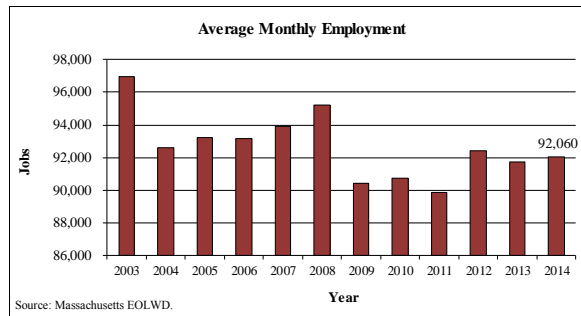
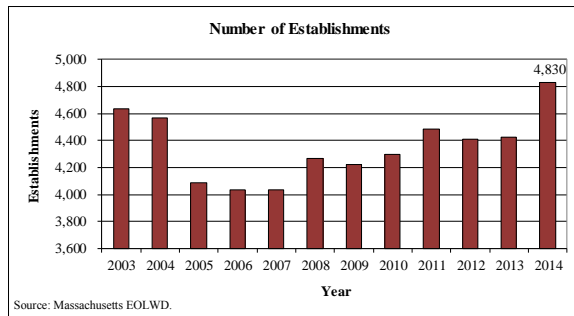
Employees: **Couriers**

Annual wages: **Warehousing and storage**

Average weekly wage: **Pipeline transportation of natural gas**

Annual receipts at nonemployer establishments: **General freight trucking**

NAICS 51 – Information. The Information sector comprises establishments engaged in the following processes: producing and distributing information and cultural products, providing the means to transmit or distribute these products as well as data or communications, and processing data. In 2014, Information exports of prepackaged software, NAICS code 511, were recoded to the Manufacturing NAICS code 334.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **5.5%**

GDP rank: **7 of 20**

Nonemployer to employer establishment ratio: **1.8 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Other information services**

Nonemployer establishments: **Other information services**

Employees: **Software publishers**

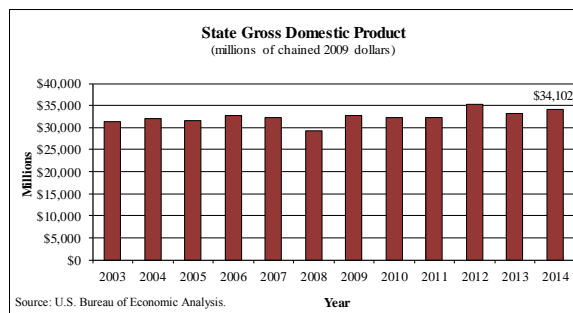
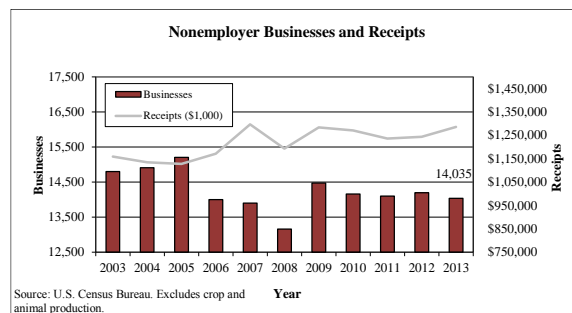
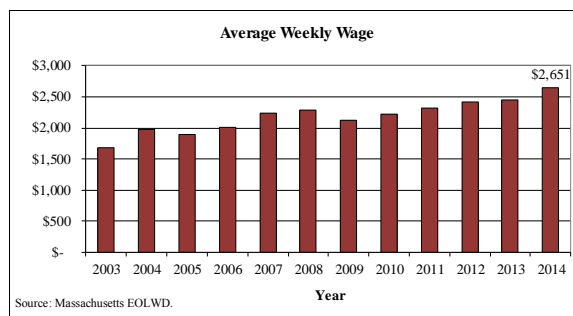
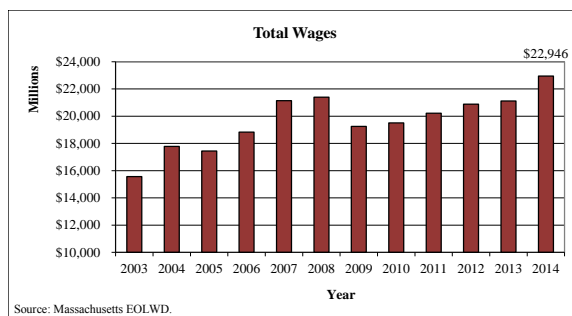
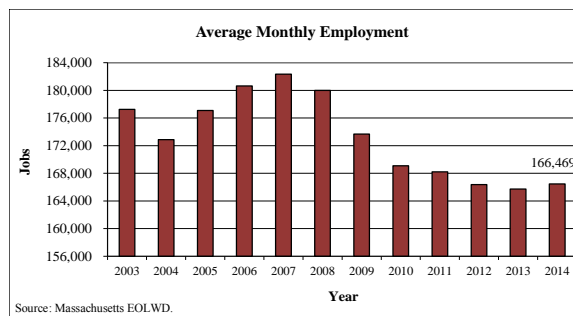
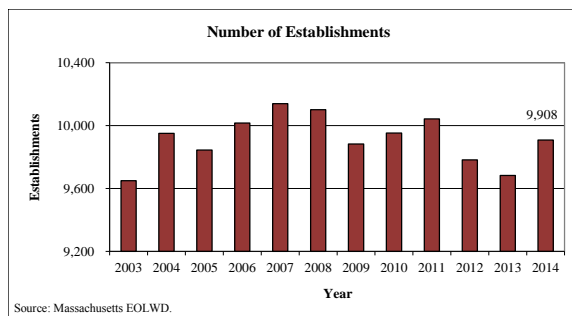
Annual wages: **Software publishers**

Average weekly wage: **Software publishers**

Annual receipts at nonemployer establishments: **Other information services**

Most valuable export: **Prepackaged software**

NAICS 52 - Finance and Insurance. The Finance and Insurance sector comprises establishments primarily engaged in financial transactions (transactions involving the creation, liquidation, or change in ownership of financial assets) and/or in facilitating financial



State export data are not available for this sector.

Summary.

GDP contribution to state total: **8.1%**

GDP rank: **6 of 20**

Nonemployer to employer establishment ratio: **1.4 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Insurance agencies, brokerages & support**

Nonemployer establishments: **Other financial investment activities**

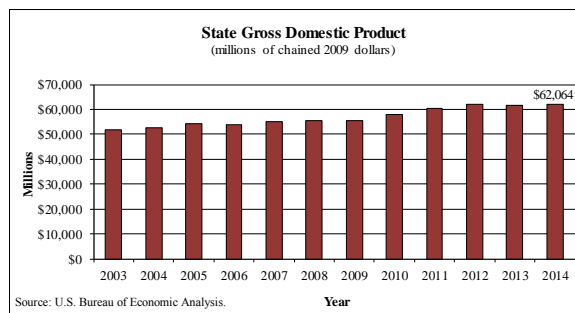
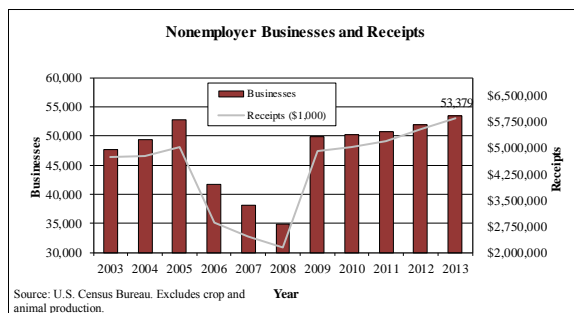
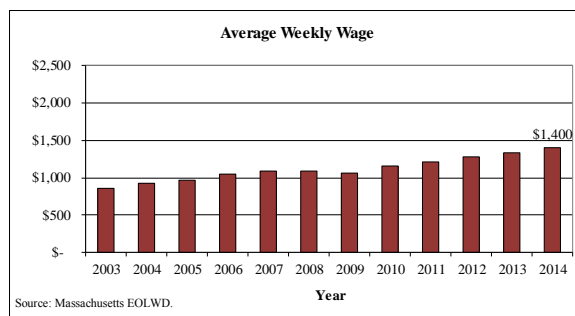
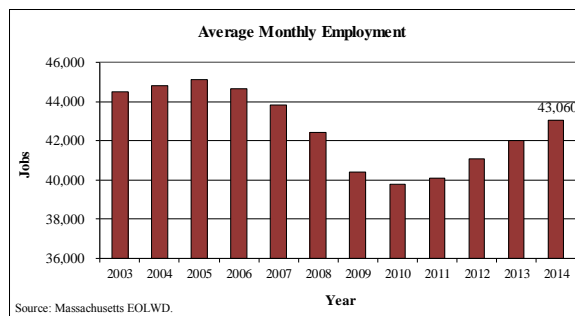
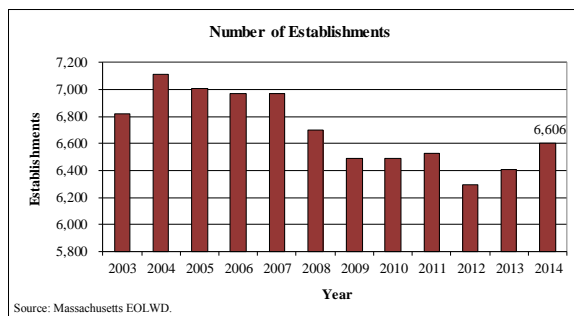
Employees: **Depository credit intermediation**

Annual wages: **Other financial investment activities**

Average weekly wage: **Security and commodity investment activity**

Annual receipts at nonemployer establishments: **Other financial investment activities**

NAICS 53 - Real Estate and Rental and Leasing. The Real Estate and Rental and Leasing sector comprises establishments primarily engaged in renting, leasing, or otherwise allowing the use of tangible or intangible assets, and establishments providing related services. The major portion of this sector comprises establishments that rent, lease, or otherwise allow the use of their own assets by others. The assets may be tangible, as is the case of real estate and equipment, or intangible, as is the case with patents and trademarks.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **14.8%**

GDP rank: **1 of 20**

Nonemployer to employer establishment ratio: **8.3 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Activities related to real estate**

Nonemployer establishments: **Lessors of real estate**

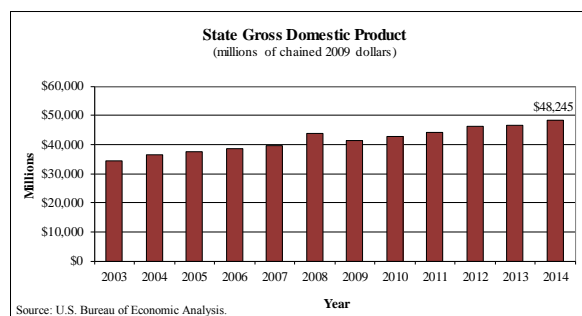
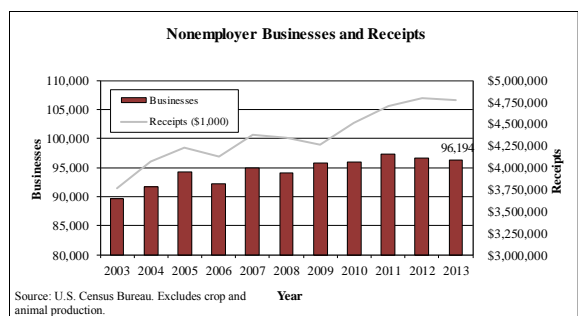
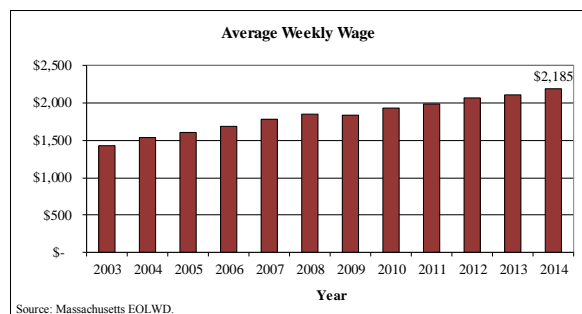
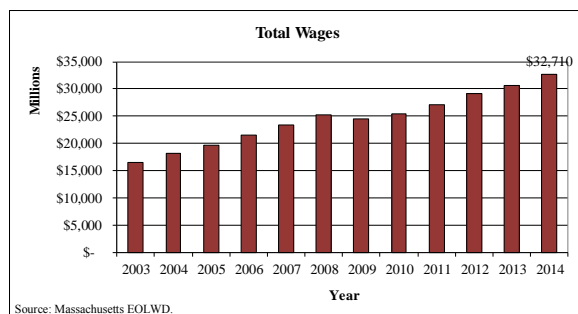
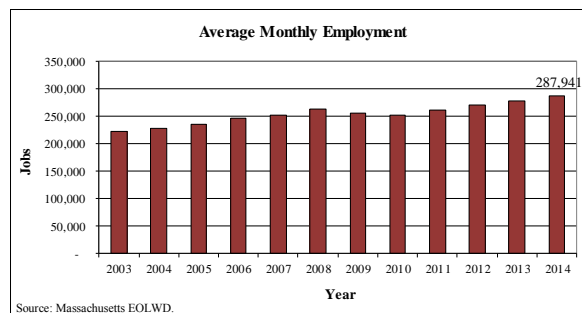
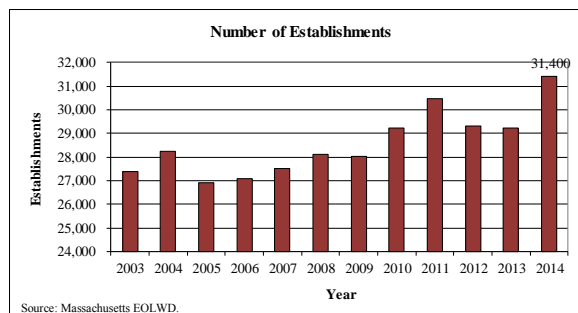
Employees: **Activities related to real estate**

Annual wages: **Activities related to real estate**

Average weekly wage: **Lessors, nonfinancial intangible assets**

Annual receipts at nonemployer establishments: **Lessors of real estate**

NAICS 54 - Professional and Technical Services. The Professional and Technical Services sector comprises establishments that specialize in performing professional, scientific, and technical activities for others. These activities require a high degree of expertise and training. The establishments in this sector specialize according to expertise and provide these services to clients in a variety of industries - in some cases, to households. Activities performed include: legal advice and representation, accounting, bookkeeping, and payroll services, architectural, engineering, and specialized design services, computer services, consulting services, research services, advertising services, photographic services, translation and interpretation services, veterinary services, and other professional, scientific, and technical services.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **11.5%**

GDP rank: **2 of 20**

Nonemployer to employer establishment ratio: **3.3 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Computer systems design and related services**

Nonemployer establishments: **Other professional, scientific, and technical services**

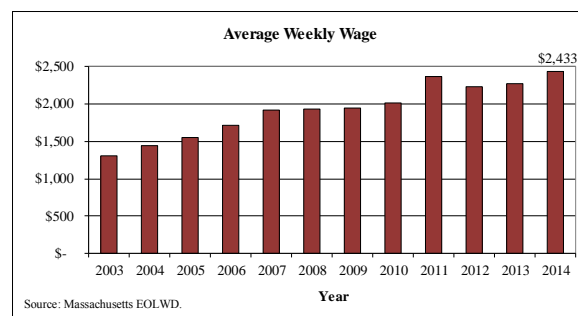
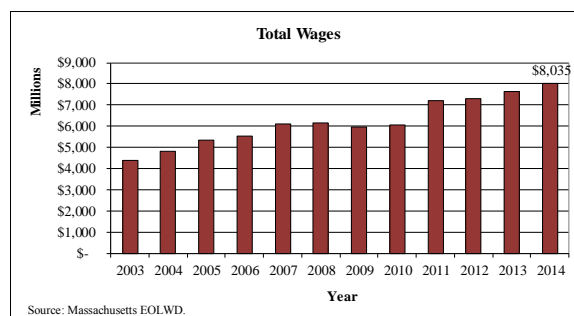
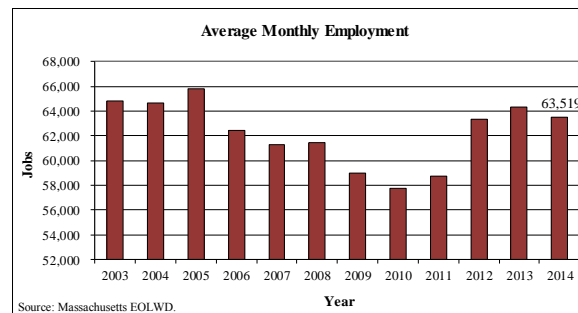
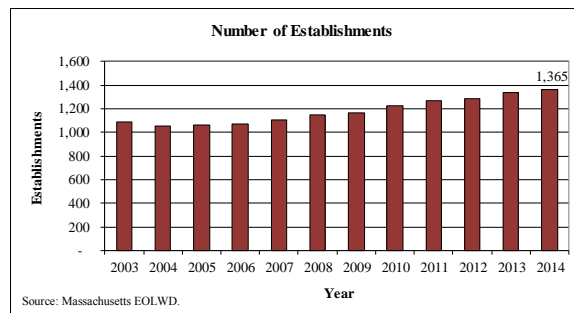
Employees: **Computer systems design and related services**

Annual wages: **Computer systems design and related services**

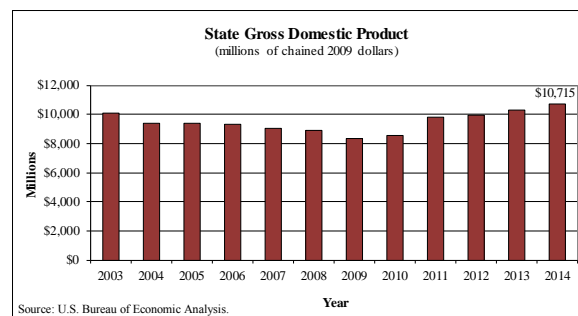
Average weekly wage: **Scientific Research and Development Services**

Annual receipts at nonemployer establishments: **Management, scientific, and technical consulting services**

NAICS 55 - Management of Companies and Enterprises. The Management of Companies and Enterprises sector comprises establishments that hold the securities of (or other equity interests in) companies and enterprises for the purpose of owning a controlling interest or influencing management decisions or establishments (except government establishments) that administer, oversee, and manage establishments of the company or enterprise and that normally undertake the strategic or organizational planning and decision making role of the company or enterprise. Establishments that administer, oversee, and manage may hold the securities of the company or enterprise.



State nonemployer and export data are not available for this sector.



Summary.

GDP contribution to state total: 2.6%

GDP rank: 14 of 20

Nonemployer to employer establishment ratio: N/A

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll, and receipts.

Establishments with employees: Subsector detail N/A

Nonemployer establishments: N/A

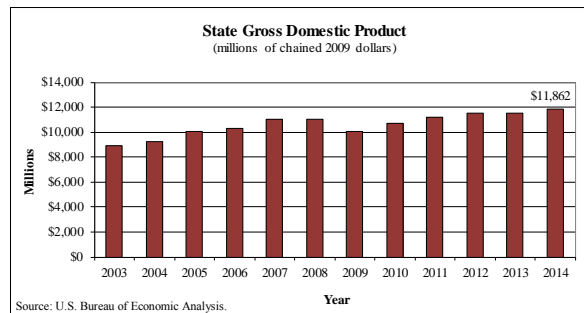
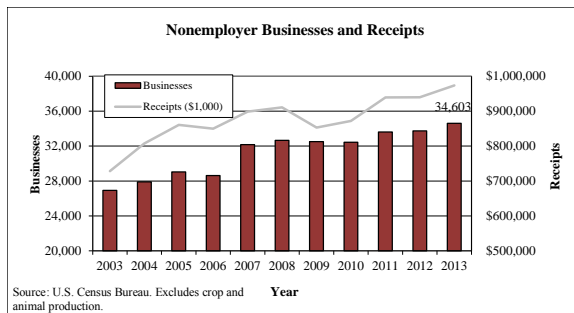
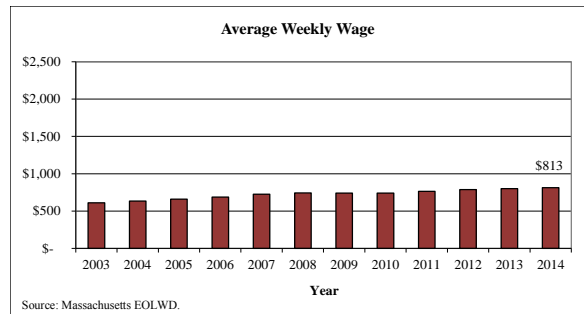
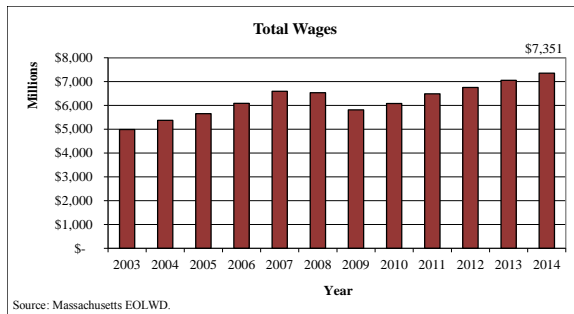
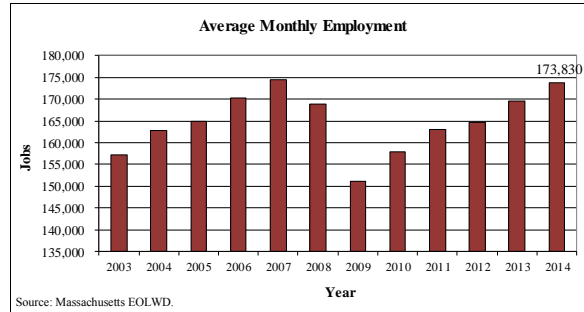
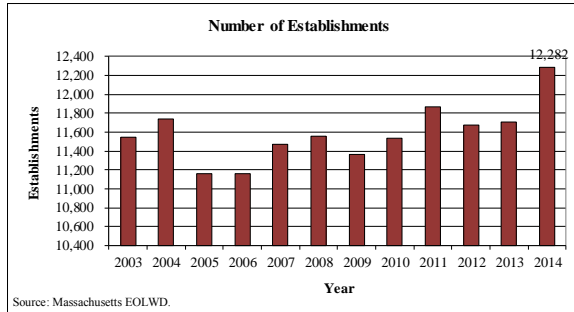
Employees: Subsector detail N/A

Annual wages: Subsector detail N/A

Average weekly wage: Subsector detail N/A

Annual receipts at nonemployer establishments: N/A

NAICS 56 - Administrative and Waste Services. The Administrative and Waste Services sector comprises establishments performing routine support activities for the day-to-day operations of other organizations. The establishments in this sector specialize in one or more of these support activities and provide these services to clients in a variety of industries and in some cases, to households. Activities performed include: office administration, hiring and placing of personnel, document preparation and similar clerical services, solicitation, collection, security and surveillance services, cleaning, and waste disposal services.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **2.8%**

GDP rank: **11 of 20**

Nonemployer to employer establishment ratio: **3.0 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Services to buildings and dwellings**

Nonemployer establishments: **Services to buildings and dwellings**

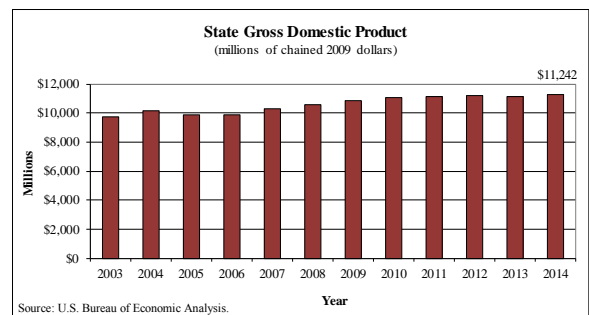
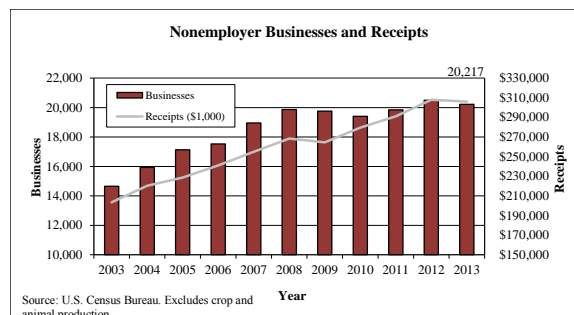
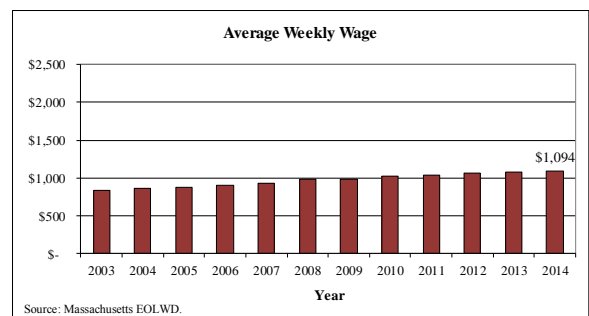
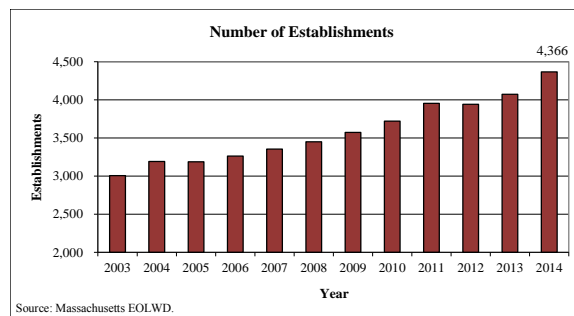
Employees: **Employment services**

Annual wages: **Employment services**

Average weekly wage: **Office administrative services**

Annual receipts at nonemployer establishments: **Services to buildings and dwellings**

NAICS 61 - Educational Services. The Educational Services sector comprises establishments that provide instruction and training in a wide variety of subjects. This instruction and training is provided by specialized establishments, such as schools, colleges, universities, and training centers. These establishments may be privately owned and operated for profit or not for profit, or they may be publicly owned and operated. They may also offer food and/or accommodation services to their students.



State export data are not available for this sector.

Summary.

GDP contribution to state total: 2.7%

GDP rank: 13 of 20

Nonemployer to employer establishment ratio: 5.0 to 1

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Other schools and instruction**

Nonemployer establishments: Subsector detail N/A

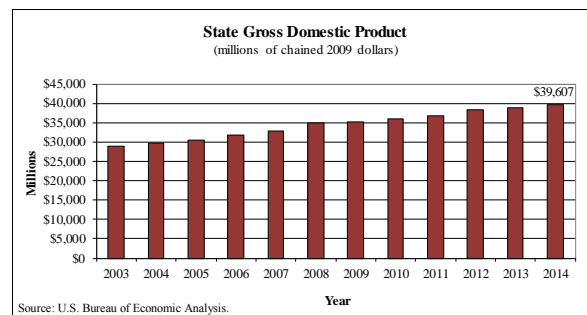
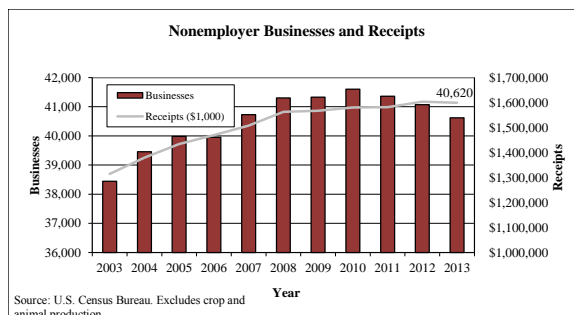
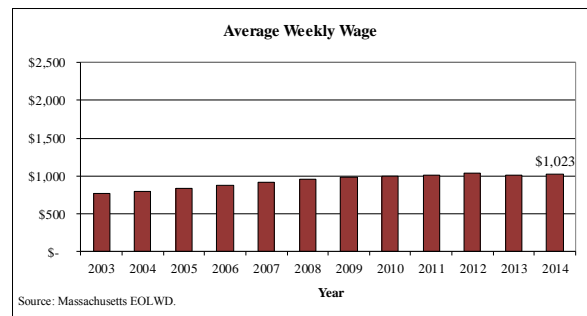
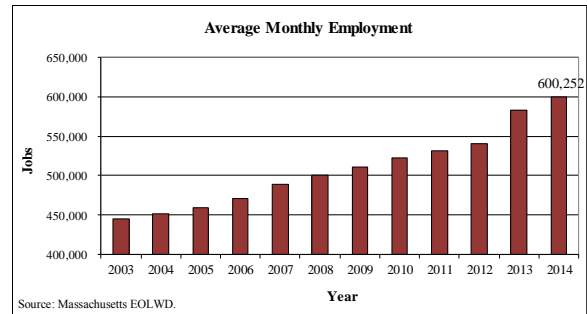
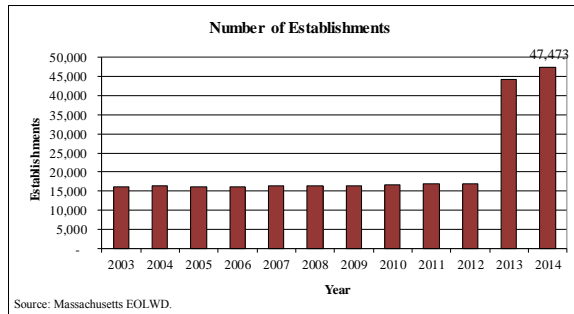
Employees: **Elementary and secondary schools**

Annual wages: **Elementary and secondary schools**

Average weekly wage: **Colleges and universities**

Annual receipts at nonemployer establishments: Subsector detail N/A

NAICS 62 - Health Care and Social Assistance. The Health Care and Social Assistance sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. **Note:** Beginning with the first quarter 2013, a code change for employees from private households (NAICS 814110) into services for the elderly and persons with disabilities (NAICS 624120) moved 33,960 employees in Massachusetts in January 2013.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **9.5%**

GDP rank: **5 of 20**

Nonemployer to employer establishment ratio: **0.9 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Individual and Family Services**

Nonemployer establishments: **Offices of other health practitioners**

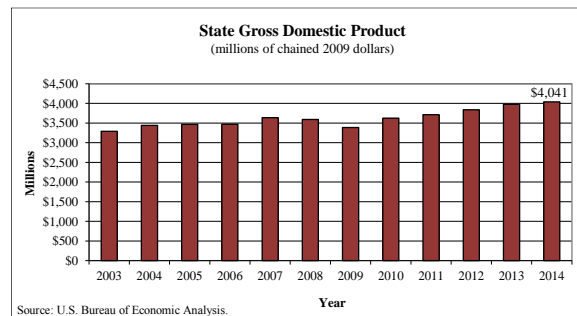
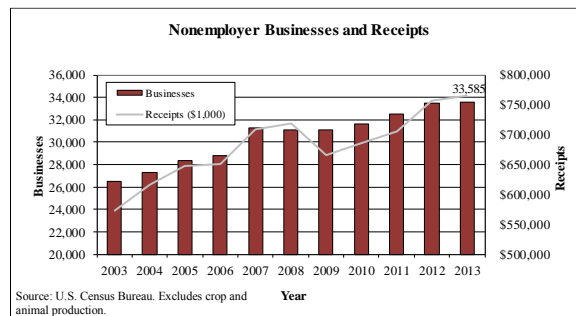
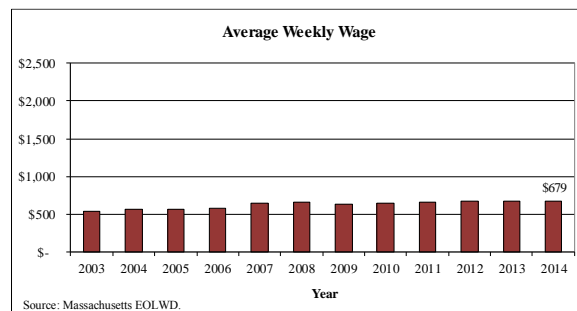
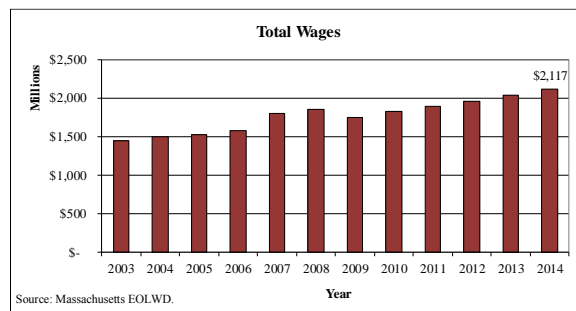
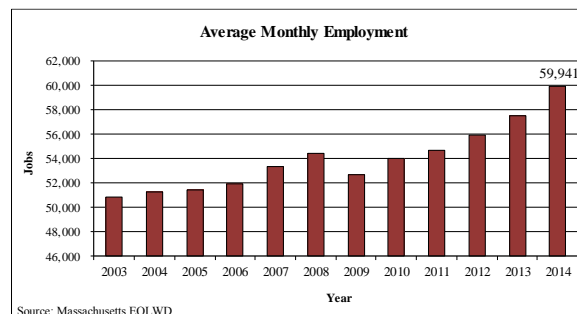
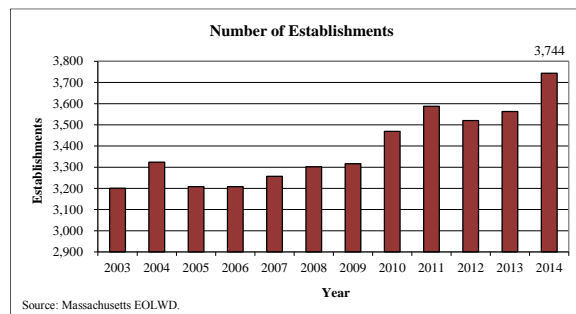
Employees: **General medical and surgical hospitals**

Annual wages: **General medical and surgical hospitals**

Average weekly wage: **Offices of physicians**

Annual receipts at nonemployer establishments: **Offices of other health practitioners**

NAICS 71 - Arts, Entertainment, and Recreation. The Arts, Entertainment, and Recreation sector includes a wide range of establishments that: operate facilities or provide services to meet varied cultural, entertainment, and recreational interests of their patrons, are involved in producing, promoting, or participating in live performances, events, or exhibits intended for public viewing, preserve and exhibit objects and sites of historical, cultural, or educational interest and operate facilities or provide services that enable patrons to participate in recreational activities or pursue amusement, hobby, and leisure-time interests. See the appendix page six for travel and tourism information.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **1.0%**

GDP rank: **18 of 20**

Nonemployer to employer establishment ratio: **9.4 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Other amusement & recreation industries**

Nonemployer establishments: **Independent artists, writers, and performers**

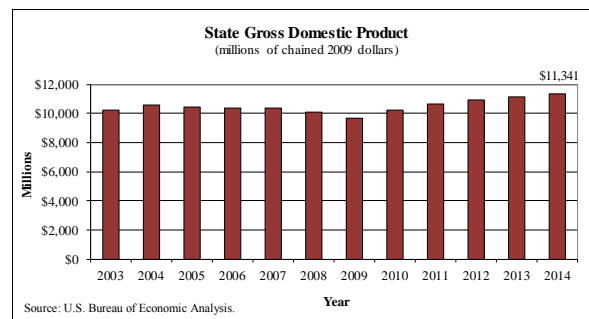
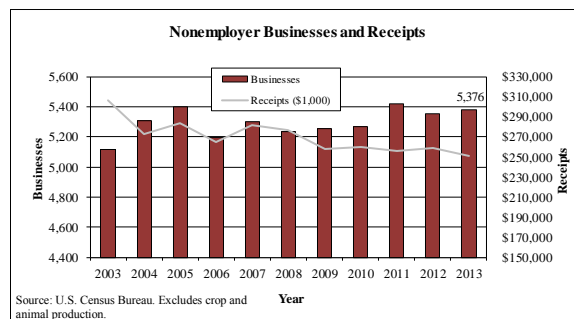
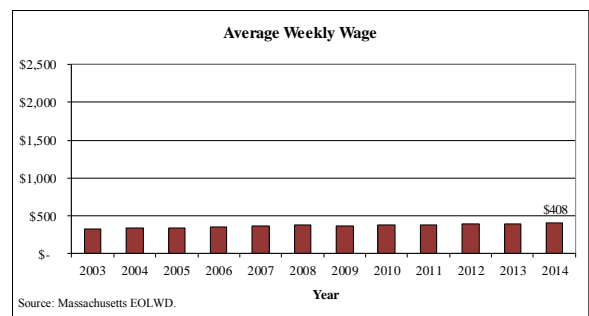
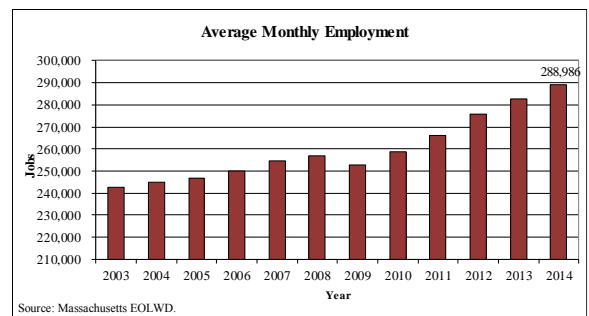
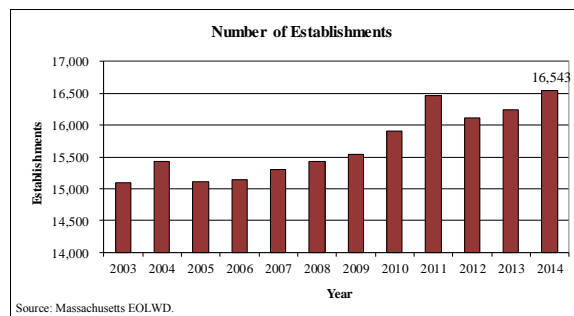
Employees: **Other amusement & recreation industries**

Annual wages: **Other amusement & recreation industries**

Average weekly wage: **Spectator sports**

Annual receipts at nonemployer establishments: **Independent artists, writers, and performers**

NAICS 72 - Accommodation and Food Services. The Accommodation and Food Services sector comprises establishments providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption. The sector includes both accommodation and food services establishments because the two activities are often combined at the same establishment.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **2.7%**

GDP rank: **12 of 20**

Nonemployer to employer establishment ratio: **0.3 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Restaurants and other eating places**

Nonemployer establishments: **Special food services**

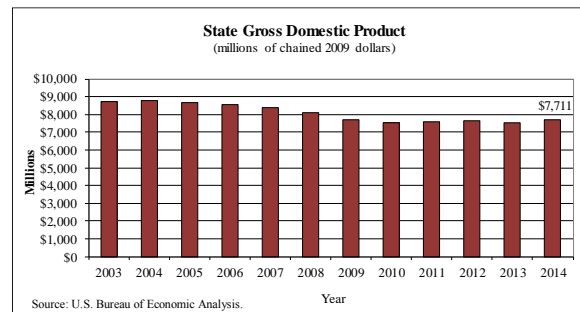
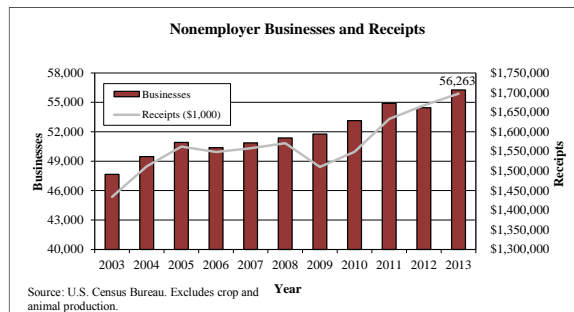
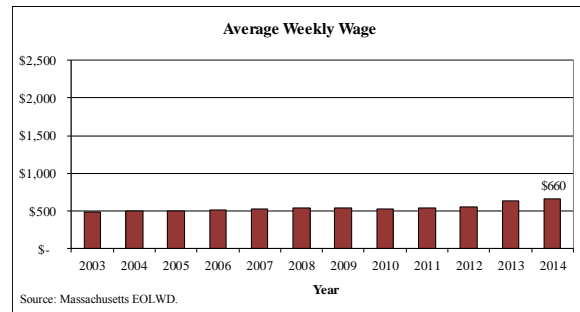
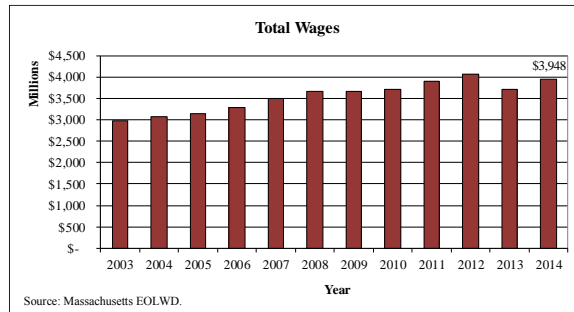
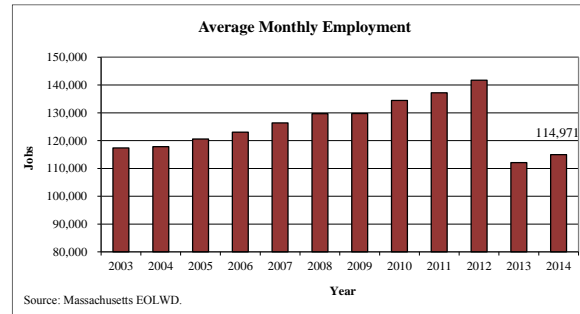
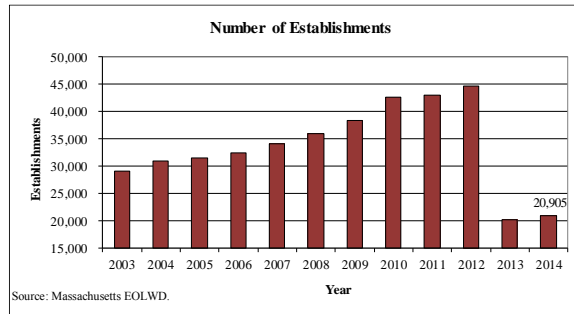
Employees: **Restaurants and other eating places**

Annual wages: **Restaurants and other eating places**

Average weekly wage: **Traveler accommodation**

Annual receipts at nonemployer establishments: **Restaurants and other eating places**

NAICS 81 - Other Services, Except Public Administration. The Other Services (except Public Administration) sector comprises establishments engaged in providing services not specifically provided for elsewhere in the classification system. Establishments in this sector are primarily engaged in activities such as equipment and machinery repairing, promoting or administering religious activities, grant-making, advocacy, providing dry cleaning and laundry services, personal care services, death care services, pet care services, photofinishing services, temporary parking services, and dating services. **Note:** Beginning with the first quarter 2013, a code change for employees from private households (NAICS 814110) into services for the elderly and persons with disabilities (NAICS 624120) moved 33,960 employees in Massachusetts in January 2013.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **1.8%**

GDP rank: **15 of 20**

Nonemployer to employer establishment ratio: **2.8 to 1**

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Private households**

Nonemployer establishments: **Other personal services**

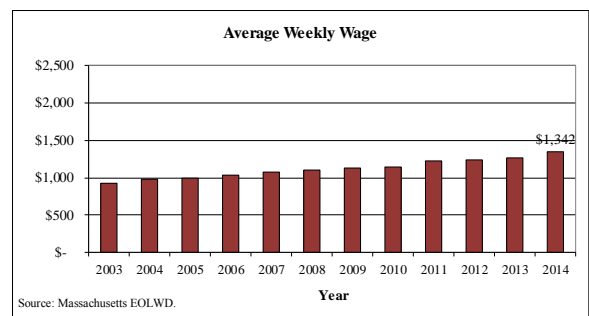
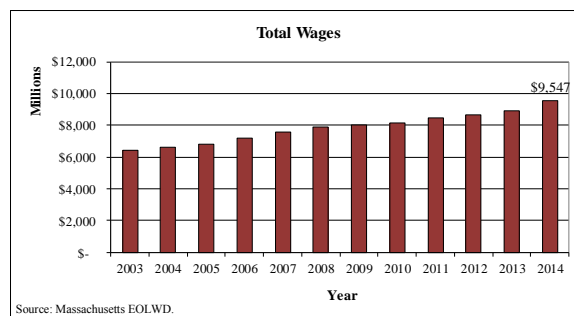
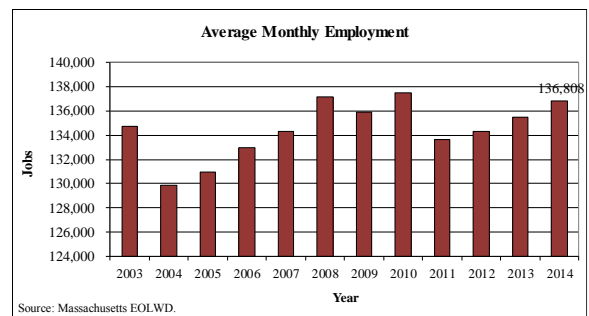
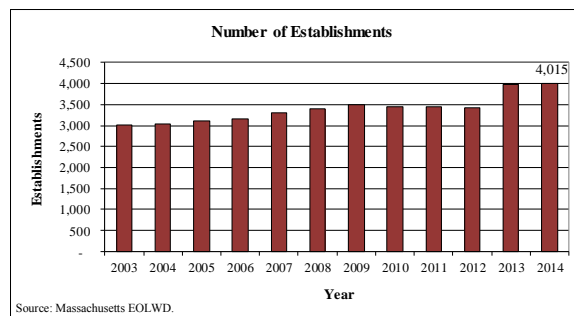
Employees: **Personal Care Services**

Annual wages: **Automotive repair and maintenance**

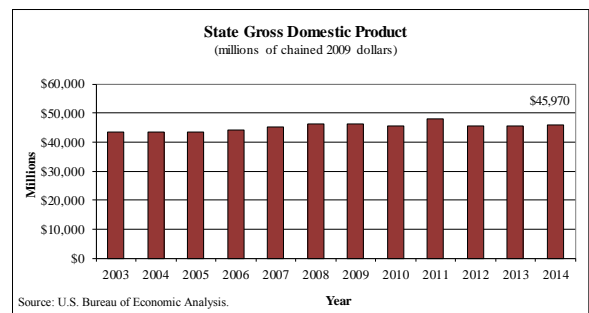
Average weekly wage: **Electronic equipment repair/maintenance**

Annual receipts at nonemployer establishments: **Other personal services**

NAICS 92 - Public Administration. The Public Administration sector consists of establishments of federal, state, and local government agencies that administer, oversee, and manage public programs and have executive, legislative, or judicial authority over other institutions within a given area. These agencies also set policy, create laws, adjudicate civil and criminal legal cases and provide for public safety and national defense.



State nonemployer and export data are not available for this sector.



Summary.

GDP contribution to state total: **11.0%**

GDP rank: **3 of 20**

Nonemployer to employer establishment ratio: N/A

Sector leaders. Industry subsectors with the majority of establishments, employees, payroll and receipts.

Establishments with employees: **Justice, public order, and safety activities**

Nonemployer establishments: N/A

Employees: **Justice, public order, and safety activities**

Annual wages: **Justice, public order, and safety activities**

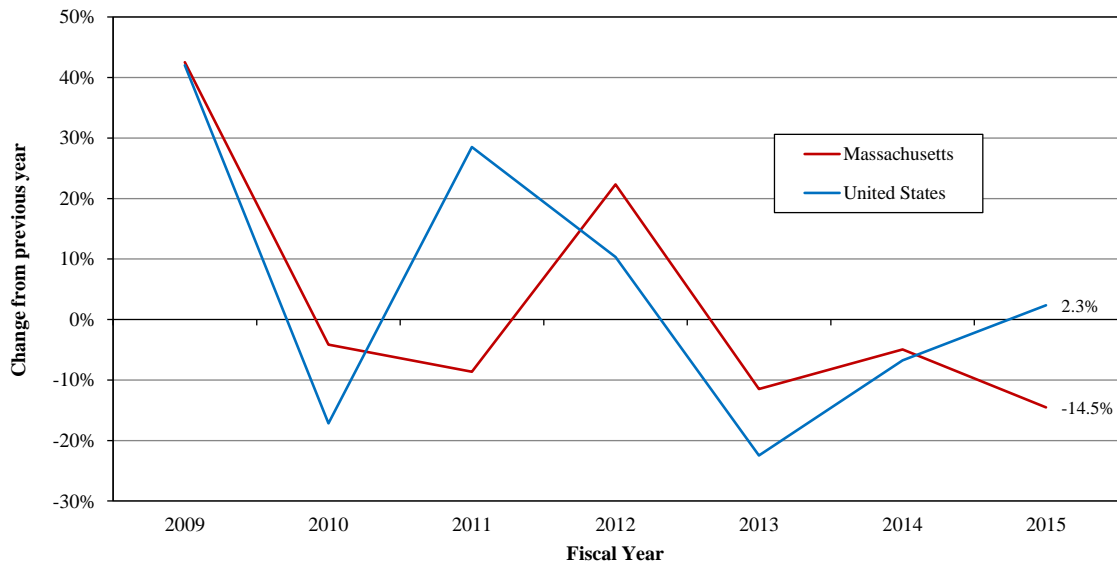
Average weekly wage: **National security & international affairs**

Annual receipts at nonemployer establishments: N/A

ECONOMIC BASE AND PERFORMANCE—GOVERNMENT REVENUES AND SPENDING

Federal Spending in Massachusetts. Massachusetts received approximately \$58.5 billion in contracts, grants, direct payments, insurance, loans and guarantees, and other spending from the federal government in federal FY 2015. Massachusetts received 2.1 percent of all federal spending in FY 2015 versus 2.5 percent in FY 2014. Federal dollars to Massachusetts have dropped for the last three fiscal years, after a large increase in 2012. The state saw a 7.4 percent increase in grants, \$1.2 billion, but the other categories, loans, other financial assistance and contracts, decreased. Massachusetts federal contracts have declined over the last three fiscal years. The proportion of all Massachusetts federal contracts has averaged 2.9 percent over the last eight years.

Change in Federal Spending - U.S. vs. Massachusetts



*Federal Spending in the United States and Massachusetts
In \$Billions*

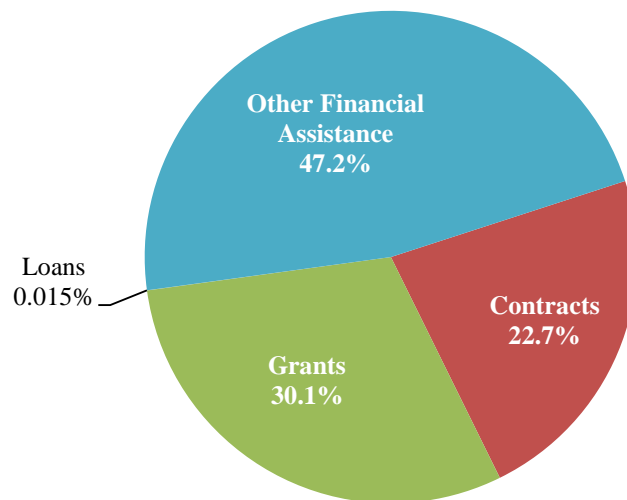
FFY	Massachusetts	YOY change	United States	YOY change
2008	\$53.3		\$2,289.3	
2009	\$75.9	42.5%	\$3,251.7	42.0%
2010	\$72.8	-4.2%	\$2,694.2	-17.1%
2011	\$66.5	-8.6%	\$3,462.2	28.5%
2012	\$81.4	22.4%	\$3,820.8	10.4%
2013	\$72.0	-11.5%	\$2,962.0	-22.5%
2014	\$68.5	-5.0%	\$2,762.4	-6.7%
2015	\$58.5	-14.5%	\$2,827.0	2.3%

SOURCE: <http://www.usaspending.gov> as of April 15, 2016.

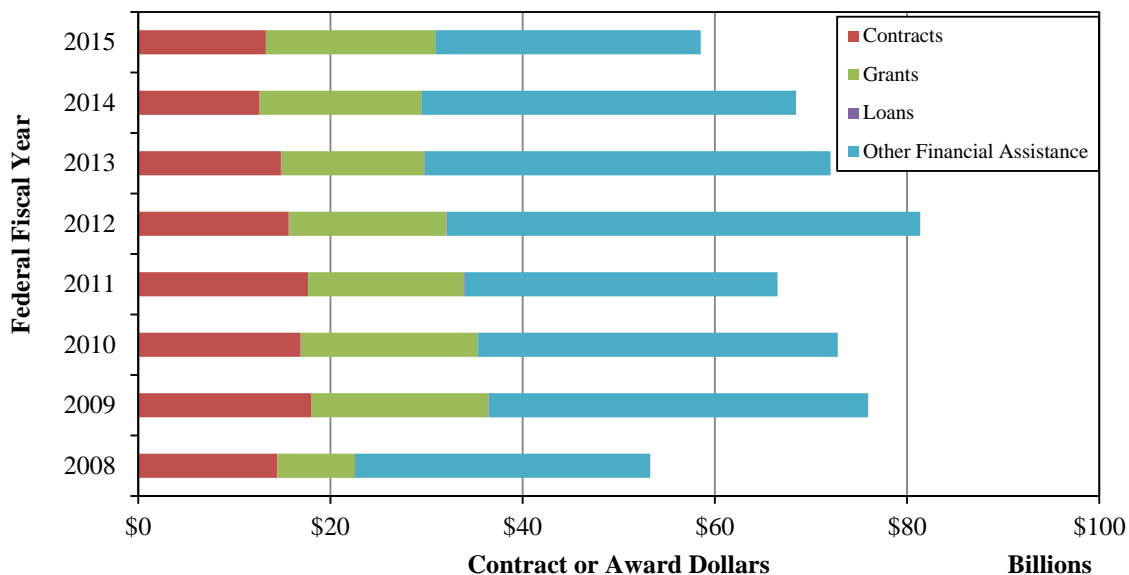
NOTE: Federal fiscal data reporting is not complete until January of the following year due to the three month lag in DOD reporting. Dollar values and change in dollar values reflect inflation-adjusted (\$2015) dollars.

In FY 2015, the largest portion of federal spending in Massachusetts, 47 percent, was for Other Financial Assistance which includes direct payments to individuals (such as Medicare and food stamps), insurance payments (such as unemployment benefits, flood insurance), and other types of assistance payments (such as reimbursements for prescriptions for veterans). Other Financial Assistance decreased 29 percent and Loans decreased 71 percent from FY 2014, but Contracts and Grants increased 5 percent. The graphs below describe the most recent complete fiscal year and the last eight years of federal spending in Massachusetts, including the most recent data for the current fiscal year as reported by USASpending.gov.

Federal Spending in Massachusetts - Federal Fiscal Year 2015



Composition of Federal Spending Awards to Massachusetts, 2008 - 2015



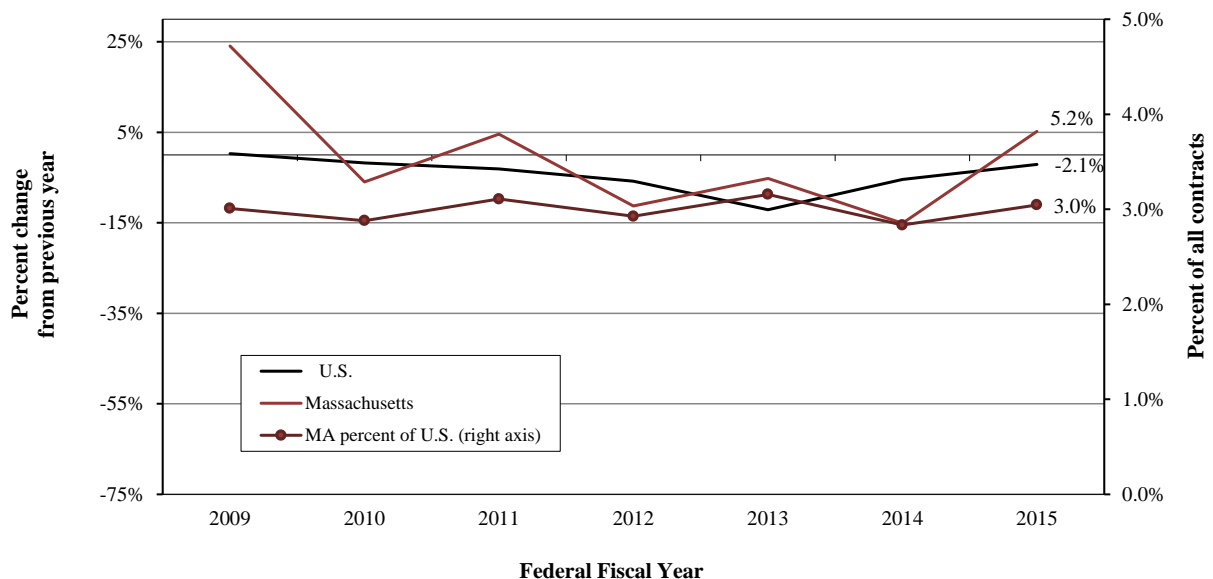
SOURCE: <http://www.usaspending.gov> as of April 15, 2016. Federal fiscal data reporting is not complete until January of the following year due to the three month lag in DOD reporting. Dollar values and change in dollar values reflect inflation-adjusted (\$2015) dollars.

Federal Contracts. The table and graph below compare the annual summary of federal contracts performed in Massachusetts to the total contracts awarded by the federal government. In FFY 2015, the latest full year available, 3.0 percent of all federal contract work was performed in Massachusetts. This is slightly more than the 2.9 percent average it has been receiving over the last eight years.

The following two pages summarize the federal contracts by top products or services, funding agencies and sub agencies, contractors and sub-awardees, over the long-term and the latest complete federal fiscal year. The work was primarily performed in Massachusetts and the vendors who were awarded the contracts may or may not have been located in Massachusetts.

<i>Federal Contracts Performed in Massachusetts as a Percent all Federal Contracts</i> (millions of dollars)					
Fiscal Year	Massachusetts	MA percent increase from previous year	MA portion of all federal	U.S.	U.S. percent increase from previous year
2008	\$14,484		2.4%	\$595,832	
2009	\$17,972	24.1%	3.0%	\$597,427	0.3%
2010	\$16,903	-6.0%	2.9%	\$587,066	-1.7%
2011	\$17,681	4.6%	3.1%	\$568,927	-3.1%
2012	\$15,684	-11.3%	2.9%	\$536,061	-5.8%
2013	\$14,867	-5.2%	3.2%	\$471,123	-12.1%
2014	\$12,626	-15.1%	2.8%	\$445,590	-5.4%
2015	\$13,286	5.2%	3.0%	\$436,265	-2.1%

Change in Massachusetts Federal Contracts, FFY 2009 - 2015



SOURCE: <http://www.usaspending.gov> as of April 15, 2016. Federal fiscal data reporting is not complete until January of the following year due to the three month lag in DOD reporting. Dollar values and change in dollar values reflect inflation-adjusted (\$2015) dollars.

Summary of Federal Contracts Performed in Massachusetts

FY 2008 to FY 2015

Total Dollars: \$117,456,191,791

Number of Transactions: 650,621

Top 5 Products or Services Sold

Gas Turbines & Jet Engines Aircraft	\$10,047,665,197
Precious Metals Primary Forms	\$8,792,893,161
R&D-Electronics & Comm Eq-B Res	\$7,450,464,606
Misc Communication Eq	\$6,419,302,050
Engineering And Technical Services	\$4,986,836,790

Top 5 Prime Award Major Agencies

Department of Defense	\$95,028,260,509
Department of the Treasury	\$8,985,595,200
Department of Veterans Affairs	\$3,544,814,734
Department of Health and Human Services	\$3,274,524,275
Department of Transportation	\$2,958,278,806

Top 5 Prime Award Sub Agencies

Department of the Army	\$24,008,680,731
Department of the Navy	\$22,128,771,433
Department of the Airforce	\$19,105,042,060
United States Mint	\$8,760,400,029
Defense Logistics Agency	\$3,046,751,146

Top 5 Prime Award Contractors

Raytheon Company	\$33,389,156,365
General Dynamics	\$11,473,079,029
General Electric Company	\$11,311,969,890
Massachusetts Institute of Technology	\$8,504,434,199
Coins 'N Things, Inc.	\$6,615,620,375

Top 5 Contract Sub-Awardees

BAE Systems	\$930,342,313
General Dynamics	\$605,473,957
Raytheon Company	\$324,824,725
The Charles Stark Draper Laboratory, Inc.	\$156,354,142
Mercury Systems, Inc.	\$146,349,059

SOURCE: <http://www.usaspending.gov> as of April 15, 2016. Annual federal fiscal data reporting is not complete until January of the following year due to the three month lag in DOD reporting.

Federal Contracts Performed in Massachusetts

Fiscal Year: 2015

Total Contract Funds Awarded: \$13,285,263,266

Total Contract Funds to Sub-Awardees: \$634,940,234

This amount is 3.0 percent of all dollars awarded nationally for the fiscal year.

Top 5 Products or Services Sold

Guided Missile Systems, Complete	\$1,174,633,756
Precious Metals Primary Forms	\$1,130,442,340
Miscellaneous Communication Equipment	\$1,050,752,350
R&D- Defense System: Electronics/Communication Equipment (Basic Research)	\$949,707,373
Support- Professional: Engineering/Technical	\$880,324,096

Top 5 Prime Award Major Agencies

Department of Defense	\$9,461,121,524
Department of the Treasury	\$1,151,768,331
Department of Veterans Affairs	\$634,880,937
Department of Agriculture	\$322,186,760
Department of Transportation	\$299,797,061

Top 5 Prime Award Sub Agencies

Department of the Navy	\$458,212,554
United States Mint	\$401,163,815
Department of the Air Force	\$149,503,838
Department of the Army	\$140,153,841
Department of Veterans Affairs	\$109,908,308

Top 5 Prime Award Contractors

Raytheon Company	\$3,346,239,032
Massachusetts Institute Of Technology	\$1,004,074,939
General Dynamics C4 Systems, Inc.	\$982,278,228
General Electric Company	\$822,482,956
Coins 'N Things, Inc.	\$797,898,826

Top 5 Contract Sub-Awardees

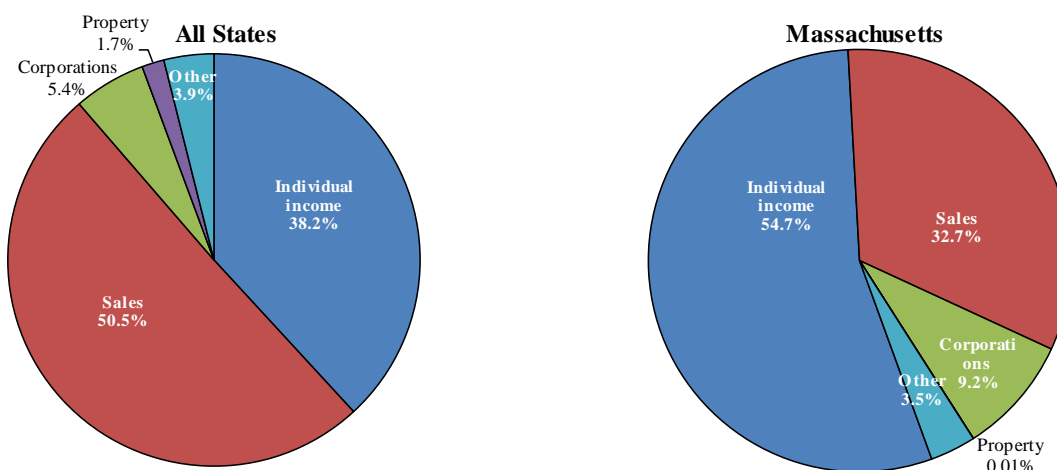
General Dynamics Advanced Information Systems, Inc.	\$190,102,894
Covidien Lp	\$59,282,162
Ranor Inc.	\$24,135,500
Mercury Systems, Inc.	\$15,281,399
Sevenson Environmental Services, Inc.	\$13,362,436

SOURCE: <http://www.usaspending.gov> as of April 15, 2016. Annual federal fiscal data reporting is not complete until January of the following year due to the three month lag in DOD reporting.

State Revenues. Taxes collected by all states in FY 2014 totaled \$866.8 billion, 0.7 percent more than FY 2013. Massachusetts collected \$25.3 billion in FY 2014, 3.9 percent more than in FY 2013. In FY 2014, the average state collected 83.4 percent of its revenue from individual income tax and sales and gross receipts tax (in inflation-adjusted dollars). Massachusetts ranked 9th in the nation in total taxes collected in 2014, up from 10th in 2013.

Massachusetts collected most of its revenue, 52.5 percent, from individual income tax while the average U.S. state collected 47.5 percent of its revenue from sales and gross receipts tax. Sales and gross receipts tax accounted for 31.4 percent of Massachusetts's nearly one billion in new revenue in 2014 and 47.5 percent of all U.S. state's \$5.8 billion in new revenue. Seven states do not have an individual income tax.

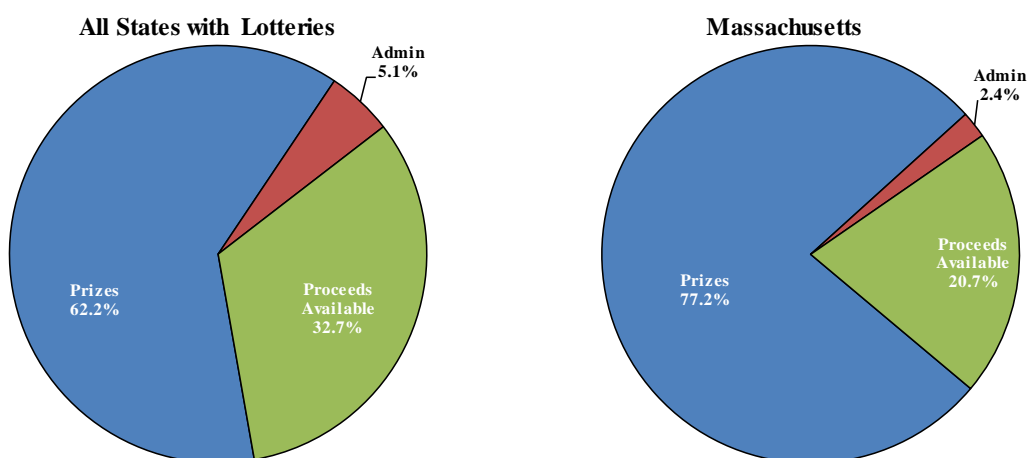
FY 2014 State Revenues by Type



SOURCE: U.S. Census Bureau, Governments Division.
Other: Licenses, death and gift, severance, documentary and stock transfer and other NEC. Shares of total based on inflation-adjusted dollars (\$2015).

State Lottery Proceeds. Massachusetts ranked third in revenue, \$4.64 billion, and second in prize money awarded, \$3.59 billion, among the 43 states with lotteries in FY 2013. Massachusetts lottery revenue decreased 0.8 percent from the previous year.

Apportionment of Lottery Funds in FY 2013



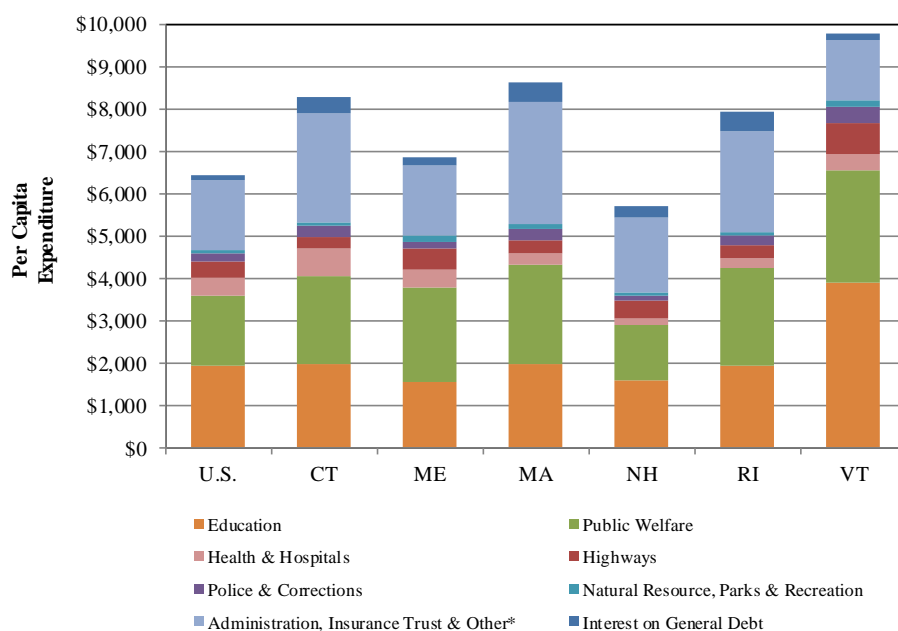
SOURCE: U.S. Census Bureau, Governments Division. Shares of total based on inflation-adjusted dollars (\$2015).

State Expenditures. The following table and graph depict FY 2013 per capita state government general expenditures in inflation-adjusted dollars by category for the six New England states and the U.S. average state expenditures. Massachusetts ranked 6th in the nation in per capita expenditures, \$8,610 in 2013, while it ranked 6th and spent \$8,775 in 2012. This represents a 1.9 percent decrease in per capita expenditures from 2012 to 2013, with the largest per capita dollar increase in the Natural Resource, Parks and Recreation function.

<i>Massachusetts Per Capita State Government General Expenditures, by Type</i>										
General expenditures, by function	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Education	\$1,485	\$1,633	\$1,647	\$2,145	\$1,815	\$1,917	\$1,972	\$1,967	\$2,011	\$1,973
Public Welfare	\$2,067	\$2,086	\$2,167	\$259	\$2,149	\$2,243	\$2,286	\$2,347	\$2,359	\$2,360
Health & Hospitals	\$216	\$215	\$220	\$305	\$260	\$262	\$256	\$259	\$249	\$249
Highways	\$591	\$334	\$307	\$313	\$380	\$325	\$323	\$304	\$320	\$304
Police & Corrections	\$270	\$269	\$291	\$100	\$322	\$324	\$304	\$289	\$286	\$292
Natural Resource, Parks & Recreation	\$113	\$92	\$95	\$2,160	\$98	\$106	\$99	\$94	\$84	\$95
Administration, Insurance Trust & Other*	\$2,278	\$2,014	\$1,987	\$592	\$2,092	\$2,348	\$2,780	\$2,621	\$2,987	\$2,897
Interest on General Debt	\$503	\$528	\$572	\$7,749	\$614	\$620	\$567	\$499	\$479	\$440
Total	\$7,521	\$7,173	\$7,287	\$13,623	\$7,731	\$8,146	\$8,588	\$8,381	\$8,775	\$8,610

<i>Fiscal 2013 Per Capita State Government General Expenditures, by Type</i> (for the U.S. and the New England States)								
General expenditures, by function	U.S.	CT	ME	MA	NH	RI	VT	
Education	\$1,926	\$1,985	\$1,546	\$1,973	\$1,591	\$1,920	\$3,906	
Public Welfare	\$1,669	\$2,070	\$2,215	\$2,360	\$1,294	\$2,314	\$2,644	
Health & Hospitals	\$420	\$633	\$456	\$249	\$146	\$218	\$383	
Highways	\$361	\$299	\$471	\$304	\$429	\$308	\$739	
Police & Corrections	\$204	\$255	\$163	\$292	\$130	\$246	\$367	
Natural Resource, Parks & Recreation	\$87	\$64	\$151	\$95	\$77	\$85	\$155	
Administration, Insurance Trust & Other*	\$1,634	\$2,575	\$1,674	\$2,897	\$1,767	\$2,365	\$1,417	
Interest on General Debt	\$148	\$406	\$178	\$440	\$275	\$458	\$153	
Total	\$6,450	\$8,288	\$6,853	\$8,610	\$5,708	\$7,913	\$9,764	
State's rank of total per capita expenditures		10	19	6	32	9	2	

Fiscal 2013 Per Capita State Government General Expenditures, by Type
(U.S. and the New England States)

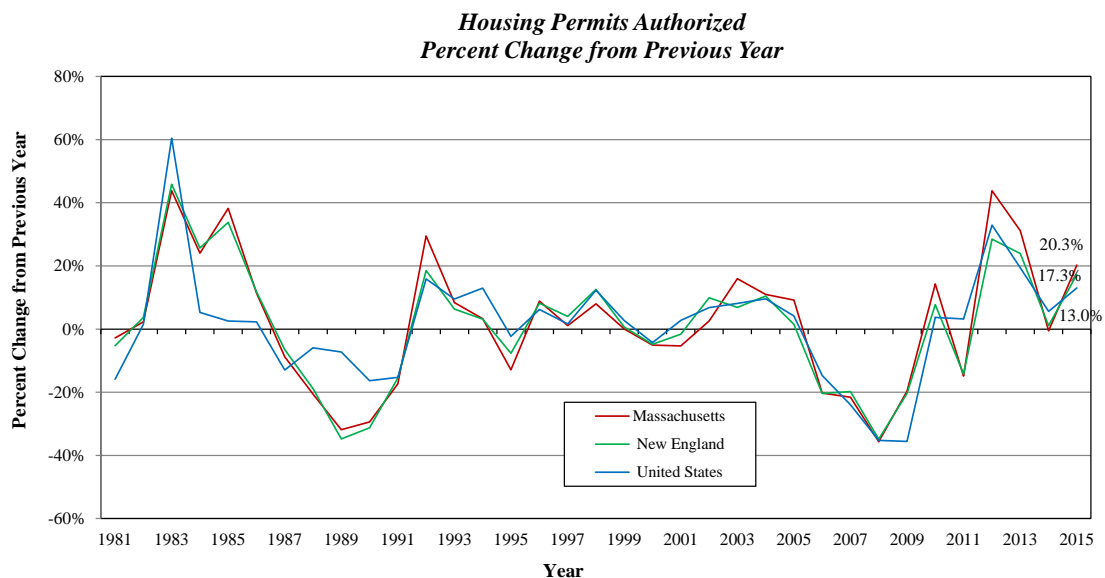


SOURCE: U.S. Census Bureau, Governments Division. *Other includes utility, liquor store, other and unallocable expenditures. Updated February 3, 2015. Per capita dollars are adjusted for inflation (\$2015).

Supplementary Data Section. The following appendix contains more detailed data for industry sectors or subsectors.

Building Permits. The Census Bureau's Residential Construction Branch Building Permits Survey is a leading economic indicator used to track the housing industry.

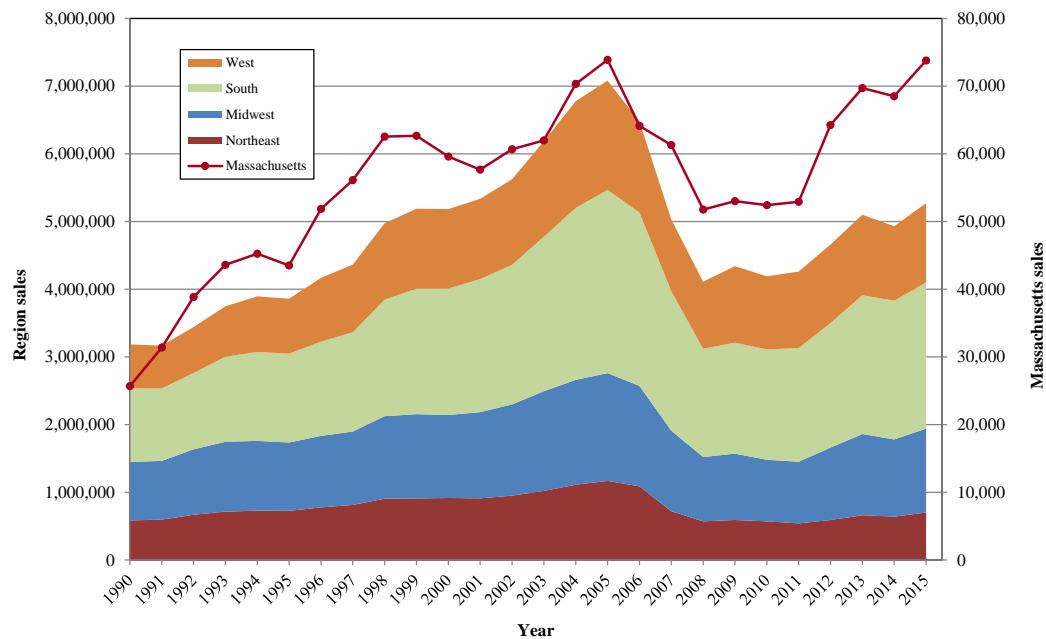
<i>Housing Permits Authorized</i>						
Year	Massachusetts		New England		United States	
	Total Units	Percent Change Previous Year	Total Units	Percent Change Previous Year	Total Units	Percent Change Previous Year
1970	38,330	14.2%	74,068	5.0%	1,354,746	1.8%
1975	17,697	-27.5%	41,645	-21.0%	934,511	-12.4%
1980	16,055	-20.4%	40,195	-25.1%	1,171,763	-23.6%
1985	39,360	38.2%	96,832	33.8%	1,732,335	2.5%
1990	15,276	-29.4%	36,811	-31.2%	1,125,583	-16.3%
1995	15,946	-12.9%	37,357	-7.7%	1,335,835	-2.3%
1996	17,360	8.9%	40,425	8.2%	1,419,083	6.2%
1997	17,554	1.1%	42,047	4.0%	1,442,251	1.6%
1998	18,958	8.0%	47,342	12.6%	1,619,500	12.3%
1999	18,967	0.0%	47,632	0.6%	1,663,533	2.7%
2000	18,000	-5.1%	45,335	-4.8%	1,592,267	-4.3%
2001	17,034	-5.4%	44,594	-1.6%	1,636,676	2.8%
2002	17,465	2.5%	49,031	9.9%	1,747,678	6.8%
2003	20,257	16.0%	52,395	6.9%	1,889,214	8.1%
2004	22,477	11.0%	57,858	10.4%	2,070,077	9.6%
2005	24,549	9.2%	58,742	1.5%	2,155,316	4.1%
2006	19,580	-20.2%	46,782	-20.4%	1,838,903	-14.7%
2007	15,358	-21.6%	37,532	-19.8%	1,398,415	-24.0%
2008	9,883	-35.6%	24,454	-34.8%	905,359	-35.3%
2009	7,941	-19.6%	19,463	-20.4%	582,963	-35.6%
2010	9,075	14.3%	20,964	7.7%	604,610	3.7%
2011	7,725	-14.9%	17,987	-14.2%	624,061	3.2%
2012	11,111	43.8%	23,109	28.5%	829,658	32.9%
2013	14,569	31.1%	28,635	23.9%	990,822	19.4%
2014	14,486	-0.6%	28,958	1.1%	1,046,363	5.6%
2015	17,424	20.3%	33,959	17.3%	1,182,582	13.0%



SOURCE: U.S. Census Bureau. Reported data plus data imputed for non-reporters & partial reporters.

Home Sales. Sales of existing single-family homes for Massachusetts and the U.S. are presented in the following table and graph. The state existing-home sales report includes single-family houses, condos and co-ops.

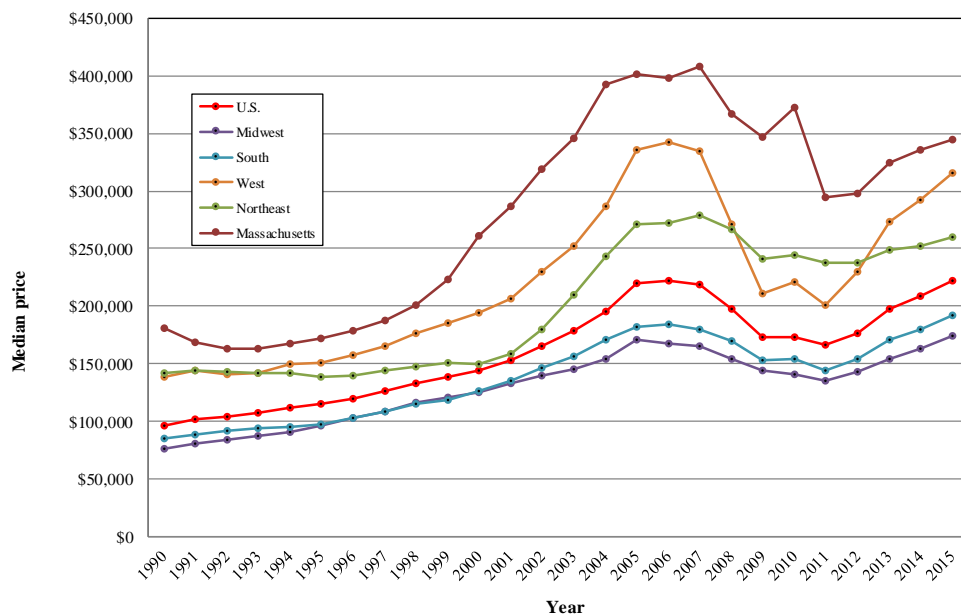
<i>Sales of Existing Homes United States, National Regions and Massachusetts</i>						
Year	U.S.	Northeast	Midwest	South	West	Massachusetts
1990	3,184,000	583,000	864,000	1,088,000	649,000	25,691
1991	3,146,000	596,000	867,000	1,070,000	633,000	31,379
1992	3,431,000	667,000	967,000	1,127,000	680,000	38,847
1993	3,737,000	714,000	1,031,000	1,257,000	745,000	43,588
1994	3,884,000	728,000	1,031,000	1,313,000	822,000	45,238
1995	3,849,000	725,000	1,010,000	1,312,000	812,000	43,509
1996	4,167,000	776,000	1,056,000	1,393,000	942,000	51,857
1997	4,374,000	813,000	1,084,000	1,466,000	1,001,000	56,107
1998	4,965,000	905,000	1,219,000	1,722,000	1,129,000	62,549
1999	5,179,000	908,000	1,245,000	1,854,000	1,182,000	62,662
2000	5,173,000	915,000	1,226,000	1,867,000	1,175,000	59,602
2001	5,335,000	910,000	1,274,000	1,965,000	1,186,000	57,665
2002	5,634,000	950,000	1,347,000	2,062,000	1,265,000	60,661
2003	6,176,000	1,020,000	1,473,000	2,283,000	1,410,000	61,979
2004	6,778,000	1,111,000	1,549,000	2,540,000	1,578,000	70,342
2005	7,080,000	1,168,000	1,591,000	2,707,000	1,614,000	73,887
2006	6,477,000	1,087,000	1,484,000	2,562,000	1,344,000	64,126
2007	5,030,000	720,000	1,190,000	2,060,000	1,060,000	61,299
2008	4,110,000	570,000	950,000	1,600,000	990,000	51,766
2009	4,340,000	590,000	980,000	1,640,000	1,130,000	52,992
2010	4,190,000	570,000	910,000	1,630,000	1,080,000	52,413
2011	4,260,000	540,000	910,000	1,680,000	1,130,000	52,902
2012	4,660,000	590,000	1,070,000	1,840,000	1,160,000	64,254
2013	5,090,000	660,000	1,200,000	2,050,000	1,190,000	69,697
2014	4,940,000	640,000	1,140,000	2,050,000	1,100,000	68,503
2015	5,250,000	700,000	1,240,000	2,160,000	1,170,000	73,772



SOURCE: National Association of Realtors and Massachusetts Association of Realtors.

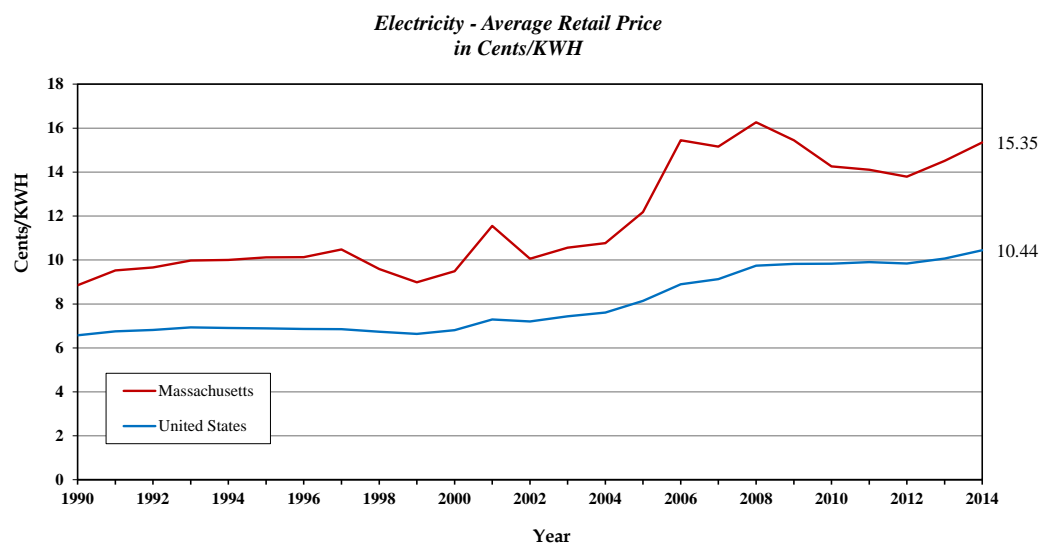
Home prices. Massachusetts sales prices are much higher than the national median but they are 15.4 percent less than the 2007 peak.

Median Sales Price of Existing Homes United States, National Regions and Massachusetts						
Year	U.S.	Northeast	Midwest	South	West	Massachusetts
1990	\$96,400	\$141,400	\$76,300	\$84,700	\$138,600	\$181,225
1991	\$101,400	\$143,600	\$80,500	\$88,100	\$144,500	\$168,895
1992	\$104,000	\$142,600	\$84,200	\$91,100	\$141,200	\$163,291
1993	\$107,200	\$142,100	\$87,000	\$93,700	\$141,800	\$162,854
1994	\$111,300	\$141,500	\$90,600	\$94,900	\$149,200	\$167,475
1995	\$114,600	\$138,500	\$96,100	\$96,900	\$150,600	\$171,702
1996	\$119,900	\$139,600	\$102,300	\$102,400	\$157,100	\$178,536
1997	\$126,100	\$143,600	\$108,200	\$108,400	\$165,700	\$187,213
1998	\$132,800	\$147,300	\$115,600	\$115,000	\$175,900	\$200,870
1999	\$138,000	\$150,500	\$121,000	\$118,900	\$185,400	\$223,593
2000	\$143,600	\$149,800	\$125,300	\$126,300	\$194,600	\$261,293
2001	\$153,100	\$158,700	\$132,500	\$135,500	\$207,000	\$286,277
2002	\$164,900	\$179,300	\$139,300	\$146,000	\$230,000	\$318,649
2003	\$178,800	\$210,000	\$145,600	\$156,700	\$251,800	\$346,210
2004	\$195,400	\$243,800	\$154,600	\$170,400	\$286,400	\$392,241
2005	\$219,600	\$271,300	\$170,600	\$181,700	\$335,300	\$401,548
2006	\$221,900	\$271,900	\$167,800	\$183,700	\$342,700	\$398,753
2007	\$219,000	\$279,100	\$165,100	\$179,300	\$335,100	\$407,826
2008	\$198,100	\$266,400	\$154,100	\$169,200	\$271,500	\$367,182
2009	\$172,500	\$240,500	\$144,100	\$153,000	\$211,100	\$346,921
2010	\$173,100	\$243,900	\$140,800	\$153,700	\$220,700	\$372,439
2011	\$166,100	\$237,500	\$135,400	\$144,200	\$201,300	\$295,000
2012	\$176,800	\$237,700	\$142,700	\$154,000	\$230,100	\$297,750
2013	\$197,100	\$249,100	\$154,600	\$170,700	\$273,100	\$325,000
2014	\$208,300	\$252,700	\$163,200	\$179,300	\$291,800	\$336,000
2015	\$222,400	\$260,200	\$174,400	\$192,200	\$316,000	\$345,000



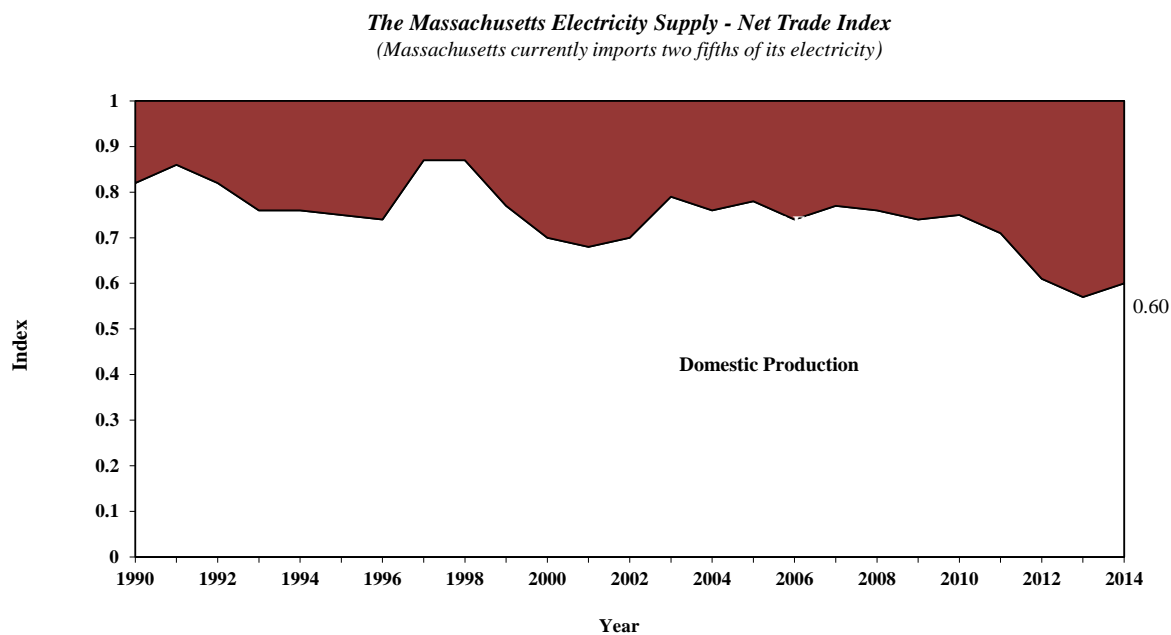
SOURCE: National Association of Realtors and Massachusetts Association of Realtors. The Massachusetts sales price reflects only that of single-family homes. Sales prices of the other regions represent the average of both single- and multi-family homes.

Electricity Prices, Supply and Capacity by Source. Massachusetts had the sixth highest electric rate in the country in 2014, 15.35 cents per kilowatt hour, while the U.S. average was 10.44. This was a increase of 5.8 percent for Massachusetts and an increase of 3.7 percent for the U.S. from the previous year. Massachusetts electric utilities generated \$8.4 billion in revenue in 2014. This was 4.3 percent more than in 2013, while they sold 1.4 percent less electricity. The Massachusetts Net Electricity Trade Index, which represents the state's electricity self-sufficiency, was 0.60 in 2014, the latest data available. In 2013, 56.8 percent of Massachusetts electricity was generated by burning natural gas, our top fuel source for power generation.



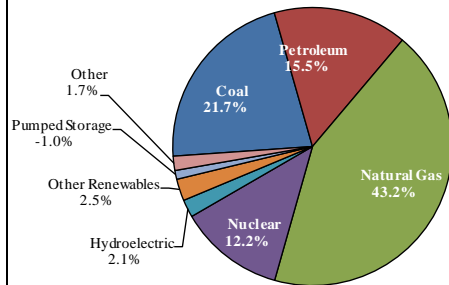
SOURCE: U.S. Dept. of Energy, http://www.eia.doe.gov/cneaf/electricity/st_profiles/massachusetts.html.

*NOTE: Massachusetts restructured the electric utility industry, to establish consumer electricity rate savings by March 1, 1998.
<https://malegislature.gov/Laws/SessionLaws/Acts/1997/Chapter164>

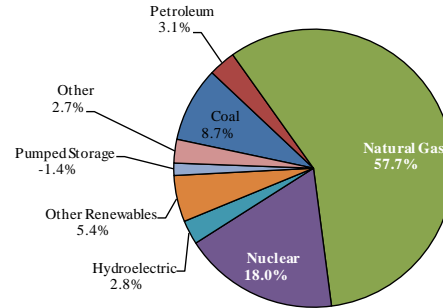


SOURCE: U.S. Dept. of Energy, http://www.eia.doe.gov/cneaf/electricity/st_profiles/massachusetts.html.

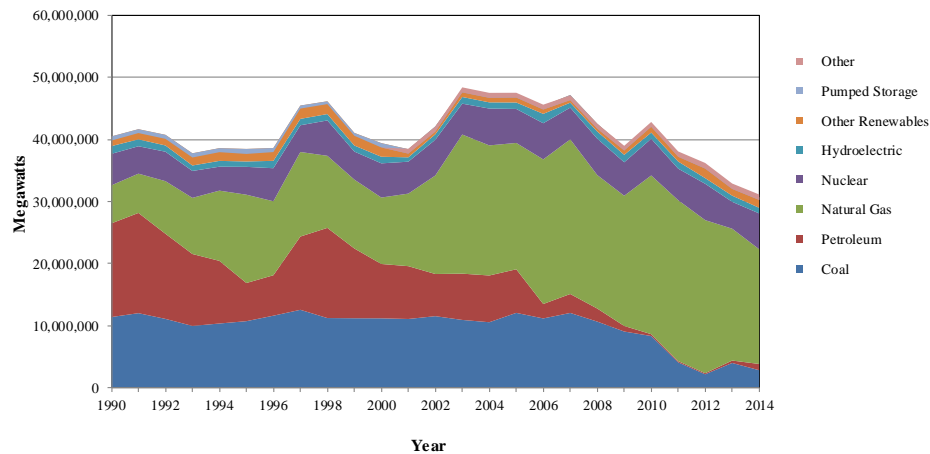
**Electric Power Generated in Massachusetts
by Primary Energy Source 2004**



**Electric Power Generated in Massachusetts
by Primary Energy Source 2014**



Electric Power Generation by Primary Energy Source



SOURCE: U.S. Dept. of Energy, <http://www.eia.doe.gov/>; state electricity profiles.

Other Renewables includes wood, black liquor, other wood waste, municipal solid waste, landfill gas, sludge waste, agriculture byproducts, other biomass, geothermal, solar thermal, photovoltaic energy, and wind. **Other** includes batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, tire-derived fuels and misc. technologies.

Travel and Tourism. The Massachusetts Office of Travel and Tourism (MOTT) reported a 2.6 percent increase in 2015 museum and attraction attendance compared to 2014, with 11.3 million visitors. Museum attendance was down 2.9 percent in December 2015 for the calendar year compared to December 2014. For December FY 2016 year-to-date, net room occupancy tax collections totaled \$150.7 million, an 8.3 percent increase from the same period in FY 2015.

Transportation and Warehousing. Massachusetts's major air and seaports are managed by the Massachusetts Port Authority (Massport), an independent public authority. Based on total passenger volume for calendar year 2014 data, Logan Airport was the most active airport in New England, remaining the 18th most active in the U.S. according to the Federal Aviation Authority. According to the FAA, in calendar year 2014, Logan Airport ranked 25th in the nation in total air cargo volume. In 2015, Massport reported the airport handled 576 million pounds of cargo; a 1.7 percent decrease from 2014. Massport reported that as of March 2016 year-to-date, total express mail was down 3.4 percent from the same period in 2015. Massport reported that as of March 2016 year-to-date, total airport flight operations were up 10.7 percent and total airport passengers were up 11.3 percent from the same period in 2015. Please refer to the Aviation Activity charts on the following page.

Massport's Port of Boston properties processed 237,166 full TEUs (twenty-foot equivalent units) of containerized cargo in 2015, an increase of 10.7 percent from calendar year 2014. It also processed 59,995 automobiles, a decrease of 53 automobiles, and 328,305 cruise passengers, a 4.0 percent increase, compared to 2014.

The Army Corps of Engineers reported Massachusetts total waterborne cargo shipped or received in 2014 decreased by 0.7 percent to 18.7 million short tons from 2013. Waterborne cargo in New England decreased 0.9 percent while the U.S. increased 3.1 percent. Please refer to the Waterborne Tonnage by State charts on the following page.

Aviation Activity for Massachusetts's Primary Airports

Passenger Boardings	2006	2007	2008	2009	2010	2011	2012	2013	2014
Logan International	13,544,552	13,783,297	12,820,489	12,566,797	13,561,814	14,180,730	14,293,675	14,810,153	15,507,561
Nantucket Memorial	276,866	282,197	258,214	204,981	201,390	169,352	178,918	183,557	170,361
Barnstable Municipal	206,980	204,152	191,906	138,858	124,560	100,596	95,693	87,648	85,184
Worcester Regional	14,823	460	3,182	17,241	35,833	53,541	10,746	8,007	57,818
Martha's Vineyard	45,881	49,205	45,002	42,248	43,904	49,095	50,464	56,313	52,362
Provincetown Municipal	11,375	12,459	11,468	10,747	11,450	10,967	11,577	11,288	10,410
New Bedford Regional	15,211	14,567	13,908	11,680	12,363	11,152	12,254	10,604	8,159
Hanscom Field	14,560	16,568	8,385	7,350	7,952	10,893	9,963	12,621	11,116
Total	14,130,248	14,362,905	13,352,554	12,999,902	13,806,666	14,586,326	14,663,290	15,180,191	15,902,971

Cargo - Gross Landed Weight (lbs.)	2006	2007	2008	2009	2010	2011	2012	2013	2014
Logan International	1,100,485,850	1,059,947,900	984,258,400	835,954,035	817,235,460	819,986,332	780,913,850	866,698,830	910,283,225

Change in Aviation Activity at Massachusetts's Primary Airports

Passenger Boardings	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Logan International	2.5%	1.8%	-7.0%	-2.0%	7.9%	4.6%	0.8%	3.6%	4.7%
Nantucket Memorial	9.5%	1.9%	-8.5%	-20.6%	-1.8%	-15.9%	5.6%	2.6%	-7.2%
Barnstable Municipal	16.4%	-1.4%	-6.0%	-27.6%	-10.3%	-19.2%	-4.9%	-8.4%	-2.8%
Worcester Regional	628.0%	-96.9%	591.7%	441.8%	107.8%	49.4%	-79.9%	-25.5%	622.1%
Martha's Vineyard	-6.3%	7.2%	-8.5%	-6.1%	3.9%	11.8%	2.8%	11.6%	-7.0%
Provincetown Municipal	11.1%	9.5%	-8.0%	-6.3%	6.5%	-4.2%	5.6%	-2.5%	-7.8%
New Bedford Regional	-15.3%	-4.2%	-4.5%	-16.0%	5.8%	-9.8%	9.9%	-13.5%	-23.1%
Hanscom Field	4.8%	13.8%	-49.4%	-12.3%	8.2%	37.0%	-8.5%	26.7%	-11.9%
Total	2.9%	1.6%	-7.0%	-2.6%	6.2%	5.6%	0.5%	3.5%	4.8%

Cargo	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Logan International	-4.2%	-3.7%	-7.1%	-15.1%	-2.2%	0.3%	-4.8%	11.0%	5.0%

SOURCE: Federal Aviation Administration.

http://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/

Waterborne Tonnage by State (In Units of 1,000 Tons)

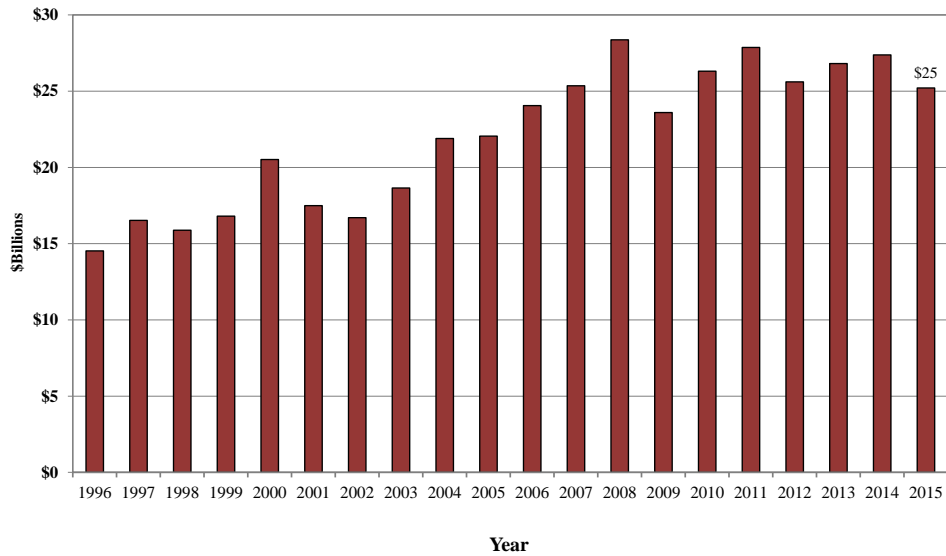
State	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
U.S. total	2,551,939	2,527,622	2,588,440	2,563,972	2,477,094	2,210,752	2,334,399	2,367,484	2,306,770	2,274,778	2,345,439
Massachusetts	31,787	28,812	27,411	28,043	25,993	25,018	22,661	20,646	17,298	18,866	18,733
Maine	32,447	32,353	28,103	26,839	24,747	22,996	20,907	15,411	15,127	14,078	11,964
Connecticut	20,075	19,617	19,340	20,148	18,196	16,767	16,229	12,977	10,645	11,368	13,313
Rhode Island	9,764	10,972	11,016	11,184	10,517	8,404	8,315	8,378	7,567	9,072	8,754
New Hampshire	4,795	5,254	4,823	4,026	3,833	3,583	2,964	3,347	2,419	2,679	2,803
Vermont	-	-	-	-	-	-	-	-	-	-	-
New England	98,868	97,008	90,693	90,240	83,286	76,768	71,076	60,759	53,056	56,063	55,567

Waterborne Tonnage by State - Percent Change from Previous Year

State	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
U.S. total	6.6%	-1.0%	2.4%	-0.9%	-3.4%	-10.8%	5.6%	1.4%	-2.6%	-1.4%	3.1%
Massachusetts	3.7%	-9.4%	-4.9%	2.3%	-7.3%	-3.8%	-9.4%	-8.9%	-16.2%	9.1%	-0.7%
Maine	2.4%	-0.3%	-13.1%	-4.5%	-7.8%	-7.1%	-9.1%	-26.3%	-1.8%	-6.9%	-15.0%
Connecticut	8.1%	-2.3%	-1.4%	4.2%	-9.7%	-7.9%	-3.2%	-20.0%	-18.0%	6.8%	17.1%
Rhode Island	3.7%	12.4%	0.4%	1.5%	-6.0%	-20.1%	-1.1%	0.8%	-9.7%	19.9%	-3.5%
New Hampshire	-3.5%	9.6%	-8.2%	-16.5%	-4.8%	-6.5%	-17.3%	12.9%	-27.7%	10.7%	4.6%
Vermont	-	-	-	-	-	-	-	-	-	-	-
New England	3.7%	-1.9%	-6.5%	-0.5%	-7.7%	-7.8%	-7.4%	-14.5%	-12.7%	5.7%	-0.9%

SOURCE: Army Corps of Engineers, Waterborne Commerce Statistics Center (WCSC), <http://www.navigationdatacenter.us/wcsc/wcsc.htm>.

Massachusetts Annual Exports



SOURCE: <http://www.wisertrade.org>, Data from U.S. Census Bureau , Foreign Trade Division.

Massachusetts Top Export Partners (top ten export destinations ranked by value of 2015 exports, in millions)

Country	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Canada	\$2,917	\$2,927	\$3,166	\$3,480	\$3,907	\$3,086	\$3,244	\$3,796	\$3,474	\$3,734	\$3,699	\$3,090
Mexico	\$755	\$782	\$824	\$996	\$1,163	\$902	\$1,273	\$1,437	\$1,609	\$1,859	\$2,317	\$2,622
Switzerland	\$278	\$269	\$237	\$211	\$446	\$362	\$471	\$563	\$434	\$1,281	\$804	\$1,023
China	\$894	\$884	\$1,291	\$1,375	\$1,563	\$1,372	\$2,195	\$2,088	\$1,877	\$1,977	\$2,291	\$2,049
Japan	\$1,814	\$1,893	\$2,287	\$2,166	\$2,427	\$1,717	\$2,045	\$2,044	\$1,993	\$1,762	\$1,850	\$1,476
Germany	\$2,516	\$2,151	\$2,515	\$2,370	\$2,489	\$1,750	\$1,872	\$2,046	\$1,803	\$1,836	\$1,850	\$1,911
Netherlands	\$2,505	\$3,000	\$2,696	\$2,215	\$2,675	\$1,982	\$1,695	\$1,107	\$1,077	\$1,290	\$1,329	\$1,399
United Kingdom	\$1,508	\$1,628	\$1,972	\$2,306	\$3,504	\$4,049	\$3,214	\$3,285	\$2,589	\$1,408	\$2,349	\$1,183
Korea, Republic Of	\$650	\$803	\$875	\$821	\$666	\$624	\$893	\$1,030	\$1,029	\$902	\$991	\$1,005
Ireland	\$443	\$447	\$461	\$715	\$549	\$339	\$483	\$518	\$509	\$638	\$794	\$843
Total Exports, Top Destinations	\$14,279	\$14,782	\$16,325	\$16,655	\$19,390	\$16,182	\$17,384	\$17,915	\$16,394	\$16,689	\$18,274	\$16,601
All other countries	\$7,620	\$7,270	\$7,731	\$8,696	\$8,979	\$7,411	\$8,921	\$9,956	\$9,220	\$10,119	\$9,108	\$8,605
Total Exports	\$21,899	\$22,052	\$24,057	\$25,351	\$28,369	\$23,593	\$26,305	\$27,871	\$25,614	\$26,808	\$27,383	\$25,206

Value of International Shipments from Massachusetts (top ten industry groups ranked by value of latest exports, in millions)

Major Industry Group/3-Digit NAICS	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Computer And Electronic Products	\$7,519	\$7,012	\$7,513	\$7,711	\$7,821	\$6,600	\$7,488	\$7,704	\$7,295	\$7,223	\$8,151	\$7,310
Chemicals	\$4,910	\$5,285	\$5,189	\$5,258	\$5,515	\$3,863	\$3,626	\$3,364	\$3,448	\$3,613	\$3,504	\$3,394
Miscellaneous Manufactured Commodities	\$1,930	\$2,114	\$2,240	\$2,319	\$3,120	\$2,737	\$3,046	\$3,186	\$3,056	\$3,286	\$3,068	\$3,178
Machinery, Except Electrical	\$2,447	\$2,311	\$2,739	\$2,881	\$2,615	\$2,008	\$3,454	\$3,643	\$3,251	\$2,885	\$2,943	\$3,172
Waste And Scrap	\$326	\$330	\$597	\$849	\$1,373	\$666	\$654	\$1,101	\$784	\$743	\$762	\$1,255
Electrical Equipment, Appliances, And Component	\$752	\$810	\$871	\$769	\$624	\$508	\$558	\$679	\$972	\$1,117	\$1,192	\$1,184
Transportation Equipment	\$461	\$485	\$557	\$932	\$1,237	\$1,107	\$1,059	\$1,119	\$1,043	\$1,090	\$1,307	\$1,168
Plastics And Rubber Products	\$404	\$470	\$530	\$582	\$587	\$563	\$751	\$810	\$679	\$674	\$729	\$830
Fabricated Metal Products, Nesoi	\$621	\$664	\$679	\$615	\$721	\$605	\$809	\$864	\$672	\$742	\$788	\$778
Fish, Fresh, Chilled, Or Frozen And Other Marine Products	\$305	\$350	\$390	\$414	\$432	\$421	\$425	\$537	\$541	\$508	\$520	\$477
Total Exports, Top Massachusetts Industries	\$19,674	\$19,829	\$21,306	\$22,331	\$24,044	\$19,077	\$21,869	\$23,007	\$21,742	\$21,882	\$22,965	\$22,747
All other exports	\$2,107	\$2,168	\$2,494	\$2,453	\$2,705	\$2,202	\$2,463	\$2,607	\$2,451	\$2,597	\$2,573	\$2,459
Total Exports	\$21,899	\$22,052	\$24,057	\$25,351	\$28,369	\$23,593	\$26,305	\$27,871	\$25,614	\$26,808	\$27,383	\$25,206

SOURCE: United States Department of Commerce and WISERTrade.org.

Sources

Listed below are the web sites of the original data sources used to compile Exhibit A. For more information contact UMass Donahue Institute Economic and Public Policy Research.

Web: <http://www.massbenchmarks.org> Email: msdc-info@donahue.umassp.edu Tel: 413-577-2415

Introduction

American Human Development Project

<http://www.measureofamerica.org/>

Population Characteristics

U.S. Department of Commerce, Bureau of the Census

<http://www.census.gov>

U.S. Internal Revenue Service

<http://www.irs.gov>

Personal Income, Consumer Prices, and Poverty

U.S. Department of Commerce, Bureau of Economic Analysis

<http://www.bea.gov/regional/index.htm>

U.S. Department of Labor, Bureau of Labor Statistics

<http://www.bls.gov>

The Conference Board, Inc.

<http://www.conference-board.org>

Mass Insight Corporation

<http://www.massinsight.com/index.asp>

U.S. Department of Commerce, Bureau of the Census

<http://www.census.gov>

Employment

Mass. Executive Office of Labor and Workforce Development, Division of Unemployment Assistance

<http://lmi2.detma.org/Lmi/LMIDataProg.asp>

U.S. Department of Labor, Bureau of Labor Statistics

<http://www.bls.gov/data/home.htm>

Economic Base and Performance

U.S. Department of Commerce, Bureau of Economic Analysis

<http://www.bea.gov/national/index.htm#gdp>

Fortune Magazine

<http://www.fortune.com/fortune/>

Economic Base and Performance - Sector Detail (NAICS Basis)

U.S. Department of Commerce, Bureau of Economic Analysis

<http://www.bea.gov/regional/index.htm>

U.S. Census Bureau, Foreign Trade Division.

Prepared by the World Institute for Strategic Economic Research (WISER)

<http://www.wisertrade.org>

Massport

<http://www.massport.com>

Airports Council International

<http://www.aci.aero>

Federal Aviation Administration

http://www.faa.gov/airports_airtraffic/airports/planning_capacity/passenger_allcargo_stats/

Army Corps of Engineers

<http://www.navigationdatacenter.us/wcsc/wcsc.htm>

Federal Reserve Bank of Boston

<http://www.bos.frb.org>

U.S. Department of Commerce

<http://www.census.gov>

National Association of Realtors

<http://www.realtor.org/>

<http://www.marealtor.com/content/>

Massachusetts Office of Travel and Tourism

<http://www.massvacation.com>

U.S. Census Bureau, Governments Division

<http://www.census.gov/govs/www/statetax.html>

<http://www.census.gov/govs/www/state.html>

U.S. Department of Commerce, Bureau of the Census, Consolidated Federal Funds Report

<http://www.census.gov/govs/www/cffr.html>

Federal Spending - contract, grant, and other award data

<http://www.usaspending.gov>

Large employers by sector

<http://www.referenceusa.com/Home/Home>

Human Resources and Infrastructure

U.S. Census Bureau

<http://www.census.gov/acs/www/>

Massachusetts Department of Higher Education

<http://www.mass.edu/campuses/facts.asp>

New England Board of Higher Education

<http://www.nebhe.org.connection.html>

National Science Foundation

<http://www.nsf.gov/statistics>

U.S. Department of Education, National Center for Education Statistics

<http://nces.ed.gov>

Institute of International Education

<http://www.iese.org>

U.S. Patent Office

<http://www.uspto.gov>