

The Massachusetts Economic Due Diligence Report

FOURTH QUARTER FY 2015



Produced by the University of Massachusetts President's Office Donahue Institute, Economic and Public Policy Research
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Springfield's Union Station, circa 1910. Cover photo: Artist's rendering of Springfield's Union Station , anticipated opening Fall 2016. Springfield Redevelopment Authority, Springfield, MA.

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ECONOMIC INFORMATION - QUARTER 4, FY 2015

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. **The section was prepared for release on July 31, 2015. Information in the text, tables, charts, and graphs is current as of July 16, 2015.** Sources of information are indicated in the text or immediately following the charts and tables, and also from 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

| <u>Population (p. A-2)</u> | <u>Massachusetts</u> | <u>United States</u> |
|---|----------------------|----------------------|
| Estimated Percent Change in Population, July 1, 2010 - July 1, 2014 | 3.1% | 2.8% |
| | | |
| <u>Personal Income, Consumer Prices, and Poverty (p. A-8)</u> | | |
| Per Capita Personal Income, 2014 | \$59,182 | \$46,129 |
| Average Annual Pay, All Industries, 2014 | \$64,128 | \$51,361 |
| Percent Change in CPI-U*, 2013-2014 | 1.6% | 1.6% |
| Percent Change in CPI-U*, May 2014 - May 2015 | 0.6% | 0.0% |
| Poverty Rate, 2013 | 11.9% | 15.8% |
| Average Weekly Earnings, Manufacturing Production Workers: 2014 | \$877.40 | \$822.24 |
| Percent Change from previous year | 0.1% | 1.8% |
| | | |
| <u>Employment (p. A-18)</u> | | |
| Percent Change in Nonfarm Payroll Employment (Not Seasonally Adjusted), May 2014 - May 2015p | 0.8% | 2.1% |
| Unemployment Rate, 2014 | 5.8% | 6.2% |
| Unemployment Rate, June 2015 (seasonally adjusted) | 4.6% | 5.3% |
| | | |
| <u>Education (p. A-24)</u> | | |
| Expenditure Per Pupil K-12 Public, 2013 | \$14,515 | \$10,700 |
| Percent of Adults with a Bachelor's Degree or Higher, 2013 | 40.3% | 29.6% |
| | | |
| <u>Economic Base and Performance (p. A-30)</u> | | |
| Percent Change in Gross Domestic Product, 2013-2014 | 2.3% | 2.2% |
| Percent Change in International Exports, 2013-2014 | 2.0% | 2.8% |
| Percent Change in Housing Permits Authorized, 2013-2014 | -2.3% | 4.8% |

*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.

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 4.6 percent, compared to the national rate of 5.3 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

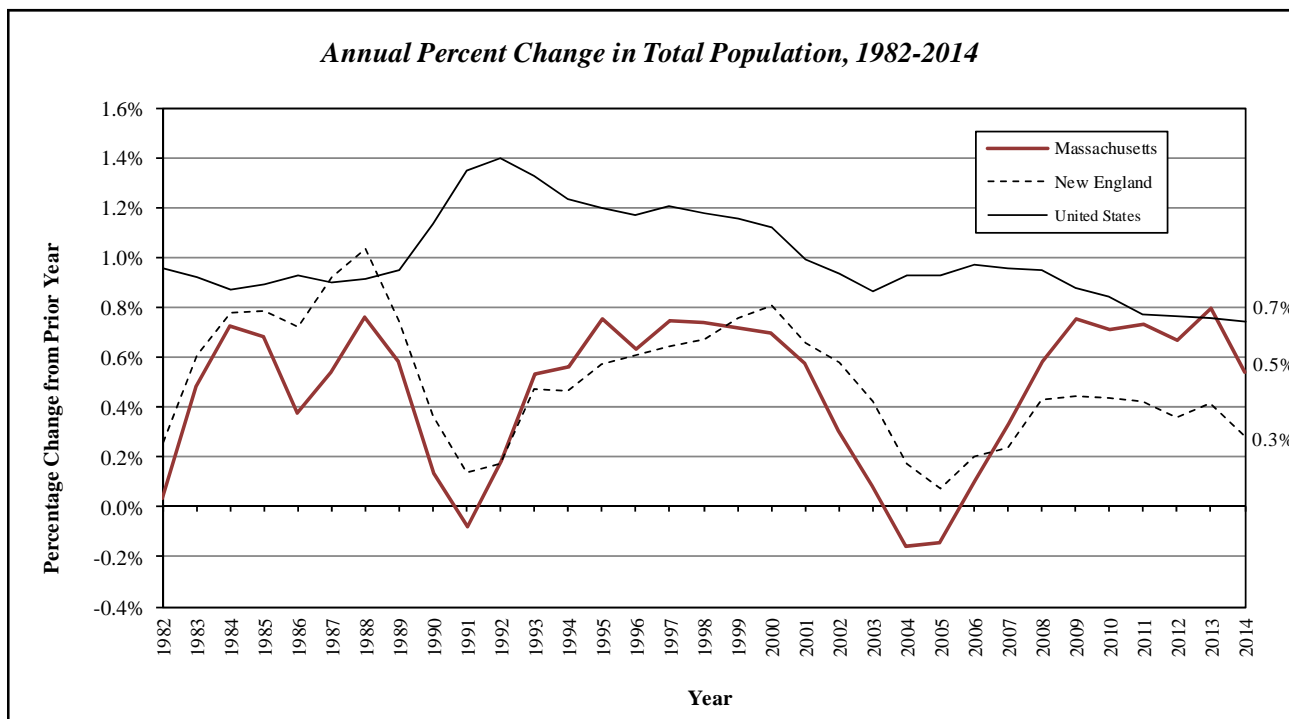
Massachusetts is a relatively slow growing but densely populated state with a comparatively large percentage of its residents living in metropolitan areas. The population density of Massachusetts was estimated as of July 1, 2014 to be 864.8 persons per square mile, as compared to 90.3 for the United 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 in percentage of residents living in metropolitan areas. According to the current county-based definition, 97.8 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, 2013 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 generally grows at a rate similar to the population of New England and more slowly than the nation as a whole. According to the Census Bureau's latest revised estimates released in December 2014, the Massachusetts population has only grown by 6 percent since Census 2000, while the U.S. has grown 13 percent.



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

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.

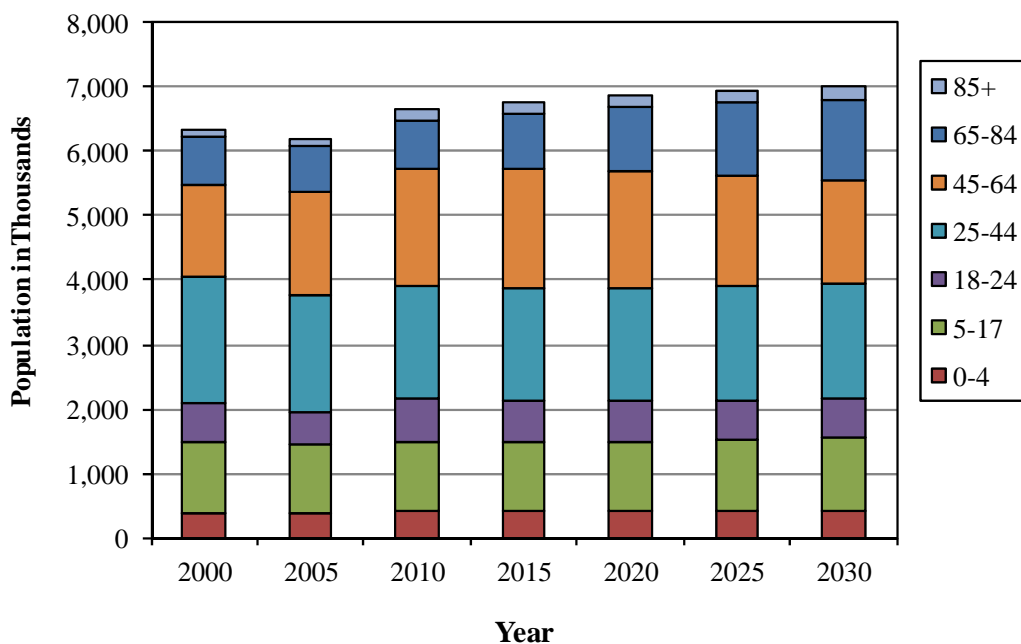
| <i>Population, 1974-2014</i> <i>(in thousands)</i> | | | | | | |
|---|----------------------|-----------------------|--------------------|-----------------------|----------------------|-----------------------|
| Year | Massachusetts | | New England | | United States | |
| | Total | Percent Change | Total | Percent Change | Total | Percent Change |
| 1974 | 5,774 | -0.1% | 12,146 | 0.0% | 213,342 | 0.9% |
| 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 | 6,564 | 0.7% | 14,466 | 0.4% | 309,347 | 0.8% |
| 2011 | 6,612 | 0.7% | 14,527 | 0.4% | 311,721 | 0.8% |
| 2012 | 6,656 | 0.7% | 14,579 | 0.4% | 314,112 | 0.8% |
| 2013 | 6,709 | 0.8% | 14,640 | 0.4% | 316,498 | 0.8% |
| 2014 | 6,745 | 0.5% | 14,681 | 0.3% | 318,857 | 0.7% |

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

The next 16 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> | | | | | | | | | |
|---|------------|-------------|--------------|--------------|--------------|--------------|------------|-----------------|-------------------|
| Year | 0-4 | 5-17 | 18-24 | 25-44 | 45-64 | 65-84 | 85+ | All Ages | Median 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 |

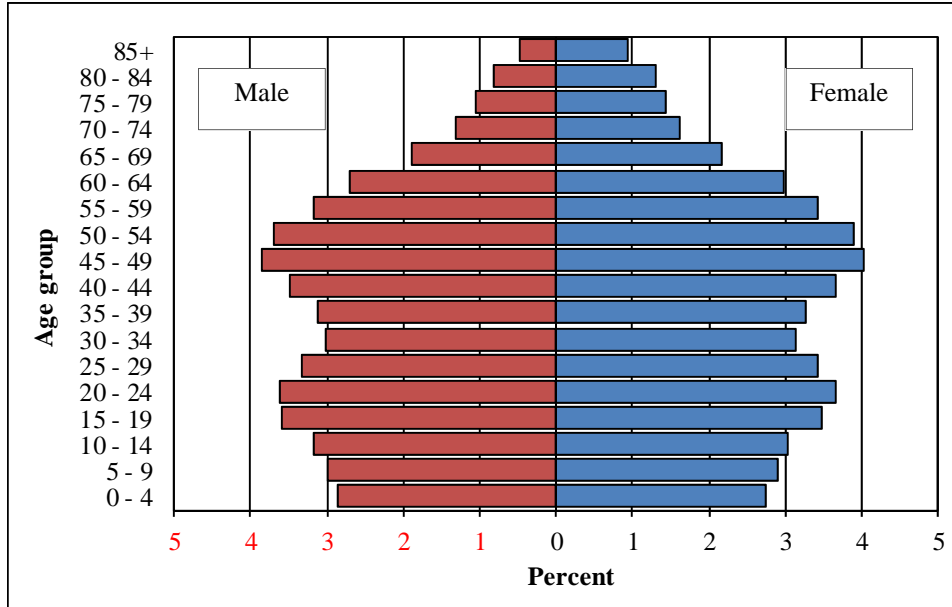
*Projected Massachusetts Population by Age Group
2000-2030*



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.

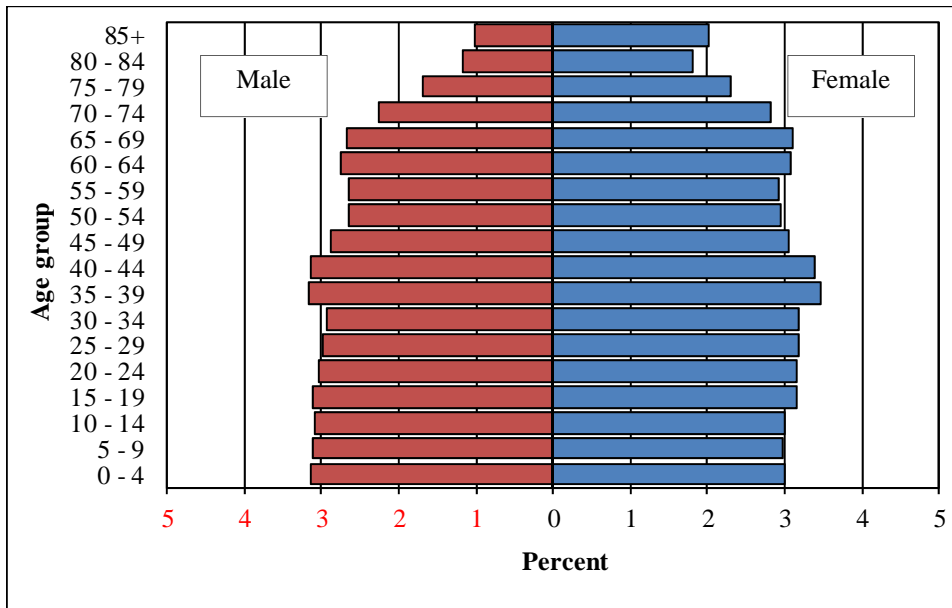
Population Pyramids of Massachusetts Percent of Total Population

2010



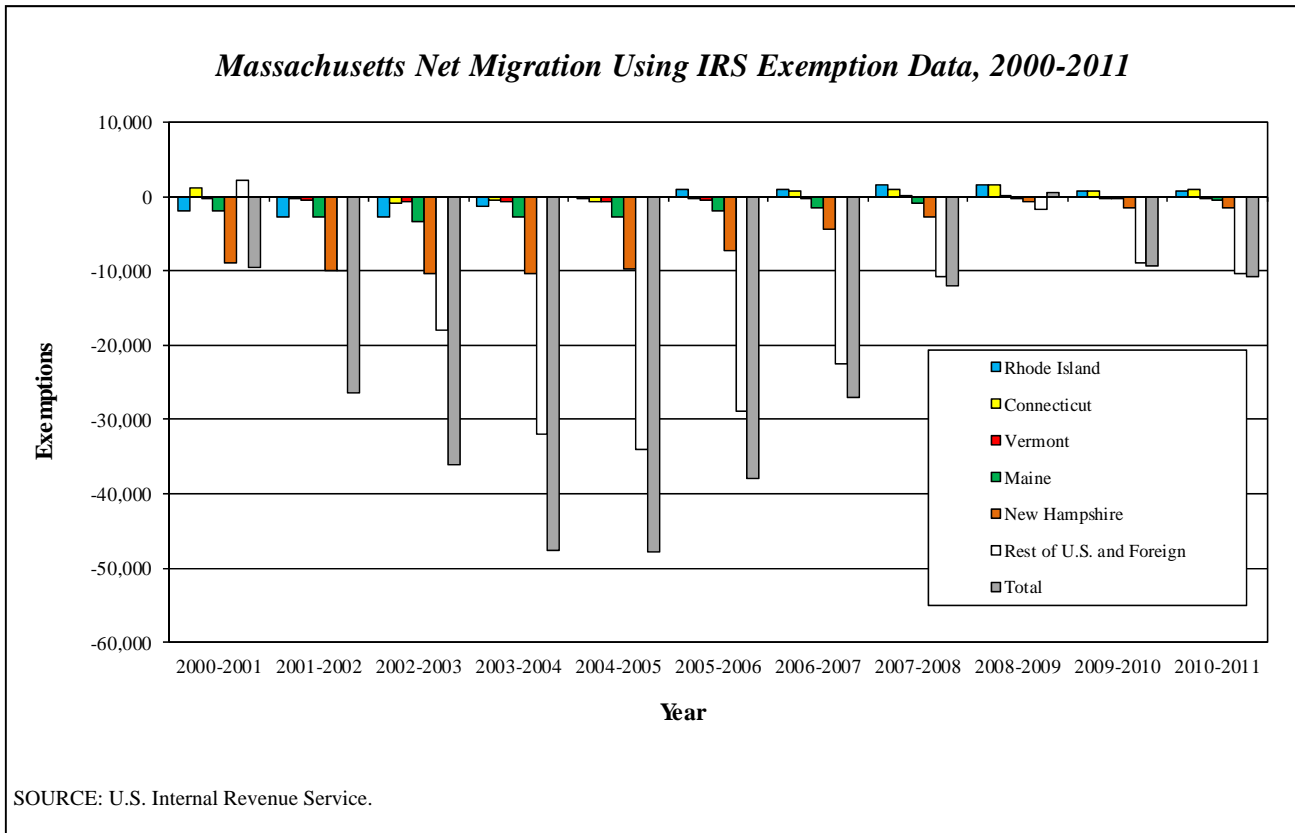
SOURCE: U.S. Census Bureau, 2010 Census.

2030



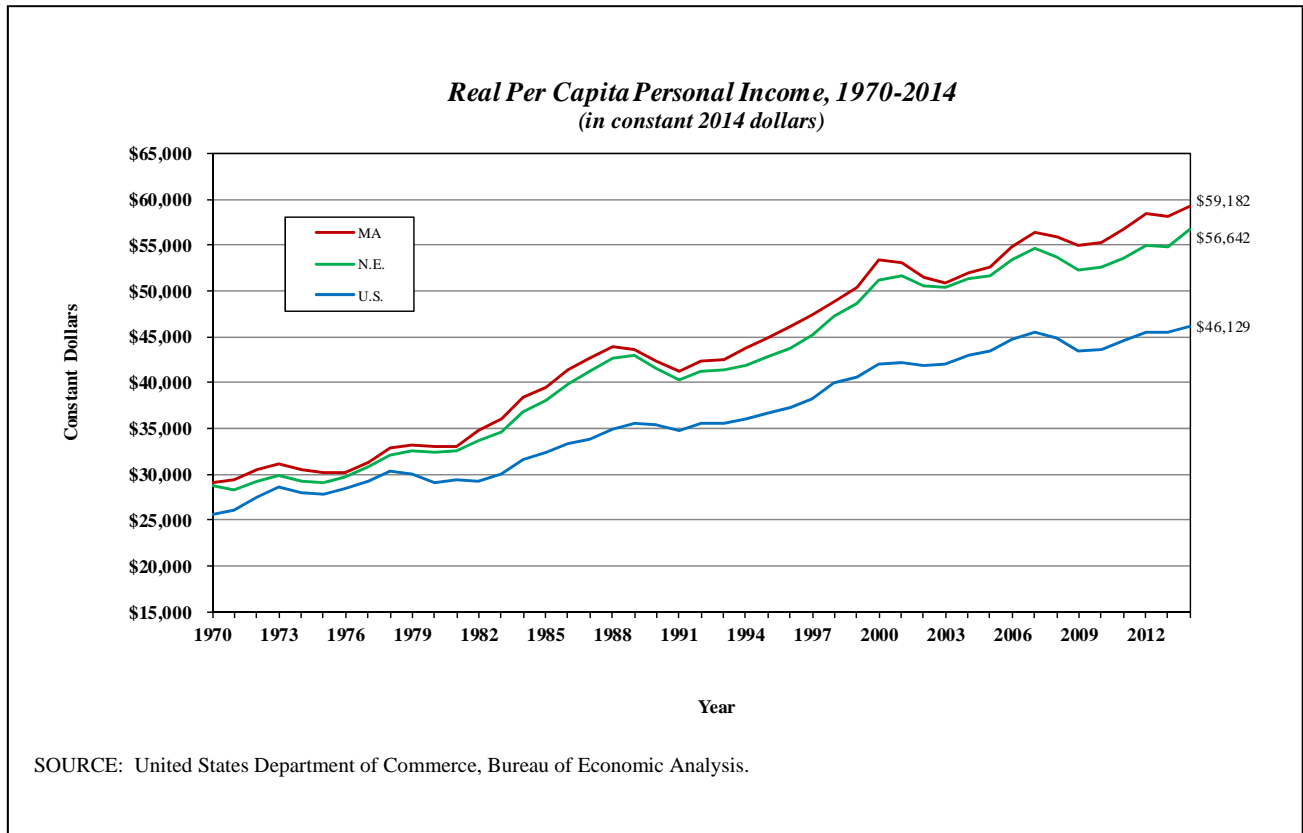
SOURCE: U.S. Census Bureau, Population Division, Interim State Population Projections, 2005.
Internet Release Date: April 21, 2005.

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 2011. Massachusetts also sends many more migrants to Florida, California, Texas and North Carolina than it gains. The chart below illustrates 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 2014 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.



The following table compares per capita personal income in Massachusetts, New England, and the United States for the period 1970-2014.

| <i>Per Capita Personal Income, 1970-2014</i> | | | | | | | | | |
|--|--|----------|----------|----------------------------------|----------|----------|----------------------------------|-------|-------|
| Year | Nominal Income (in current dollars) | | | Real Income (in 2014 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 | \$29,043 | \$28,703 | \$25,598 | 12.2% | 12.4% | 14.2% |
| 1971 | \$4,859 | \$4,795 | \$4,468 | \$29,384 | \$28,360 | \$26,113 | 1.2% | -1.2% | 2.0% |
| 1972 | \$5,228 | \$5,156 | \$4,853 | \$30,531 | \$29,312 | \$27,481 | 3.9% | 3.4% | 5.2% |
| 1973 | \$5,647 | \$5,589 | \$5,352 | \$31,126 | \$29,928 | \$28,532 | 1.9% | 2.1% | 3.8% |
| 1974 | \$6,108 | \$6,056 | \$5,824 | \$30,445 | \$29,167 | \$27,962 | -2.2% | -2.5% | -2.0% |
| 1975 | \$6,592 | \$6,516 | \$6,312 | \$30,148 | \$29,077 | \$27,770 | -1.0% | -0.3% | -0.7% |
| 1976 | \$7,096 | \$7,059 | \$6,854 | \$30,182 | \$29,791 | \$28,512 | 0.1% | 2.5% | 2.7% |
| 1977 | \$7,731 | \$7,700 | \$7,493 | \$31,267 | \$30,775 | \$29,267 | 3.6% | 3.3% | 2.6% |
| 1978 | \$8,546 | \$8,526 | \$8,337 | \$32,845 | \$32,069 | \$30,266 | 5.0% | 4.2% | 3.4% |
| 1979 | \$9,499 | \$9,500 | \$9,211 | \$33,117 | \$32,493 | \$30,031 | 0.8% | 1.3% | -0.8% |
| 1980 | \$10,693 | \$10,713 | \$10,150 | \$33,037 | \$32,452 | \$29,157 | -0.2% | -0.1% | -2.9% |
| 1981 | \$11,865 | \$11,912 | \$11,260 | \$32,984 | \$32,594 | \$29,321 | -0.2% | 0.4% | 0.6% |
| 1982 | \$13,003 | \$12,936 | \$11,944 | \$34,747 | \$33,623 | \$29,297 | 5.3% | 3.2% | -0.1% |
| 1983 | \$14,065 | \$13,894 | \$12,649 | \$35,966 | \$34,665 | \$30,060 | 3.5% | 3.1% | 2.6% |
| 1984 | \$15,753 | \$15,471 | \$13,858 | \$38,397 | \$36,864 | \$31,571 | 6.8% | 6.3% | 5.0% |
| 1985 | \$16,936 | \$16,590 | \$14,717 | \$39,507 | \$38,108 | \$32,375 | 2.9% | 3.4% | 2.5% |
| 1986 | \$18,195 | \$17,793 | \$15,457 | \$41,385 | \$39,878 | \$33,382 | 4.8% | 4.6% | 3.1% |
| 1987 | \$19,606 | \$19,181 | \$16,263 | \$42,728 | \$41,173 | \$33,886 | 3.2% | 3.2% | 1.5% |
| 1988 | \$21,400 | \$20,897 | \$17,422 | \$43,972 | \$42,720 | \$34,859 | 2.9% | 3.8% | 2.9% |
| 1989 | \$22,433 | \$22,215 | \$18,647 | \$43,602 | \$43,013 | \$35,595 | -0.8% | 0.7% | 2.1% |
| 1990 | \$23,074 | \$22,760 | \$19,584 | \$42,394 | \$41,579 | \$35,467 | -2.8% | -3.3% | -0.4% |
| 1991 | \$23,462 | \$23,050 | \$19,976 | \$41,293 | \$40,277 | \$34,716 | -2.6% | -3.1% | -2.1% |
| 1992 | \$24,632 | \$24,353 | \$21,051 | \$42,302 | \$41,167 | \$35,515 | 2.4% | 2.2% | 2.3% |
| 1993 | \$25,481 | \$25,145 | \$21,690 | \$42,529 | \$41,355 | \$35,530 | 0.5% | 0.5% | 0.0% |
| 1994 | \$26,596 | \$26,085 | \$22,528 | \$43,817 | \$41,877 | \$35,981 | 3.0% | 1.3% | 1.3% |
| 1995 | \$27,922 | \$27,382 | \$23,551 | \$44,929 | \$42,854 | \$36,578 | 2.5% | 2.3% | 1.7% |
| 1996 | \$29,510 | \$28,748 | \$24,709 | \$46,117 | \$43,755 | \$37,276 | 2.6% | 2.1% | 1.9% |
| 1997 | \$31,137 | \$30,385 | \$25,929 | \$47,327 | \$45,142 | \$38,239 | 2.6% | 3.2% | 2.6% |
| 1998 | \$32,870 | \$32,250 | \$27,488 | \$48,855 | \$47,237 | \$39,917 | 3.2% | 4.6% | 4.4% |
| 1999 | \$34,780 | \$33,845 | \$28,611 | \$50,431 | \$48,573 | \$40,650 | 3.2% | 2.8% | 1.8% |
| 2000 | \$38,430 | \$36,895 | \$30,587 | \$53,417 | \$51,209 | \$42,044 | 5.9% | 5.4% | 3.4% |
| 2001 | \$39,770 | \$38,215 | \$31,524 | \$52,999 | \$51,603 | \$42,133 | -0.8% | 0.8% | 0.2% |
| 2002 | \$39,674 | \$38,253 | \$31,800 | \$51,526 | \$50,611 | \$41,840 | -2.8% | -1.9% | -0.7% |
| 2003 | \$40,614 | \$39,145 | \$32,677 | \$50,832 | \$50,373 | \$42,036 | -1.3% | -0.5% | 0.5% |
| 2004 | \$42,691 | \$41,304 | \$34,300 | \$52,004 | \$51,372 | \$42,979 | 2.3% | 2.0% | 2.2% |
| 2005 | \$44,613 | \$42,974 | \$35,888 | \$52,612 | \$51,569 | \$43,496 | 1.2% | 0.4% | 1.2% |
| 2006 | \$47,961 | \$46,048 | \$38,127 | \$54,862 | \$53,330 | \$44,765 | 4.3% | 3.4% | 2.9% |
| 2007 | \$50,229 | \$48,362 | \$39,804 | \$56,367 | \$54,610 | \$45,440 | 2.7% | 2.4% | 1.5% |
| 2008 | \$51,515 | \$49,407 | \$40,873 | \$55,855 | \$53,650 | \$44,935 | -0.9% | -1.8% | -1.1% |
| 2009 | \$50,330 | \$48,213 | \$39,379 | \$54,942 | \$52,345 | \$43,447 | -1.6% | -2.4% | -3.3% |
| 2010 | \$51,487 | \$49,398 | \$40,144 | \$55,337 | \$52,594 | \$43,576 | 0.7% | 0.5% | 0.3% |
| 2011 | \$54,235 | \$51,860 | \$42,332 | \$56,752 | \$53,582 | \$44,545 | 2.6% | 1.9% | 2.2% |
| 2012 | \$56,713 | \$54,156 | \$44,200 | \$58,430 | \$54,884 | \$45,567 | 3.0% | 2.4% | 2.3% |
| 2013 | \$57,248 | \$54,797 | \$44,765 | \$58,183 | \$54,797 | \$45,476 | -0.4% | -0.2% | -0.2% |
| 2014 | \$59,182 | \$56,642 | \$46,129 | \$59,182 | \$56,642 | \$46,129 | 1.7% | 3.4% | 1.4% |

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 24.9 percent higher than the national average: \$64,128 compared to \$51,361.

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 51.8 and 3.0 percent respectively in 2014.

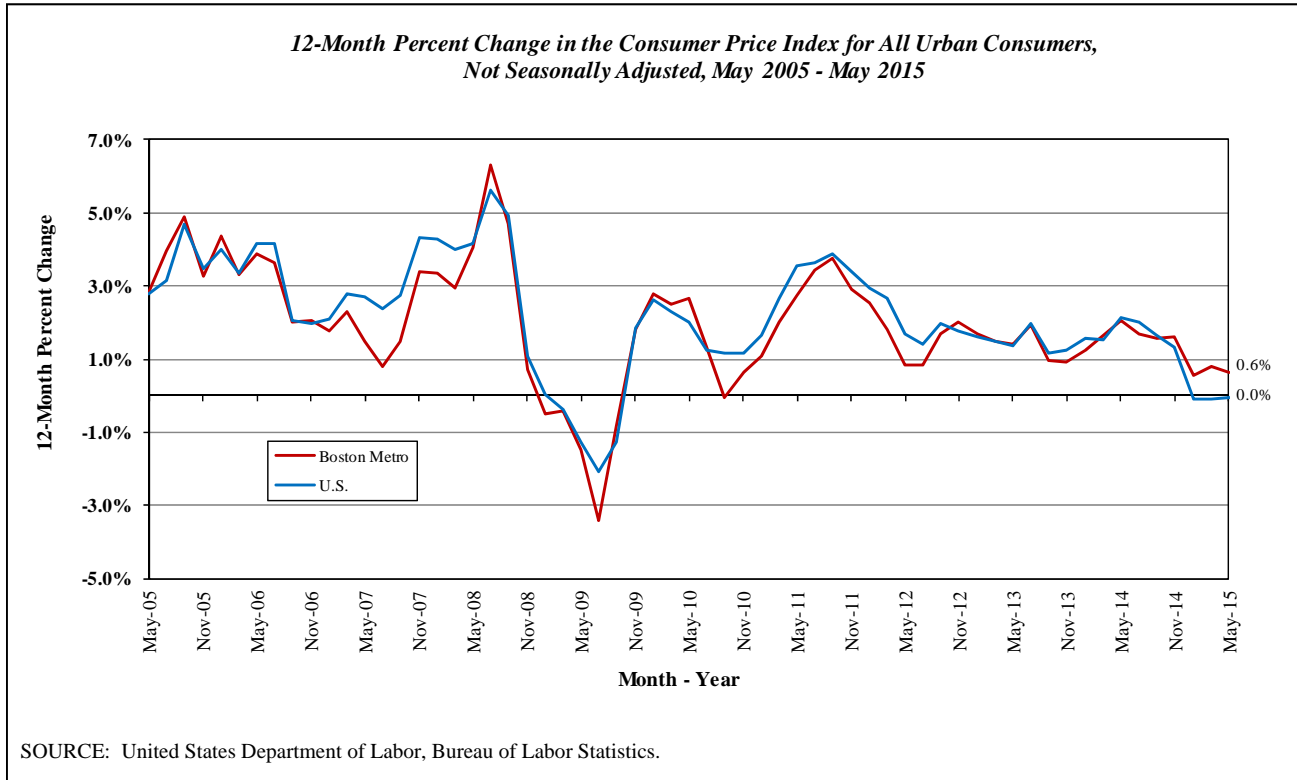
Annual Wage and Salary Disbursements, 1990-2014

(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 | \$ 6,921 | \$398 | \$203 | 51.1% | 2.9% |
| 2013 | \$ 7,110 | \$408 | \$210 | 51.4% | 3.0% |
| 2014 | \$ 7,431 | \$424 | \$220 | 51.8% | 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 May 2015. The latest available data for May 2015 show that the CPI-U for Boston area increased at a rate of 0.6 percent over May of 2014. Concurrently, the U.S. index remained unchanged 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. 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)*

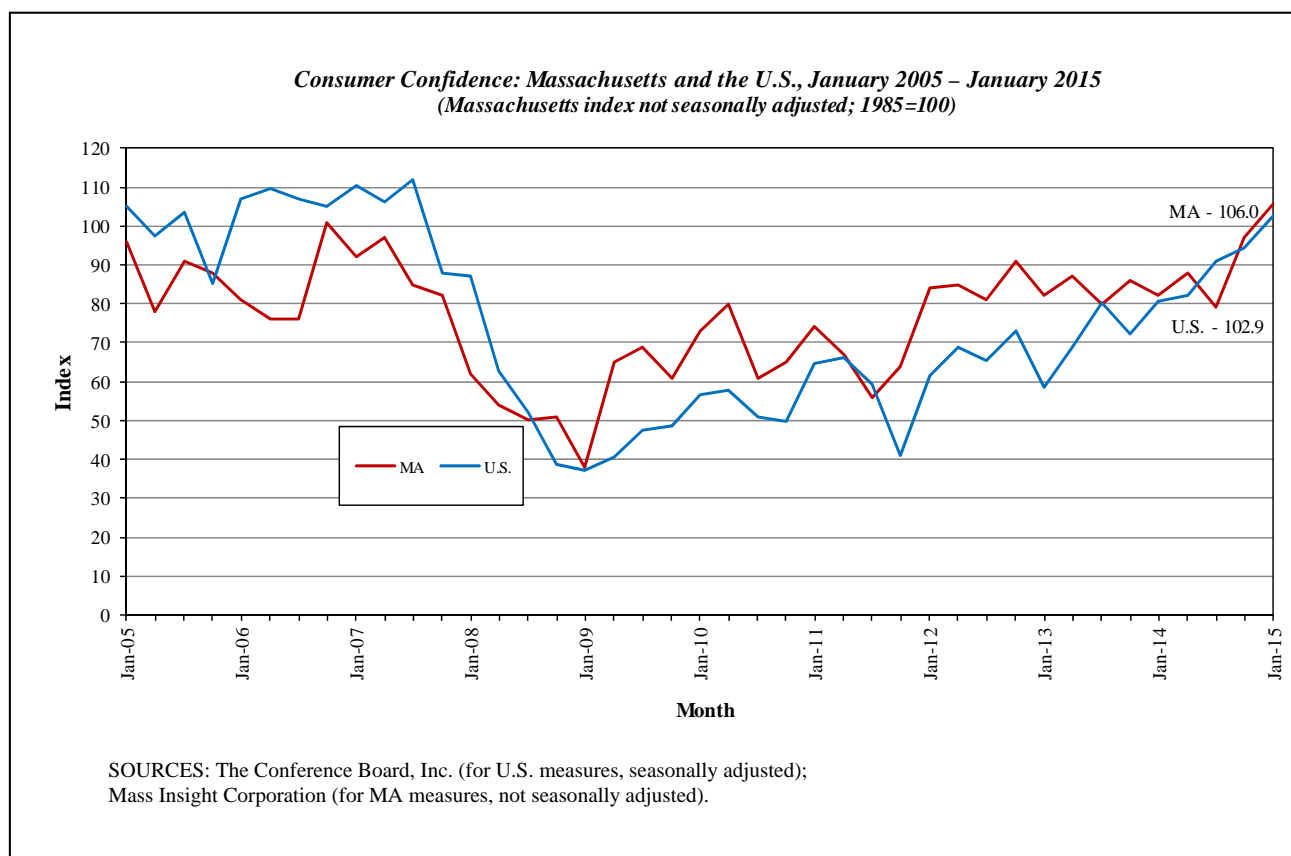
| Year | Boston Metro Area | | United States | |
|--------|-------------------|------------|---------------|-------------|
| | CPI-U | Pct.Change | CPI-U | Pct. Change |
| 1970 | 40.2 | | 38.8 | |
| 1971 | 42.2 | 5.0% | 40.5 | 4.4% |
| 1972 | 43.7 | 3.6% | 41.8 | 3.2% |
| 1973 | 46.3 | 5.9% | 44.4 | 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% |
| May-14 | 255.2 | | 237.9 | |
| May-15 | 256.8 | 0.6% | 237.8 | 0.0% |

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 the Mass Insight Corporation, based on quarterly polling of 500 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, consumer confidence nationally 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 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 a slight dip in July of 2013. Following a year of stable numbers higher than the U.S. index, the Mass Insight Corporation reported that the Massachusetts index dropped significantly to 79 points in July of 2014 only to bounce back in October with a gain of 18 points and an overall index of 97. In contrast, the U.S. index managed to grow slightly in July but as of October stood at 94.5, 2.5 points below that of Massachusetts.

In the first quarter of 2015, Consumer Confidence for both the Massachusetts and the U.S. reached an index over 100; something not experienced since 2006 and 2007, respectively. The following graph and table detail the recent record of these measures.

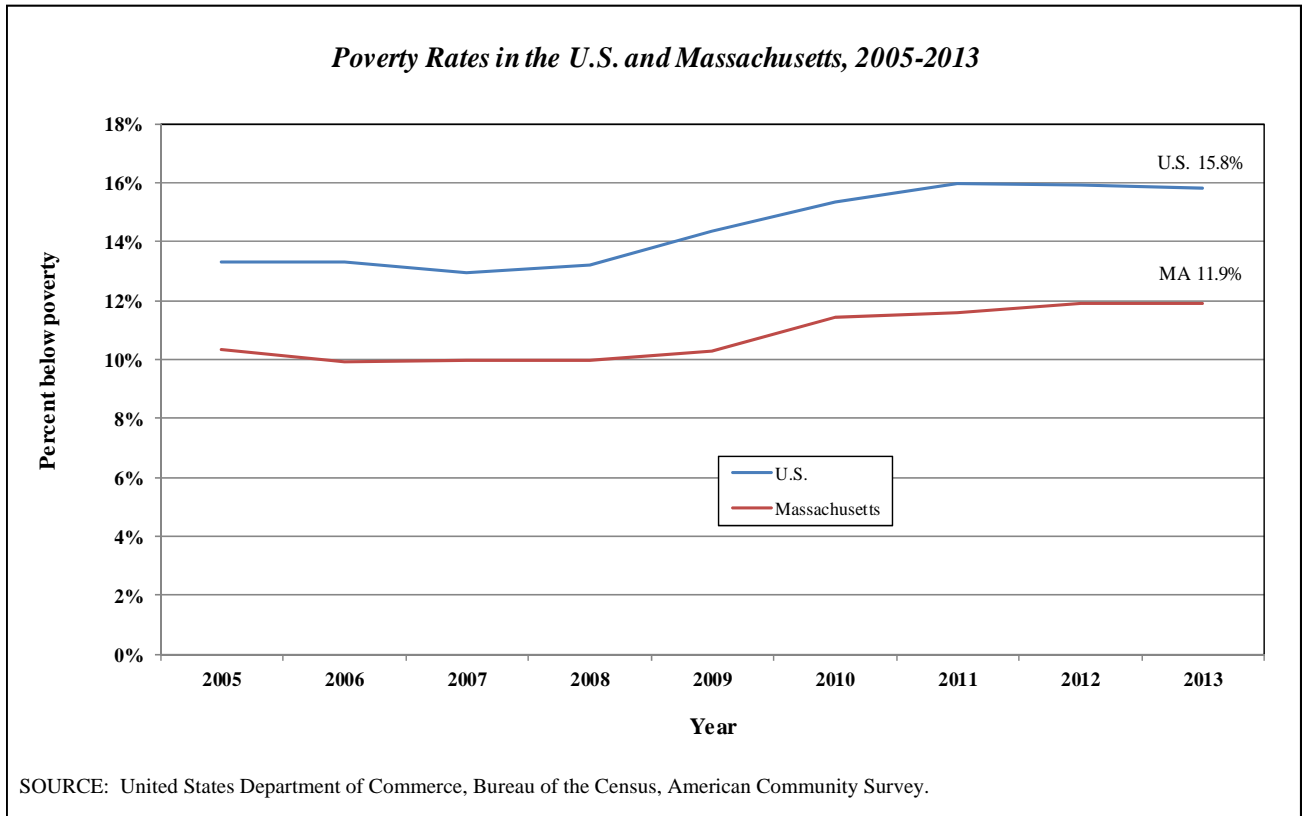


Consumer Confidence, Present Situation, and Future Expectations for Massachusetts and the U.S.
(1985=100)

| | Consumer Confidence | | Present Situation | | Future Expectations | |
|---------------|---------------------|-------|-------------------|-------|---------------------|-------|
| | MA | U.S. | MA | U.S. | MA | U.S. |
| Oct-04 | 90.0 | 92.9 | 64.0 | 94.0 | 108.0 | 92.2 |
| Jan-05 | 96.0 | 105.1 | 70.0 | 112.1 | 114.0 | 100.4 |
| Apr-05 | 78.0 | 97.5 | 63.0 | 113.8 | 88.0 | 86.7 |
| 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 | 87.8 | 76.0 | 115.7 | 86.0 | 69.1 |
| 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 | 59.5 | 20.0 | 35.7 | 80.0 | 75.4 |
| 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 | 58.6 | 48.0 | 57.3 | 105.0 | 59.5 |
| Apr-13 | 87.0 | 69.0 | 54.0 | 61.0 | 109.0 | 74.3 |
| Jul-13 | 80.0 | 80.3 | 56.0 | 73.6 | 97.0 | 84.7 |
| Oct-13 | 86.0 | 72.4 | 64.0 | 72.6 | 101.0 | 72.2 |
| Jan-14 | 82.0 | 80.7 | 55.0 | 79.1 | 99.0 | 81.8 |
| Apr-14 | 88.0 | 82.3 | 66.0 | 78.3 | 103.0 | 84.9 |
| Jul-14 | 79.0 | 90.9 | 69.0 | 88.3 | 86.0 | 92.7 |
| Oct-14 | 97.0 | 94.5 | 76.0 | 93.7 | 111.0 | 95.0 |
| Jan-15 | 106.0 | 102.9 | 84.0 | 112.6 | 120.0 | 96.4 |

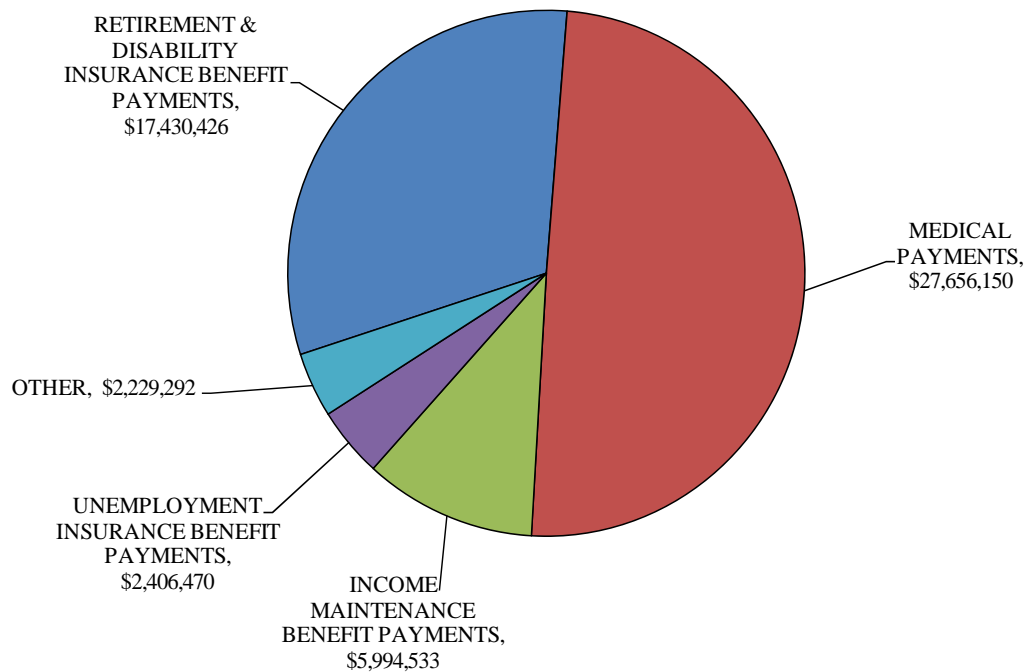
SOURCES: The Conference Board, Inc. (for U.S. measures, seasonally adjusted);
Mass Insight Corporation (for MA measures, not seasonally adjusted).

Poverty. Since 2005, the Massachusetts poverty rate, which was 11.9 percent in 2013, has been three to four percentage points lower than the national average, which was 15.8 percent in 2013. Massachusetts ranked 32nd out of the 50 states and the District of Columbia in 2013, 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 2013, dropping from 15.3 percent in 2012. 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 \$57.1 billion for 2013. Fifty percent of government transfer payments to individuals were medical payments, up from just over 48.4 percent in 2012.

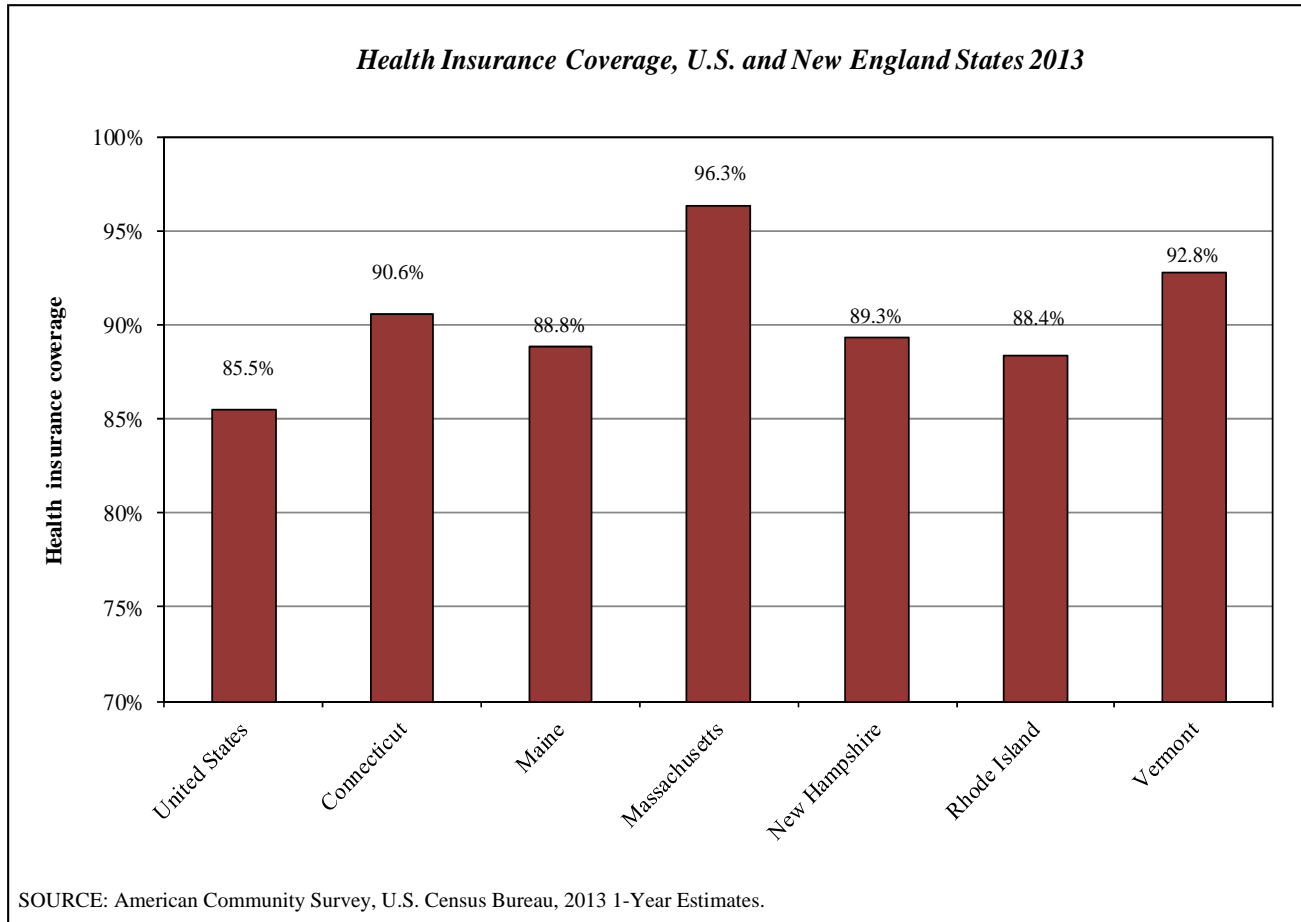
**Transfer Payments from Governments to Individuals in
Massachusetts in 2013**
(From Annual State Personal Income Estimates)
(in thousands of current dollars)



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 2013, 96.3 percent of the civilian non-institutionalized population was covered in the state by either public or private 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.



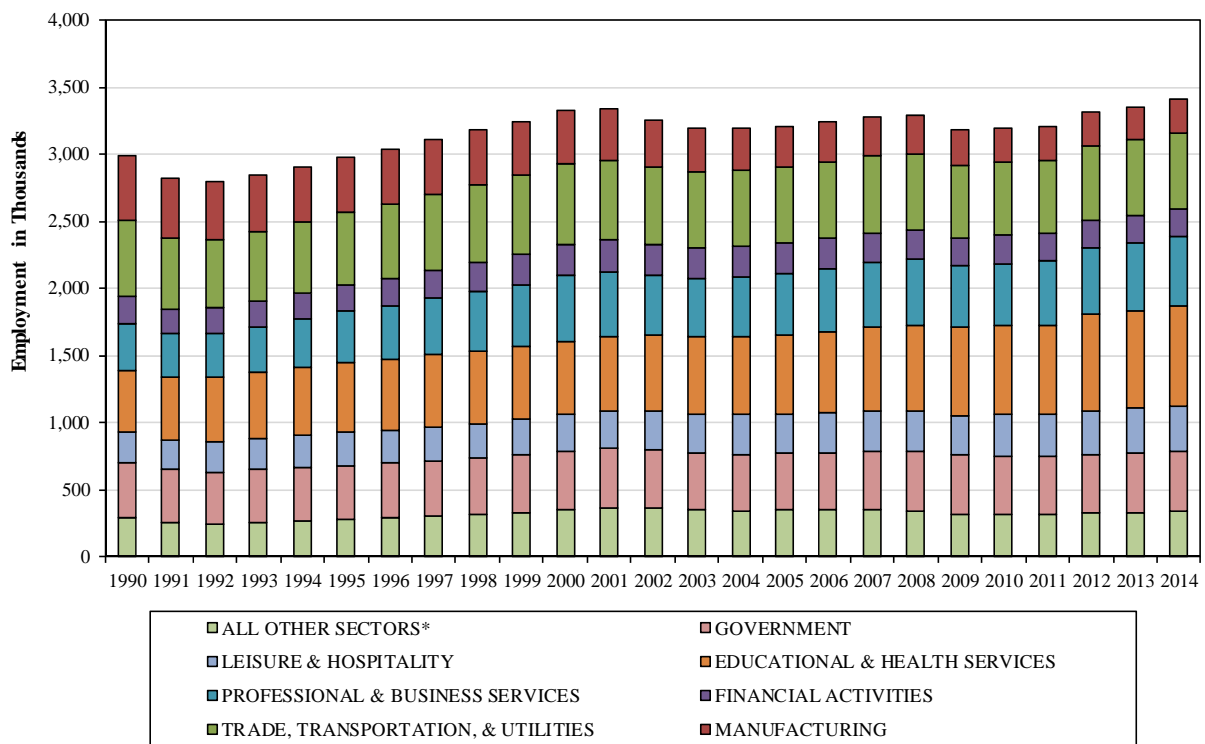
EMPLOYMENT

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 2013-2014 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 in 2002 and 2003, total non-agricultural employment in Massachusetts eventually increased 0.5 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 1.7 percent in 2014. With an annual average over 3.4 million Non-Farm employees, 2014 had the highest numbers to date. This trend continues to the present with employment averaging 3.4 million in the first quarter of 2015.

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 (7.0 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 2.2 percent in 2010. Employment grew slightly in 2011 at 0.2 percent but has since been decreasing slightly each year. December 2014 saw Manufacturing employment drop 0.8% since December of 2013. The seasonally adjusted estimate for 2014 was slightly lower than the 2013 estimate (249 thousand compared to 250). The first quarter data for 2015 shows Manufacturing employment increasing to 250 thousand.

*Annual Average Employment in Massachusetts,
NAICS Super-Sectors, 1990-2014*

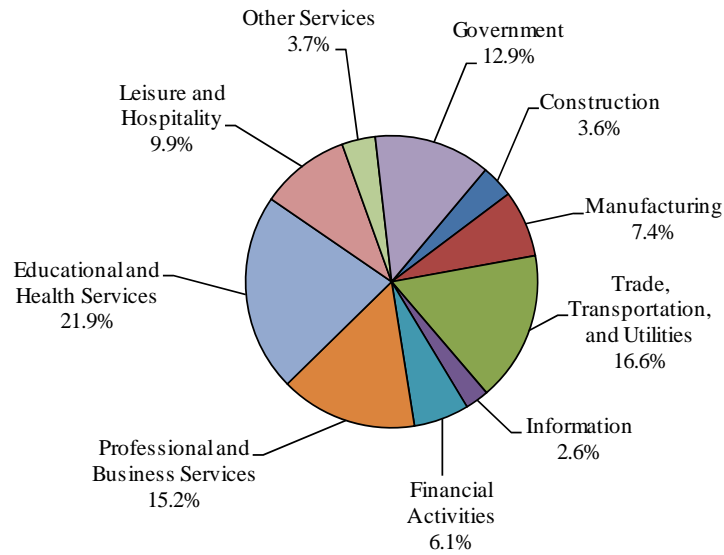


SOURCE: MA Executive Office of Workforce and Labor Development.

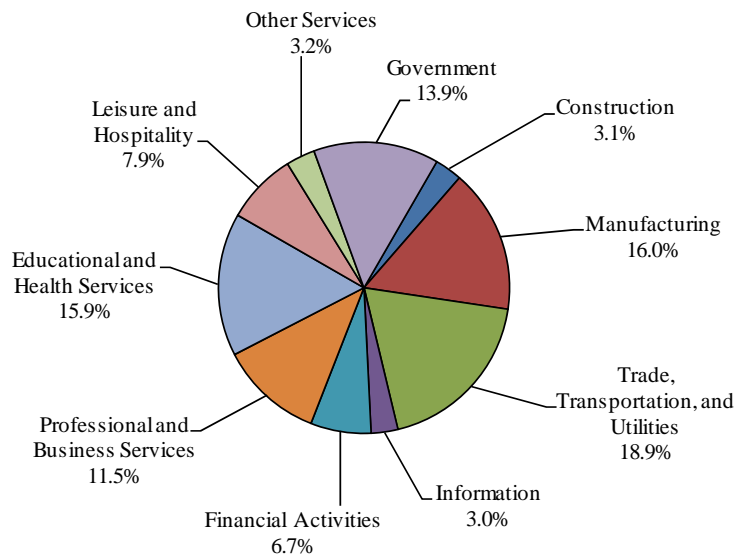
*Includes Mining & Natural Resources, Construction, Information, and Other Services.

Massachusetts Non-Farm Payroll Employment
(NAICS Industry basis)

NAICS Super-Sectors: 2013-2014 Average Share



NAICS Super-Sectors: 1992-1993 Average Share



SOURCE: MA Executive Office of Labor and Workforce Development.

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 2014. Tufts University and the Whole Foods Market Group replace TJX Companies and Verizon New England from the June 2013 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 2014
(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, 10-15-14
 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 2014 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, 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 | 2014 revenues |
|------|------|--------------------------------------|--------------------------------------|---------------|
| 2015 | 2014 | | | (billions) |
| 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 May 31, 2015, the preliminary Massachusetts Unemployment Trust Fund had a balance of \$1.114 billion. This balance is the sum of the private contributory account balance of \$1.002 billion and the government contributory account balance of \$112 million. This compares to the April 30, 2015 balance of \$1.128 billion with a private contributory portion of \$1.015 billion. The April 2015 Unemployment Insurance Trust Fund report indicated that the private contributory account balance was estimated to be \$1.502 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 14 out of 17 months between January 2006 and May 2007, but only three of those months exceeded a 0.2 percent change. In March 2007 the Massachusetts rate was 4.5 percent, the lowest it had been since October 2001. From October 2009 to January 2010, the rate peaked at 8.7 percent. From June 2007 to October 2013, the state rate remained at or below the comparable (seasonally adjusted) U.S. unemployment rate.

Since reaching 7.2 percent in October 2013, The Massachusetts Unemployment rate has slowly declined to its present rate of 4.6 percent in June of 2015, 0.7% below the national rate of 5.3%. 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.

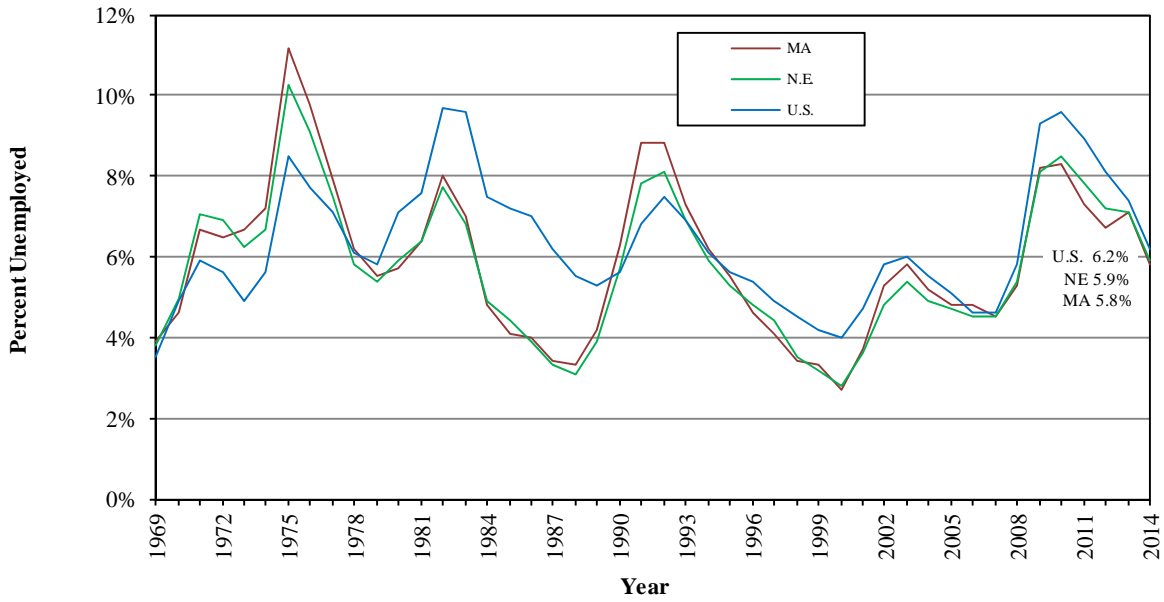
Annual Average Civilian Labor Force and Unemployment, 1969-2014

(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 | 2,726 | 5,714 | 96,158 | 268 | 521 | 7,406 | 9.8% | 9.1% | 7.7% | 127.3% |
| 1977 | 2,760 | 5,820 | 99,009 | 218 | 437 | 6,991 | 7.9% | 7.5% | 7.1% | 111.3% |
| 1978 | 2,809 | 5,936 | 102,251 | 173 | 343 | 6,202 | 6.2% | 5.8% | 6.1% | 101.6% |
| 1979 | 2,863 | 6,080 | 104,962 | 156 | 326 | 6,137 | 5.5% | 5.4% | 5.8% | 94.8% |
| 1980 | 2,885 | 6,154 | 106,940 | 164 | 365 | 7,637 | 5.7% | 5.9% | 7.1% | 80.3% |
| 1981 | 2,938 | 6,268 | 108,670 | 189 | 400 | 8,273 | 6.4% | 6.4% | 7.6% | 84.2% |
| 1982 | 2,966 | 6,345 | 110,204 | 236 | 489 | 10,678 | 8.0% | 7.7% | 9.7% | 82.5% |
| 1983 | 2,972 | 6,386 | 111,550 | 209 | 434 | 10,717 | 7.0% | 6.8% | 9.6% | 72.9% |
| 1984 | 3,032 | 6,540 | 113,544 | 146 | 318 | 8,539 | 4.8% | 4.9% | 7.5% | 64.0% |
| 1985 | 3,049 | 6,630 | 115,461 | 125 | 290 | 8,312 | 4.1% | 4.4% | 7.2% | 56.9% |
| 1986 | 3,080 | 6,724 | 117,834 | 123 | 264 | 8,237 | 4.0% | 3.9% | 7.0% | 57.1% |
| 1987 | 3,114 | 6,827 | 119,865 | 104 | 228 | 7,425 | 3.4% | 3.3% | 6.2% | 54.8% |
| 1988 | 3,156 | 6,907 | 121,669 | 104 | 215 | 6,701 | 3.3% | 3.1% | 5.5% | 60.0% |
| 1989 | 3,189 | 7,004 | 123,869 | 132 | 274 | 6,528 | 4.2% | 3.9% | 5.3% | 79.2% |
| 1990 | 3,226 | 7,128 | 125,840 | 204 | 409 | 7,047 | 6.3% | 5.7% | 5.6% | 112.5% |
| 1991 | 3,199 | 7,112 | 126,346 | 283 | 558 | 8,628 | 8.8% | 7.8% | 6.8% | 129.4% |
| 1992 | 3,181 | 7,105 | 128,105 | 281 | 573 | 9,613 | 8.8% | 8.1% | 7.5% | 117.3% |
| 1993 | 3,173 | 7,062 | 129,200 | 232 | 486 | 8,940 | 7.3% | 6.9% | 6.9% | 105.8% |
| 1994 | 3,188 | 7,041 | 131,056 | 199 | 415 | 7,996 | 6.2% | 5.9% | 6.1% | 101.6% |
| 1995 | 3,205 | 7,053 | 132,304 | 176 | 375 | 7,404 | 5.5% | 5.3% | 5.6% | 98.2% |
| 1996 | 3,231 | 7,118 | 133,943 | 148 | 340 | 7,236 | 4.6% | 4.8% | 5.4% | 85.2% |
| 1997 | 3,293 | 7,228 | 136,297 | 135 | 315 | 6,739 | 4.1% | 4.4% | 4.9% | 83.7% |
| 1998 | 3,322 | 7,257 | 137,673 | 113 | 253 | 6,210 | 3.4% | 3.5% | 4.5% | 75.6% |
| 1999 | 3,355 | 7,327 | 139,368 | 110 | 234 | 5,880 | 3.3% | 3.2% | 4.2% | 78.6% |
| 2000 | 3,366 | 7,348 | 142,583 | 92 | 204 | 5,692 | 2.7% | 2.8% | 4.0% | 67.5% |
| 2001 | 3,401 | 7,424 | 143,734 | 126 | 266 | 6,801 | 3.7% | 3.6% | 4.7% | 78.7% |
| 2002 | 3,424 | 7,496 | 144,863 | 181 | 363 | 8,378 | 5.3% | 4.8% | 5.8% | 91.4% |
| 2003 | 3,407 | 7,508 | 146,510 | 198 | 407 | 8,774 | 5.8% | 5.4% | 6.0% | 96.7% |
| 2004 | 3,381 | 7,476 | 147,401 | 177 | 366 | 8,149 | 5.2% | 4.9% | 5.5% | 94.5% |
| 2005 | 3,383 | 7,516 | 149,320 | 164 | 353 | 7,591 | 4.8% | 4.7% | 5.1% | 94.1% |
| 2006 | 3,418 | 7,607 | 151,428 | 162 | 344 | 7,001 | 4.8% | 4.5% | 4.6% | 104.3% |
| 2007 | 3,431 | 7,646 | 153,124 | 154 | 342 | 7,078 | 4.5% | 4.5% | 4.6% | 97.8% |
| 2008 | 3,463 | 7,713 | 154,287 | 185 | 418 | 8,924 | 5.3% | 5.4% | 5.8% | 91.4% |
| 2009 | 3,471 | 7,736 | 154,142 | 283 | 628 | 14,265 | 8.2% | 8.1% | 9.3% | 88.2% |
| 2010 | 3,475 | 7,763 | 153,889 | 288 | 659 | 14,825 | 8.3% | 8.5% | 9.6% | 86.5% |
| 2011 | 3,470 | 7,737 | 153,617 | 254 | 601 | 13,747 | 7.3% | 7.8% | 8.9% | 83.1% |
| 2012 | 3,475 | 7,721 | 154,975 | 234 | 557 | 12,506 | 6.7% | 7.2% | 8.1% | 82.7% |
| 2013 | 3,484 | 7,702 | 155,389 | 247 | 545 | 11,460 | 7.1% | 7.1% | 7.4% | 95.9% |
| 2014 | 3,558 | 7,785 | 155,922 | 205 | 458 | 9,617 | 5.8% | 5.9% | 6.2% | 93.5% |

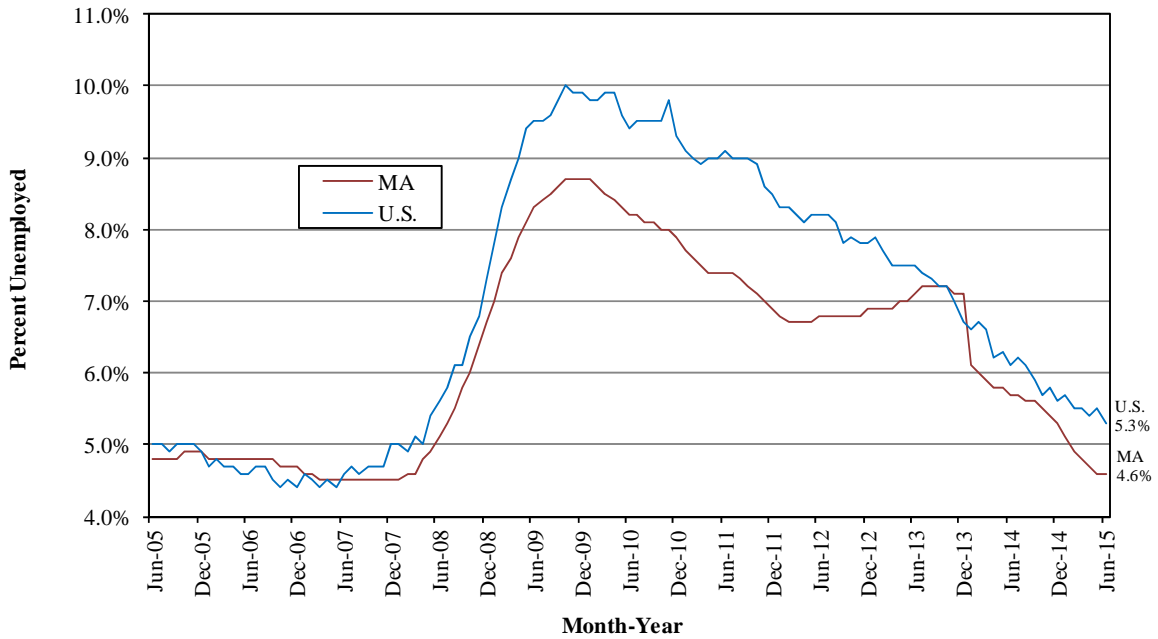
SOURCE: United States Department of Labor, Bureau of Labor Statistics.

**Annual Average Unemployment Rate, 1969-2014
Massachusetts, New England, and United States**



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

**Monthly Unemployment Rate, June 2005 - June 2015
Massachusetts and United States
(seasonally adjusted)**

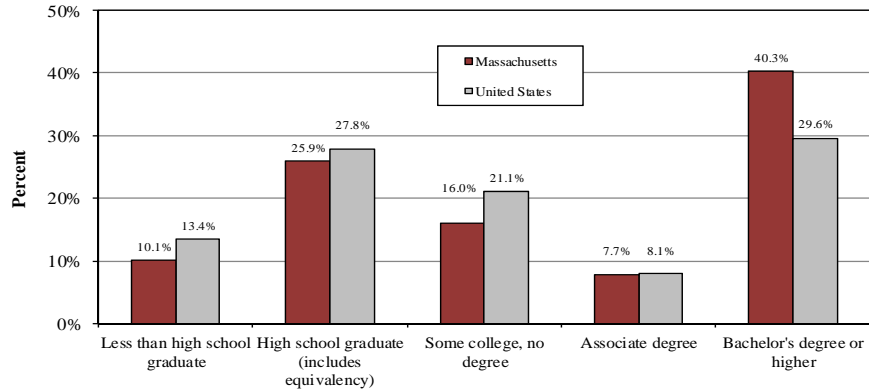


SOURCE: MA Executive Office of Labor and Workforce Development, United States Department of Labor, Bureau of Labor Statistics.

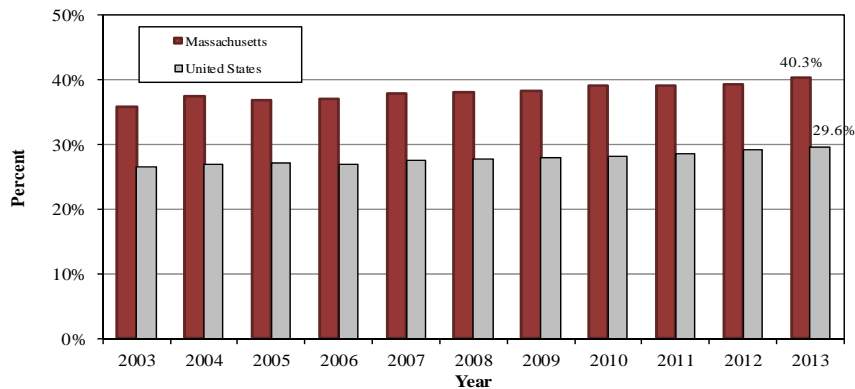
EDUCATION AND TECHNOLOGY

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 2013, according to the Census Bureau's American Community Survey (ACS). The ACS also reported that Massachusetts ranked 19th of persons who had not completed high school, 10.1 percent, less than the national average of 13.4. Massachusetts's black and Hispanic populations achieved college degrees at roughly half the rate of its white population but their rates were higher than their national averages. The most current Census data are shown below.

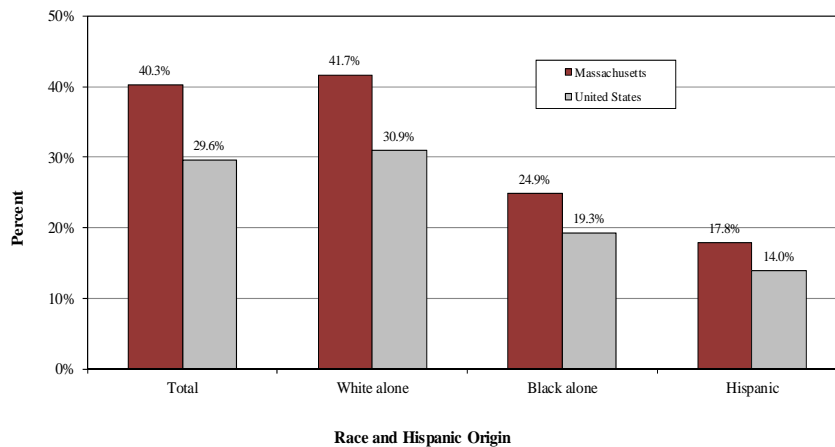
Educational Attainment of Persons 25 Years and Older in 2013



Percent of Population in the U.S. and Massachusetts with a Bachelor's Degree or Higher, 2003-2013



Persons in the U.S. and Massachusetts 25 Years and Older with a Bachelor's Degree or Higher in 2013



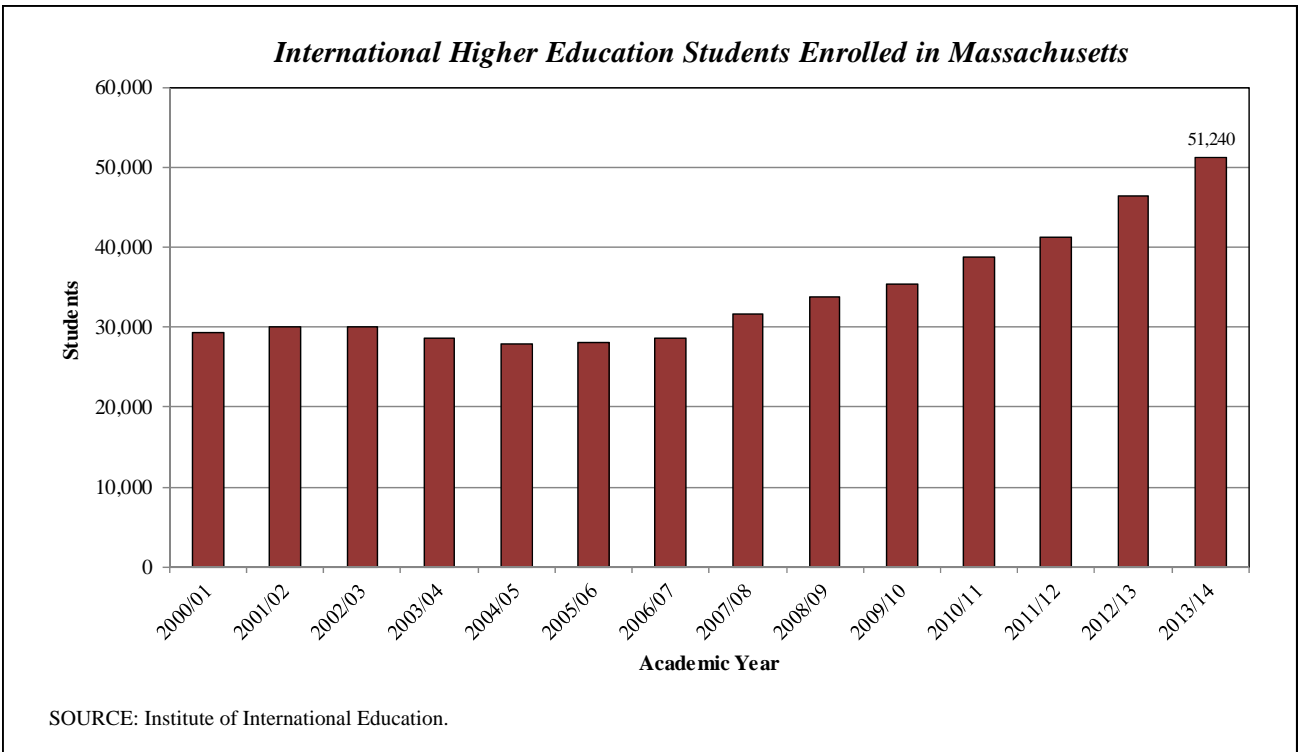
SOURCE: U.S. Census Bureau, ACS Estimates.

Higher Education Data. The table below compares Massachusetts residents' higher education enrollment by race and Hispanic Origin to the U.S. There were 0.5% less people enrolled in college in the U.S. in 2013 compared to 2012. This was a statistically significant change from 2012. Total enrollment in Massachusetts remained relatively unchanged.

| <i>Higher Education Enrollment by Race and Hispanic Origin in 2013</i> | | | | | | | Hispanic or Latino |
|--|------------|-------------|-------------|-------------|-----------------|--|--------------------|
| | Total | White alone | Black alone | Asian alone | All other races | | |
| United States | 23,301,982 | 68.3% | 15.4% | 7.7% | 8.7% | | 15.7% |
| Massachusetts | 594,746 | 73.1% | 9.6% | 10.2% | 7.1% | | 10.0% |

SOURCE: U.S. Census Bureau, American Community Survey estimates.

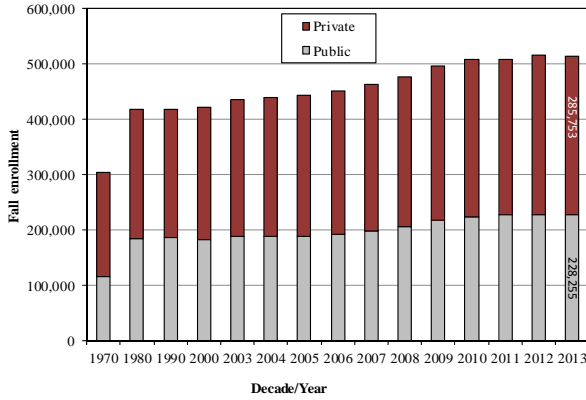
Survey data released by the Institute of International Education state that 51,240 foreign students were enrolled in Massachusetts colleges and universities in the 2013/2014 school year. This was an increase of 10.2 percent from the previous year. The national enrollment increased 8.1 percent. Massachusetts remains fourth ranked among states for foreign student enrollment.



U.S. Department of Education data show that from 2012 to 2013, higher education enrollment decreased 1.3 percent in the United States and 0.4 percent at Massachusetts institutions. During that 2000-2012 period, enrollment in public higher education increased 27 percent in the United States and 25 percent at Massachusetts institutions. Enrollment in private institutions increased 62 percent in the United States and 21 percent at Massachusetts institutions.

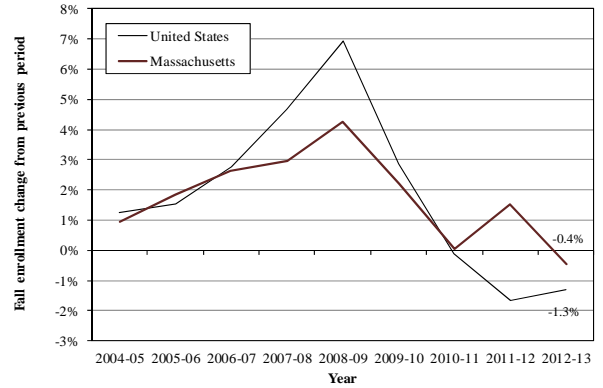
Research and development expenditures at universities and colleges increased 59 percent in the United States and 69 percent in Massachusetts between 2003 and 2012.

**Massachusetts Higher Education
Public/Private Enrollment**



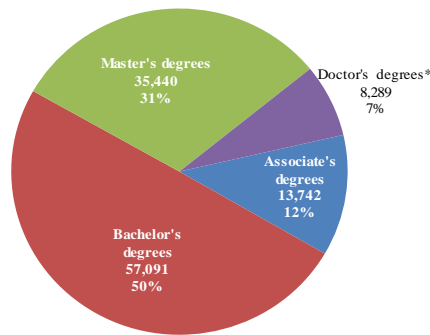
SOURCE: U.S. Department of Education, Digest of Education Statistics.

**Massachusetts Total Higher Education Enrollment
Percent Change in Total Enrollment**



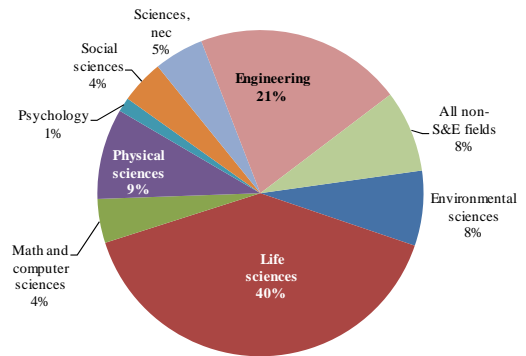
SOURCE: U.S. Department of Education, Digest of Education Statistics.

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



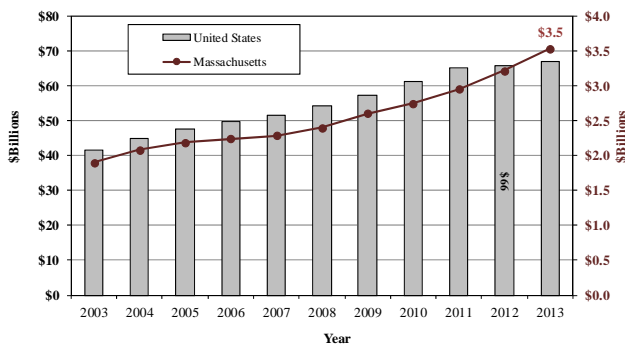
SOURCE: U.S. Department of Education, Digest of Education Statistics. *Includes Ph.D., Ed.D., and comparable degrees at the doctoral level.

**R&D Expenditures at Massachusetts Universities and
Colleges, by Science and Engineering Field: FY 2013**



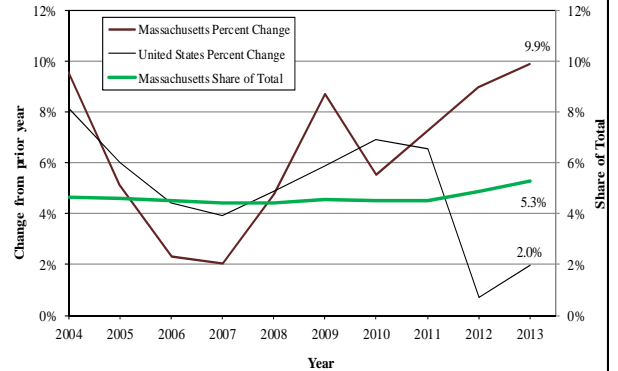
SOURCE: National Science Foundation. \$3.53 Billion in FY 2013.

**Research and Development Expenditures at Universities and
Colleges**



SOURCE: National Science Foundation.

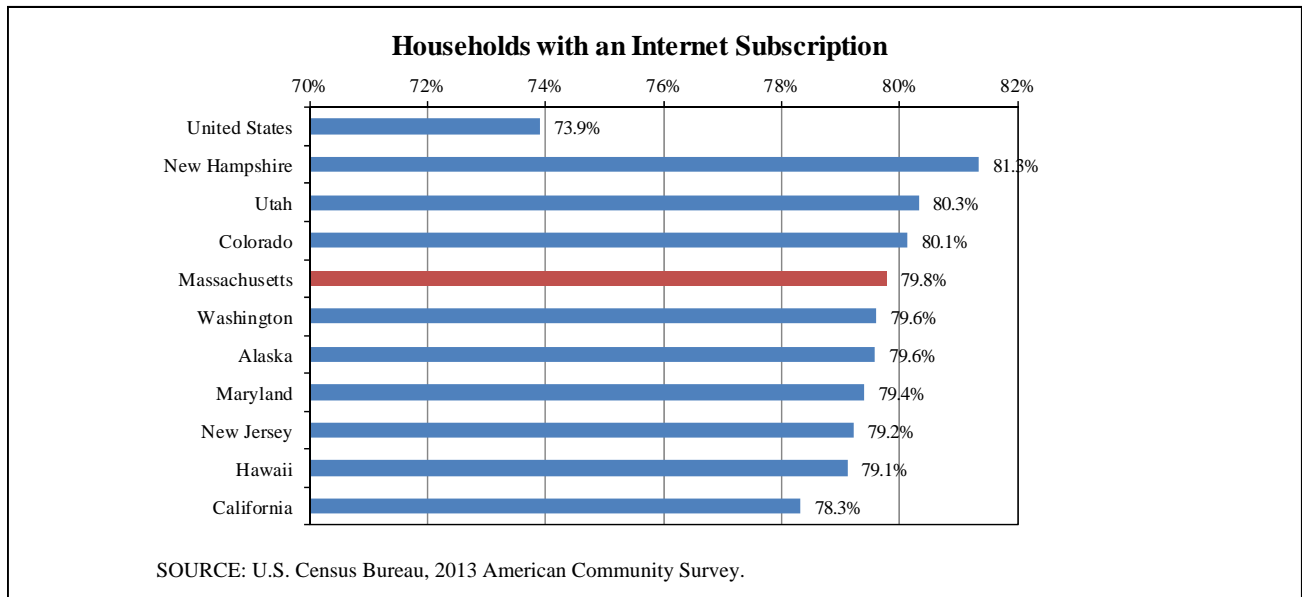
**Research and Development Expenditures at Universities and
Colleges**



SOURCE: National Science Foundation.

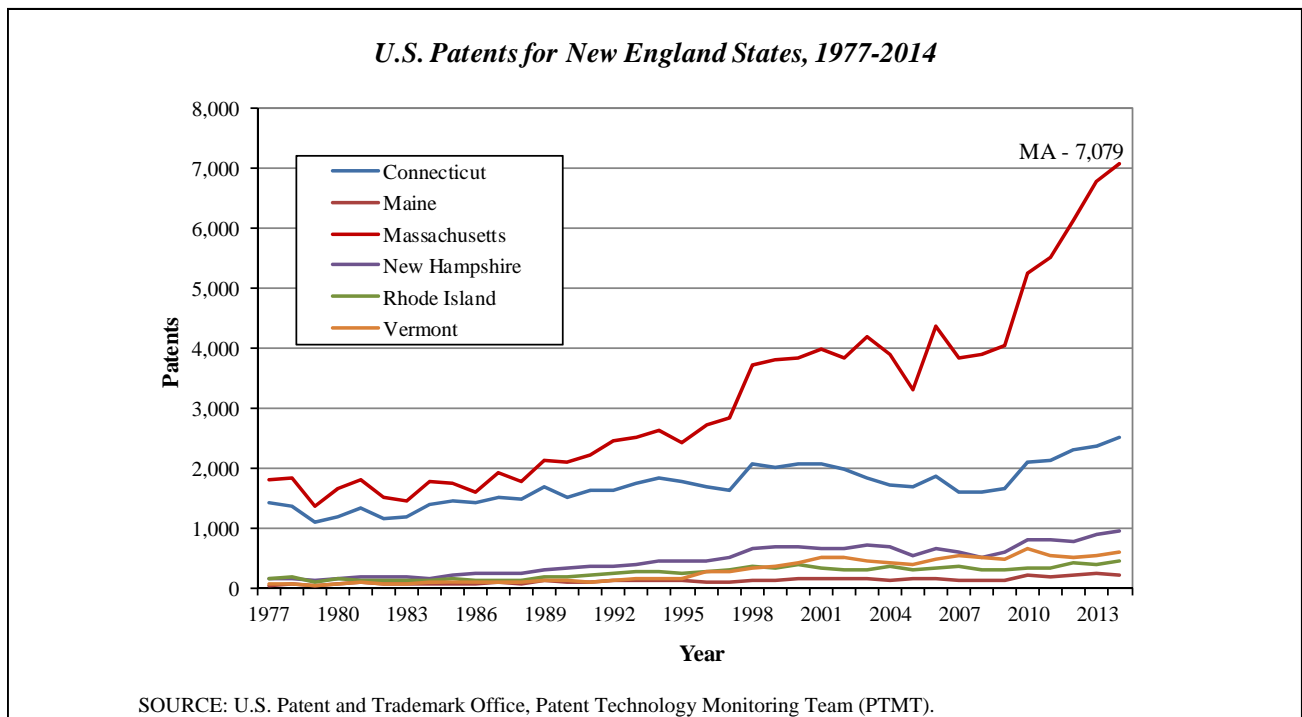
| Enrollment -2013 | MA Rank | Degrees Awarded - 2013 | MA Rank | Research & Development\$ - FY 2013 | MA Rank |
|------------------|---------|------------------------|---------|------------------------------------|---------|
| Total | 13 | Total | 10 | Total | 4 |
| Public | 23 | Associate's | 25 | Environmental sciences | 3 |
| Private | 7 | Bachelor's | 10 | Life sciences | 8 |
| | | Master's | 6 | Math/computer sciences | 7 |
| | | Professional/Doctorate | 7 | Physical sciences | 2 |
| | | | | Psychology | 8 |
| | | | | Social sciences | 3 |
| | | | | Sciences, nec | 2 |
| | | | | Engineering | 5 |

Internet Access. Massachusetts had the fourth highest household internet subscription rate in the U.S. according to the Census Bureau’s 2013 American Community Survey.



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).”

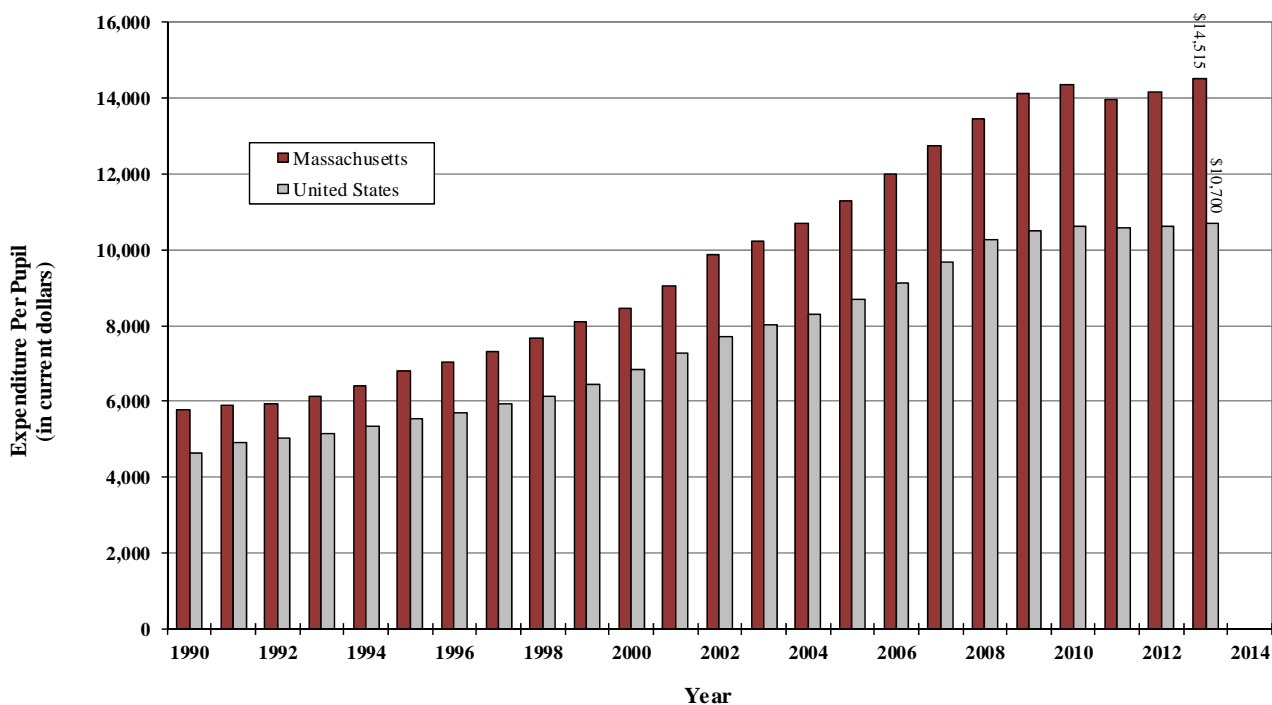
In 2014, Massachusetts was fifth among all states for the number of new patents issued. Only five nations originated more U.S. patents than Massachusetts, putting the state on par with Japan, Germany, The United Kingdom, Taiwan, and Canada for origination of U.S. patents. Since 1977, Massachusetts has received more new patents than any other New England state. With 7,079 new patents in 2014, a 4.6 percent increase since 2013, Massachusetts innovators were responsible for 60 percent of the new patents in New England.



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. since fiscal year 1985.

Per Pupil Expenditure in Public Elementary and Secondary Schools
(in current, unadjusted dollars)

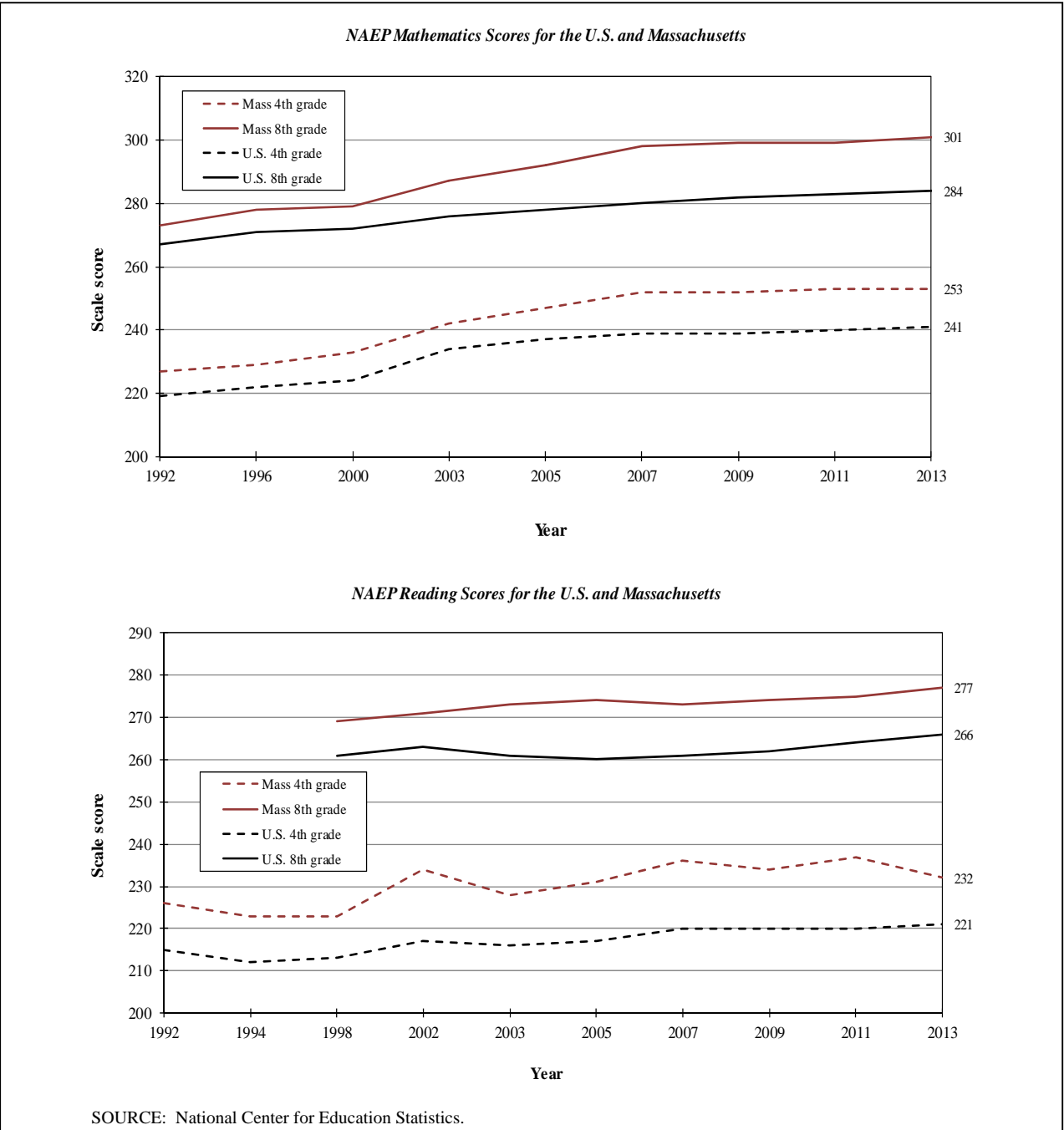
| Fiscal Year | Massachusetts | United States | Ratio (MA/U.S.) | MA change from previous year |
|-------------|---------------|---------------|-----------------|------------------------------|
| 1985 | \$3,653 | \$3,222 | 1.13 | 10.8% |
| 1990 | 5,766 | 4,643 | 1.24 | 5.1% |
| 1995 | 6,783 | 5,529 | 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 | 14,350 | 10,615 | 1.35 | 1.6% |
| 2011 | 13,941 | 10,560 | 1.32 | -2.9% |
| 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.



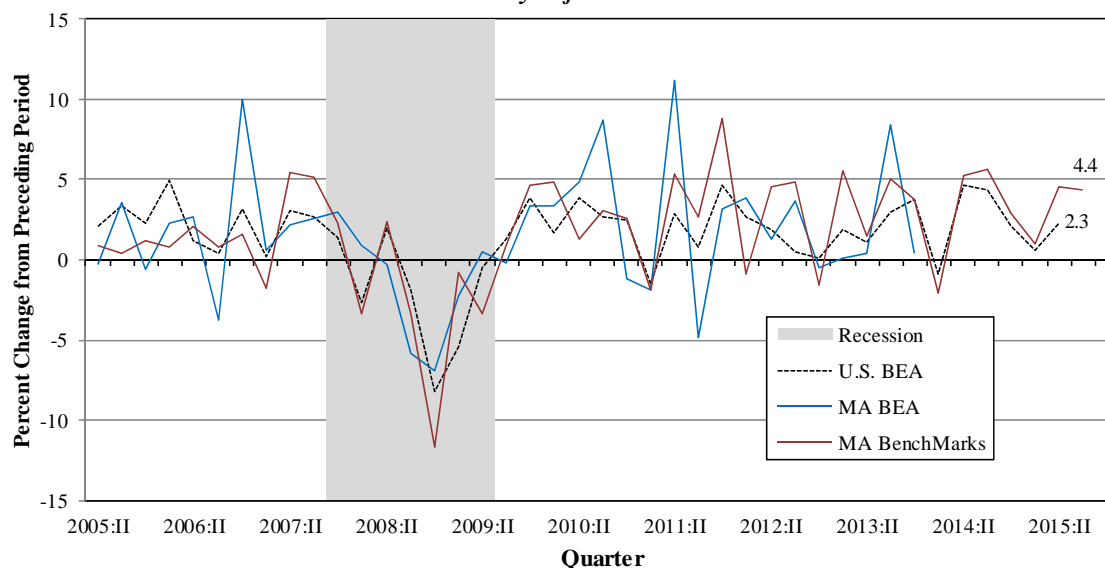
ECONOMIC BASE AND PERFORMANCE—STATE OVERVIEW

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 | \$351 | 1.0% | \$728 | 1.1% | \$12,682 | 1.0% |
| 2002 | \$353 | 0.5% | \$734 | 0.8% | \$12,909 | 1.8% |
| 2003 | \$362 | 2.5% | \$753 | 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 | 2.1% | \$14,614 | 2.7% |
| 2007 | \$391 | 2.6% | \$826 | 2.1% | \$14,874 | 1.8% |
| 2008 | \$392 | 0.2% | \$816 | -1.2% | \$14,830 | -0.3% |
| 2009 | \$382 | -2.6% | \$793 | -2.9% | \$14,419 | -2.8% |
| 2010 | \$395 | 3.4% | \$814 | 2.6% | \$14,784 | 2.5% |
| 2011 | \$404 | 2.3% | \$821 | 0.9% | \$15,021 | 1.6% |
| 2012 | \$411 | 1.7% | \$830 | 1.1% | \$15,369 | 2.3% |
| 2013 | \$415 | 1.2% | \$839 | 1.1% | \$15,710 | 2.2% |
| 2014 | \$425 | 2.3% | \$853 | 1.6% | \$16,086 | 2.4% |

Real GDP: Percent Change from Preceding Quarter
Seasonally Adjusted Annual Rates



SOURCES: U.S. Bureau of Economic Analysis, *MassBenchmarks* calculations by Dr. Alan Clayton-Matthews. Updated July 30, 2015.

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.

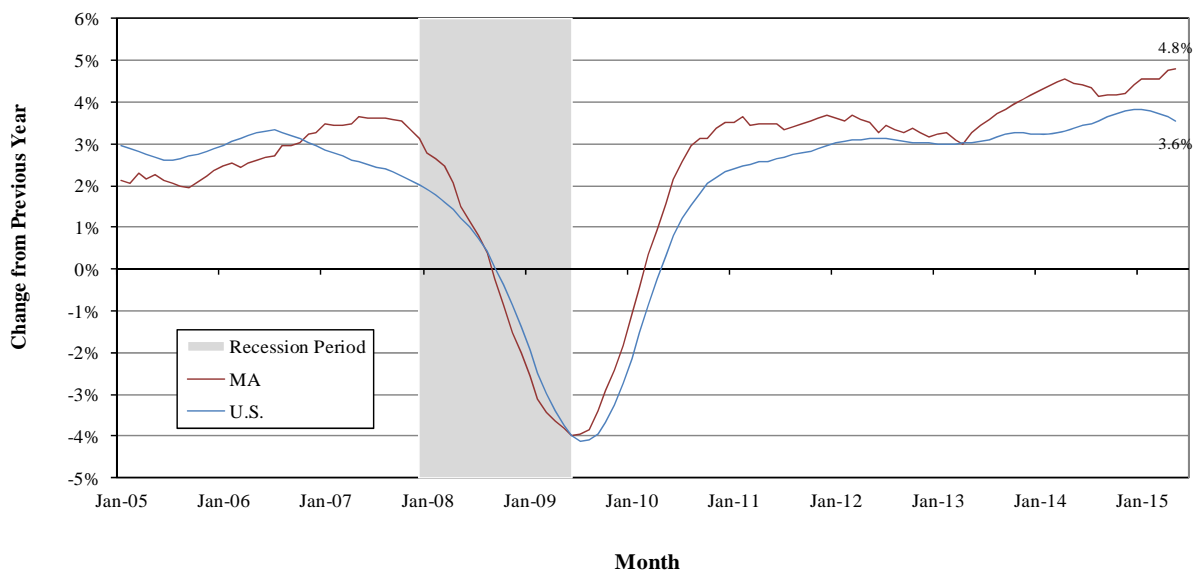
The coincident indexes combine four state-level indicators to summarize current economic conditions in a single statistic. The four state-level variables in each coincident index are nonfarm payroll employment, average hours worked in manufacturing, the unemployment rate, and wage and salary disbursements 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.”

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 their 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 | May 2015 | 1-Month Change | 3-Month Change | 12-Month Change |
|---------------|----------|----------------|----------------|-----------------|
| U.S. | 173.6 | 0.2% | 0.7% | 3.6% |
| Massachusetts | 193.2 | 0.4% | 1.2% | 4.8% |
| Connecticut | 166.5 | 0.5% | 1.2% | 3.7% |
| Maine | 145.3 | 0.1% | 0.9% | 3.0% |
| New Hampshire | 204.5 | 0.3% | 1.0% | 3.4% |
| Rhode Island | 168.0 | 0.5% | 1.4% | 4.4% |
| Vermont | 168.1 | 0.0% | 0.9% | 3.5% |

Comparing the U.S. and Massachusetts Coincident Indexes

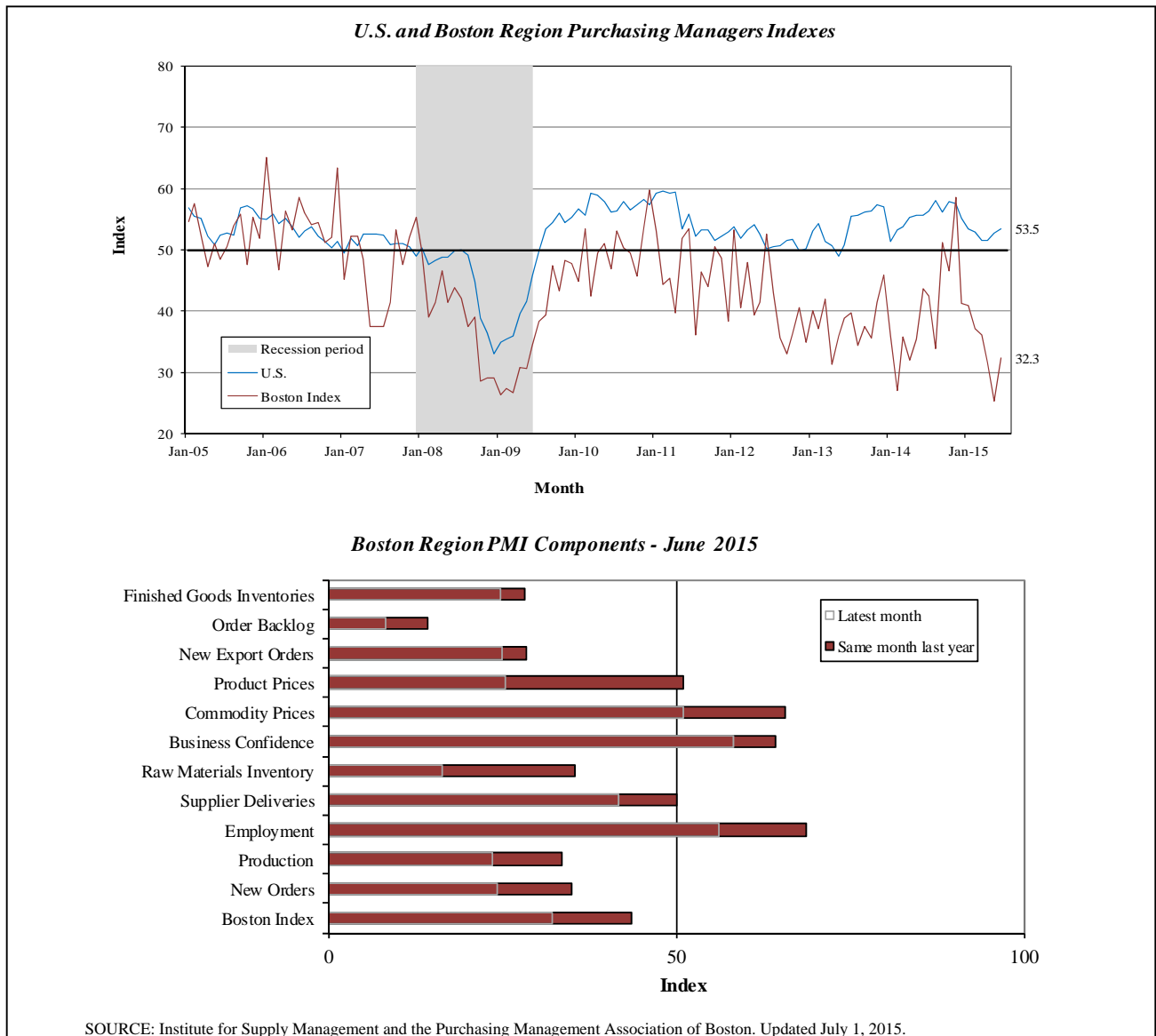


SOURCE: Federal Reserve Bank of Philadelphia. June, 2015. Shaded areas are recession periods.
 Note: Indexes are set to 100 at July 1992.

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.”

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 June 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.



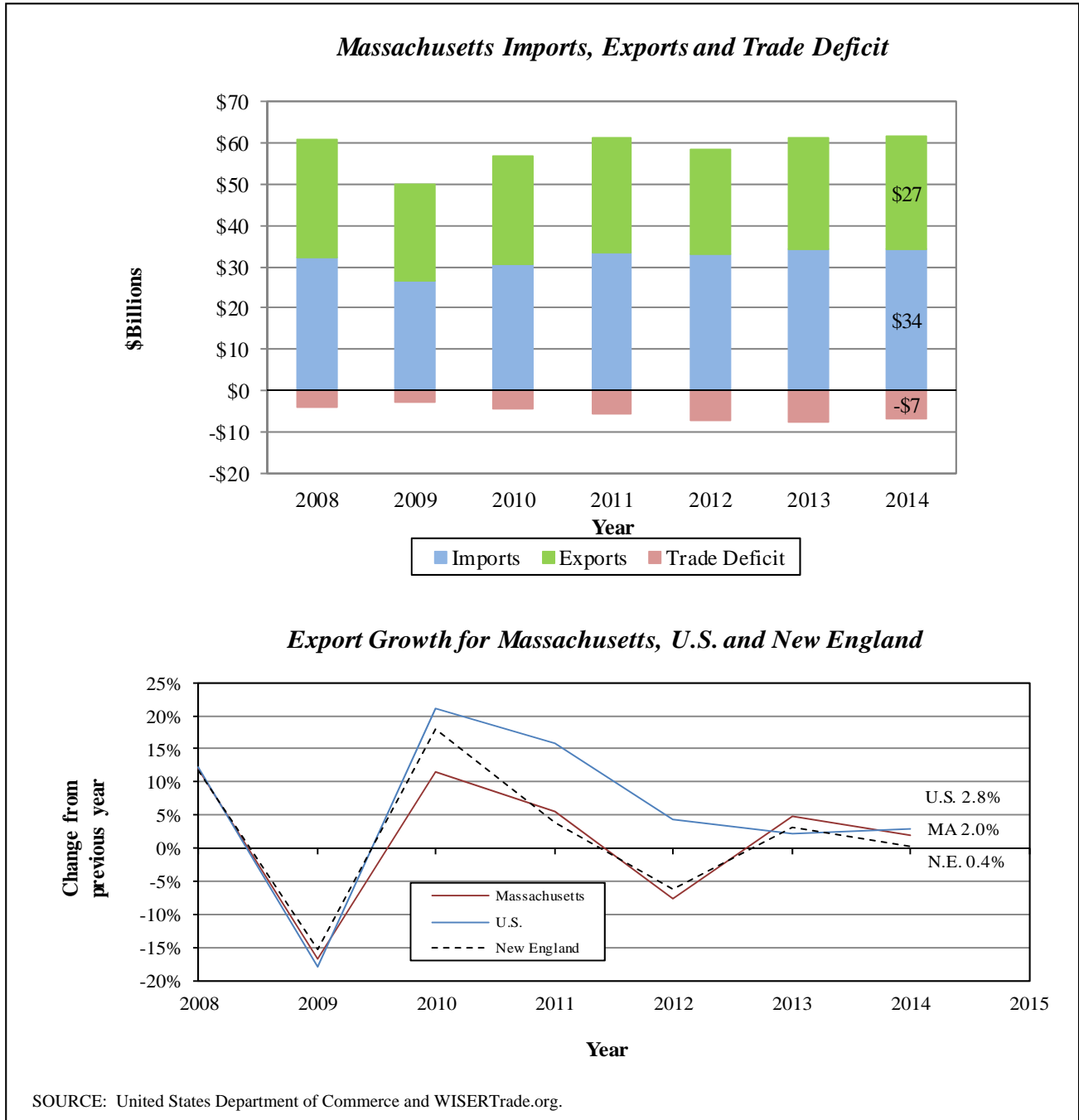
SOURCE: Institute for Supply Management and the Purchasing Management Association of Boston. Updated July 1, 2015.

ECONOMIC BASE AND PERFORMANCE—INTERNATIONAL TRADE

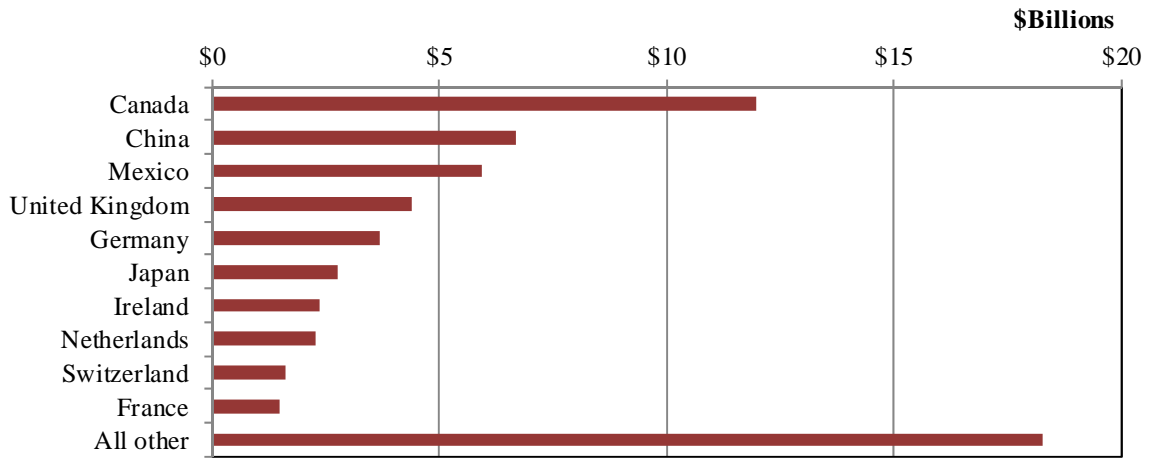
Total Trade Volume. Total trade volume, exports and imports, increased 0.7 percent from 2013 to \$61.5 billion in 2014. Canada trade volume was \$12.0 billion and 15.0 percent of the total state trade and was by far our most valuable trading partner. Massachusetts trade deficit, \$6.8 billion, shrank 9.3 percent in 2014. See appendix 8 for more trade data.

Exports. Massachusetts ranked 18th in the United States in 2014 and first in New England with \$27.4 billion in exports. This was a 2.0 percent increase from the previous year's export value, while national exports increased by 2.8 percent. Total exports from New England grew by 0.4 percent. Canada was again our top export destination in 2014 with \$3.6 billion.

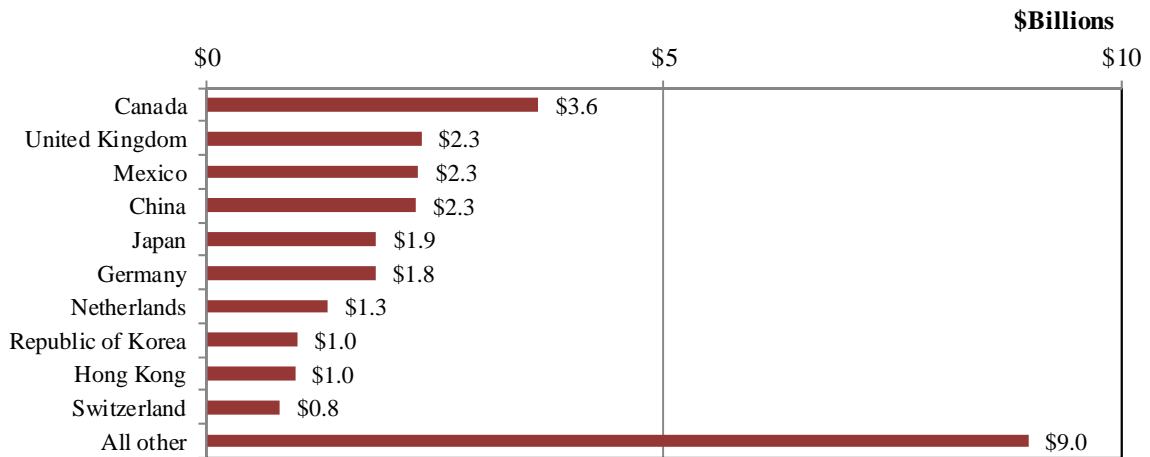
Imports. Imports decreased 0.5 percent to \$34.2 billion in 2014 after growing 4.0 percent in 2013. Canada was also the largest source for Massachusetts imports in 2014, from which we imported \$8.3 billion or 24.4 percent of our total.



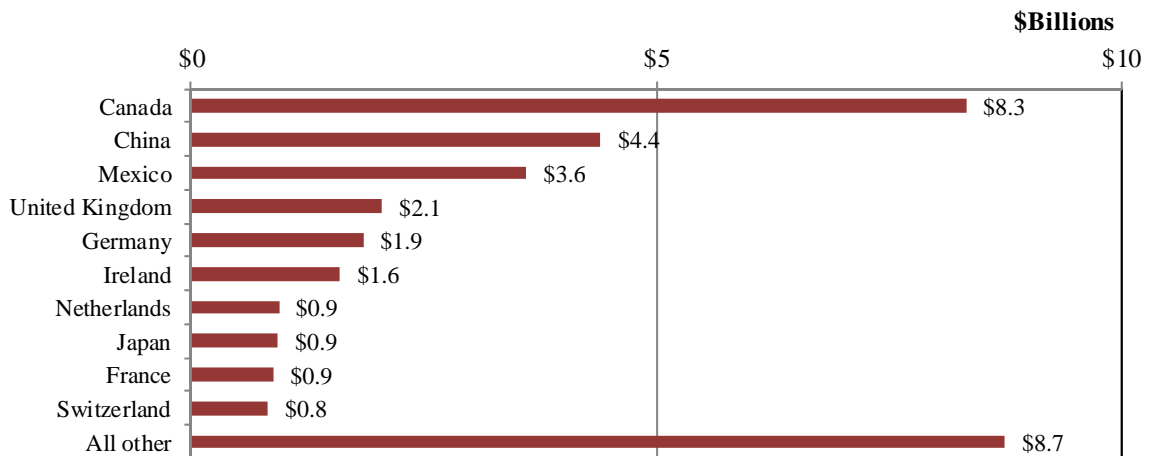
Massachusetts 2014 Top Ten Trade Partners



Massachusetts 2014 Top Ten Export Partners

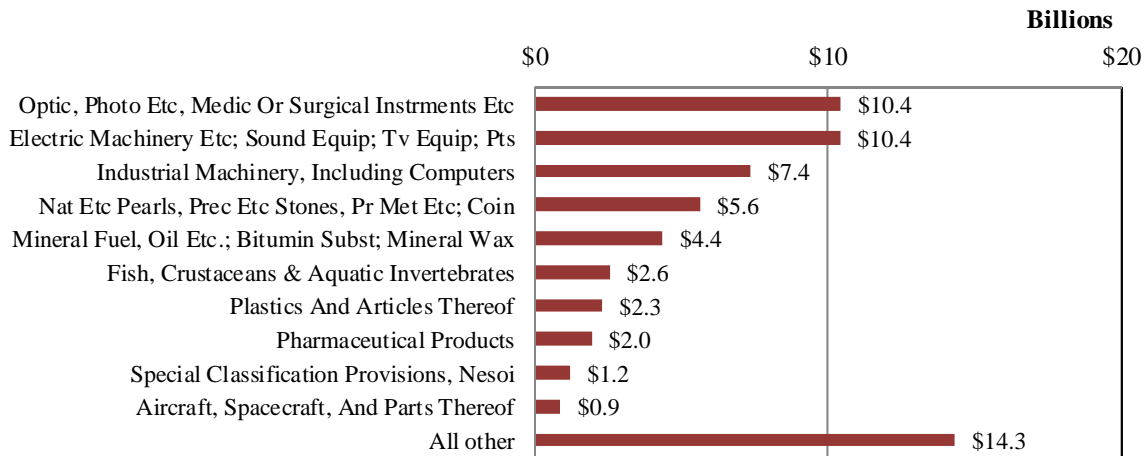


Massachusetts 2014 Top Ten Import Partners

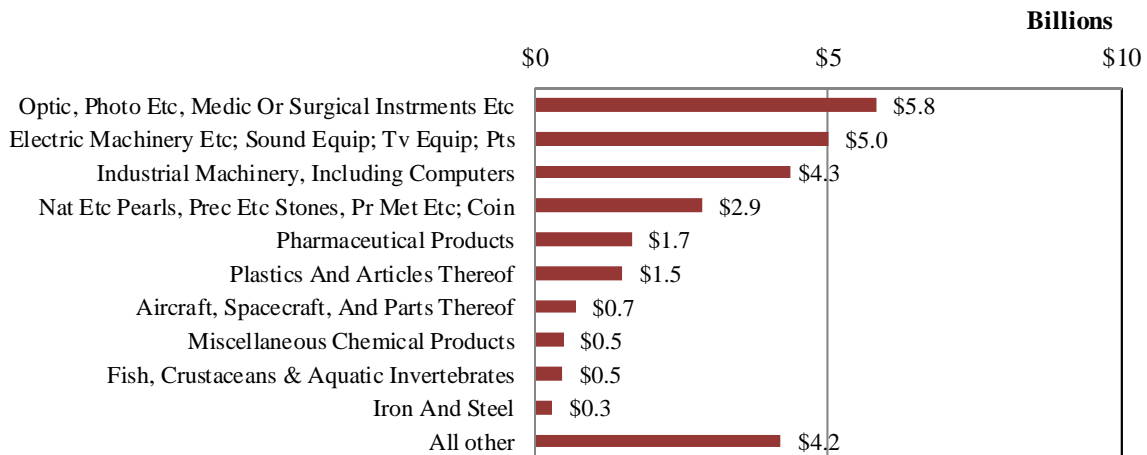


Top Ten Commodities Traded by Trade Type from WISERTrade.org.

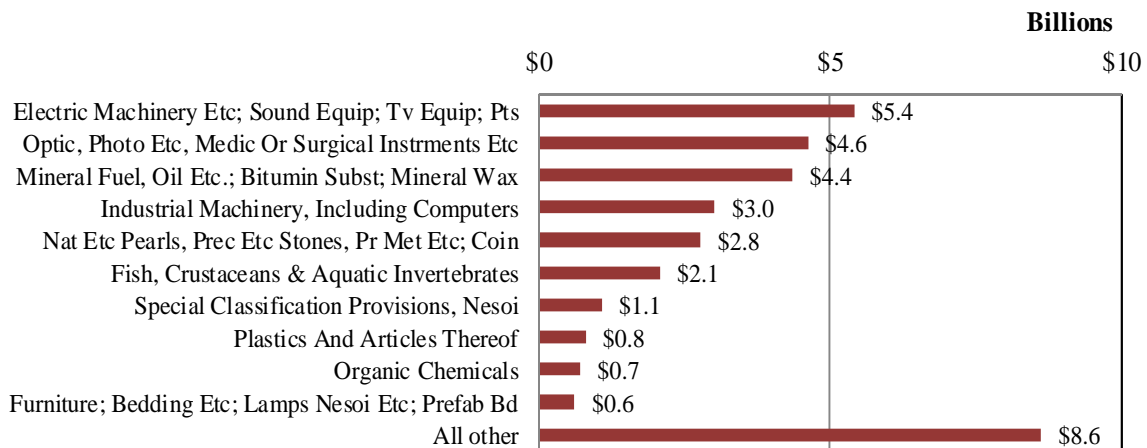
Massachusetts 2014 Top Commodities Imported and Exported



Massachusetts 2014 Top Ten Commodities Exported

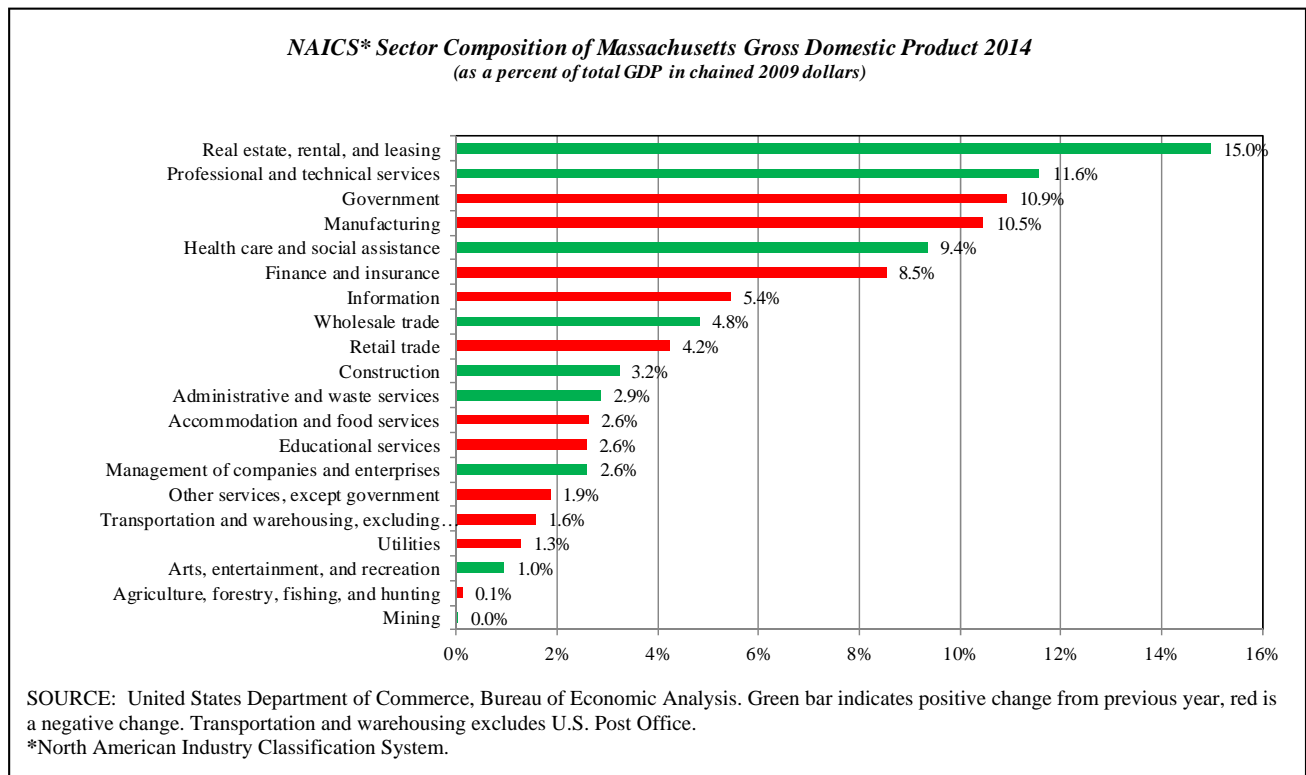


Massachusetts 2014 Top Ten Commodities Imported



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 47.9 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.



GDP Subsectors. When measured in chained 2009 dollars, the change in Massachusetts total GDP grew 15 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 2003-2013 |
|---|--------------------------|
| Computer systems design and related services | 134% |
| Motion picture and sound recording industries | 84% |
| Computer and electronic products manufacturing | 70% |
| Publishing industries, except Internet (includes software) | 70% |
| Legal services | -13% |
| Plastics and rubber products manufacturing | -24% |
| Electrical equipment, appliance, and components manufacturing | -26% |
| Other transportation equipment manufacturing | -51% |

SOURCE: United States Department of Commerce, Bureau of Economic Analysis. Updated June 2015.
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 | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Private industries | 88.3% | 88.4% | 88.4% | 88.4% | 88.2% | 87.9% | 88.4% | 88.1% | 88.9% | 89.0% | 89.1% |
| Agriculture, forestry, fishing, and hunting | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.1% | 0.1% | 0.1% |
| Mining | 0.1% | 0.1% | 0.1% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Utilities | 1.3% | 1.2% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% |
| Construction | 5.0% | 4.7% | 4.3% | 3.9% | 3.6% | 3.3% | 3.1% | 3.1% | 3.3% | 3.3% | 3.2% |
| Manufacturing | 9.8% | 10.0% | 10.6% | 11.5% | 10.8% | 10.5% | 11.2% | 10.8% | 10.7% | 10.4% | 10.5% |
| Wholesale trade | 5.9% | 5.7% | 5.9% | 5.8% | 5.8% | 5.3% | 5.2% | 5.1% | 4.8% | 4.9% | 4.8% |
| Retail trade | 5.1% | 5.1% | 4.8% | 4.5% | 4.3% | 4.4% | 4.4% | 4.3% | 4.2% | 4.2% | 4.2% |
| Transportation and warehousing, excluding Postal Service | 1.7% | 1.7% | 1.7% | 1.7% | 1.6% | 1.6% | 1.6% | 1.6% | 1.6% | 1.5% | 1.6% |
| Information | 4.5% | 4.9% | 4.8% | 5.1% | 5.4% | 5.2% | 5.6% | 5.4% | 5.4% | 5.3% | 5.4% |
| Finance and insurance | 8.6% | 8.4% | 8.6% | 8.2% | 7.5% | 8.5% | 8.1% | 7.9% | 8.5% | 8.5% | 8.5% |
| Real estate, rental, and leasing | 14.2% | 14.5% | 14.1% | 14.1% | 14.2% | 14.5% | 14.6% | 14.9% | 15.1% | 15.2% | 15.0% |
| Professional and technical services | 9.9% | 10.0% | 10.1% | 10.1% | 11.2% | 10.8% | 10.8% | 10.9% | 11.2% | 11.3% | 11.6% |
| Management of companies and enterprises | 2.5% | 2.5% | 2.4% | 2.3% | 2.3% | 2.2% | 2.2% | 2.4% | 2.4% | 2.5% | 2.6% |
| Administrative and waste services | 2.5% | 2.7% | 2.7% | 2.8% | 2.8% | 2.6% | 2.7% | 2.8% | 2.8% | 2.8% | 2.9% |
| Educational services | 2.7% | 2.6% | 2.6% | 2.6% | 2.7% | 2.8% | 2.8% | 2.8% | 2.7% | 2.7% | 2.6% |
| Health care and social assistance | 8.0% | 8.1% | 8.4% | 8.4% | 8.9% | 9.2% | 9.1% | 9.1% | 9.1% | 9.3% | 9.4% |
| Arts, entertainment, and recreation | 0.9% | 0.9% | 0.9% | 0.9% | 0.9% | 0.9% | 0.9% | 0.9% | 0.9% | 1.0% | 1.0% |
| Accommodation and food services | 2.9% | 2.8% | 2.7% | 2.6% | 2.6% | 2.5% | 2.6% | 2.6% | 2.7% | 2.7% | 2.6% |
| Other services, except government | 2.4% | 2.3% | 2.2% | 2.1% | 2.1% | 2.0% | 1.9% | 1.9% | 1.9% | 1.9% | 1.9% |
| Government | 11.7% | 11.6% | 11.6% | 11.6% | 11.8% | 12.1% | 11.6% | 11.9% | 11.1% | 11.1% | 10.9% |

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 | 13 |
| 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 | 12 | 14 |
| 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 | 13 | 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 on QCEW. As of October 10, 2014 the 2014 first quarter data are available.

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.

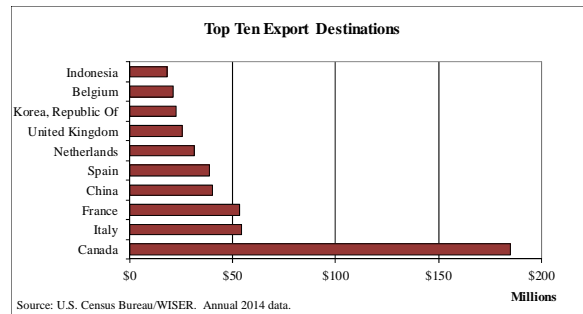
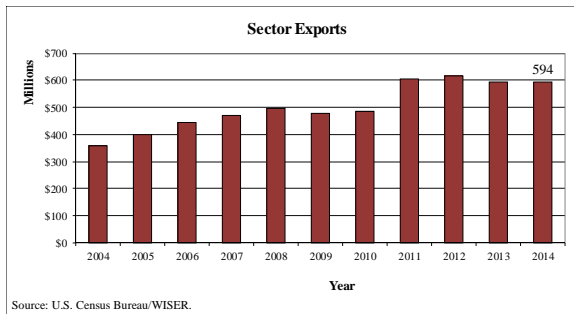
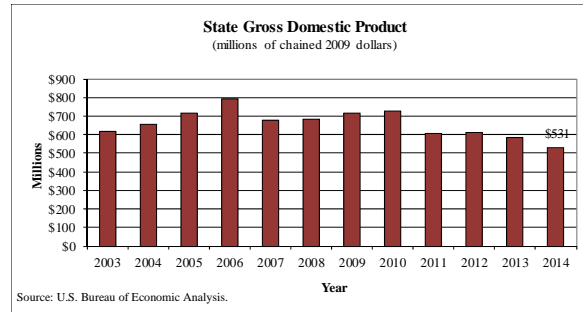
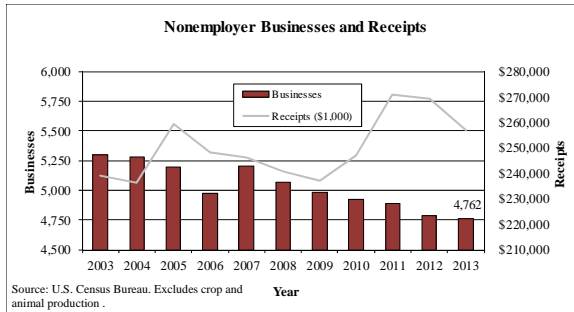
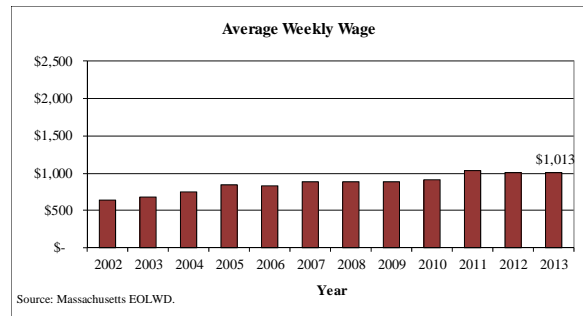
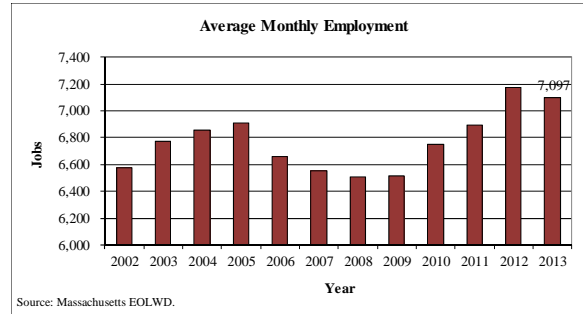
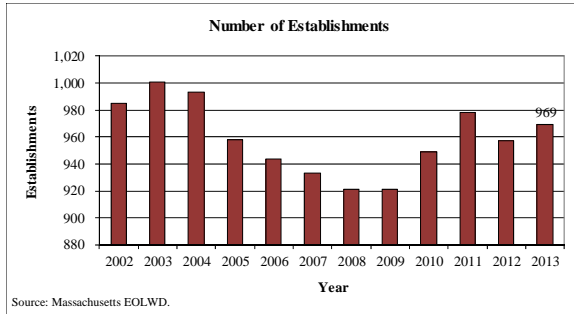
State Gross Domestic Product is an annual series from the U.S. Bureau of Economic Analysis’s Regional Economic Accounts. **NEW:** U.S. and state GDP is inflation adjusted to 2009. U.S. GDP is available quarterly and beginning in August 2014, quarterly state GDP will be reported. The June 2014 release included a comprehensive revision of gross domestic product by state. Go to http://www.bea.gov/newsreleases/regional/gdp_state/gsp_newsrelease.htm for more information.

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 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 indicates it is higher than the previous year’s rank. Red that indicates it is lower than the previous year’s and black that indicates 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: **Fishing and greenhouse and nursery production**

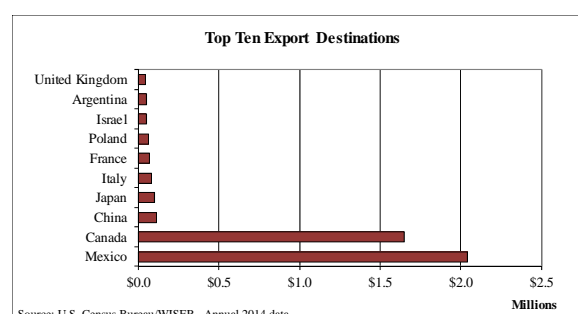
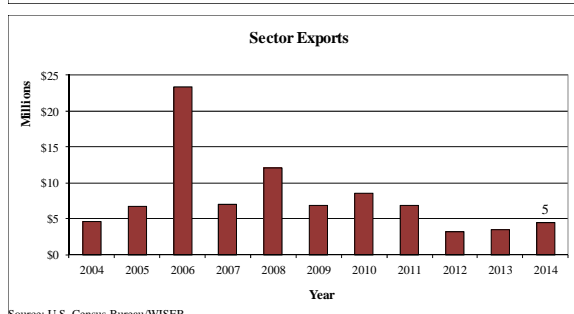
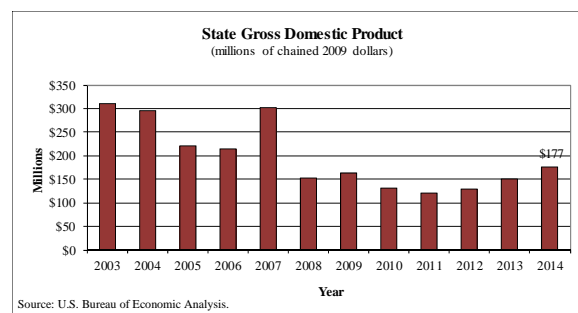
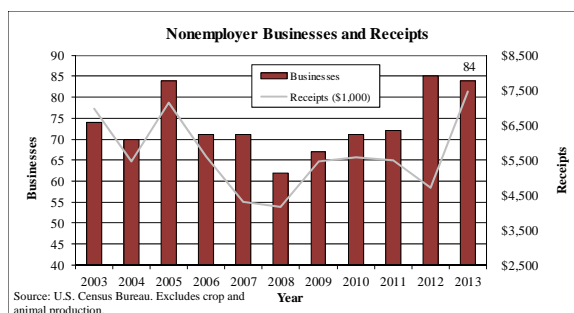
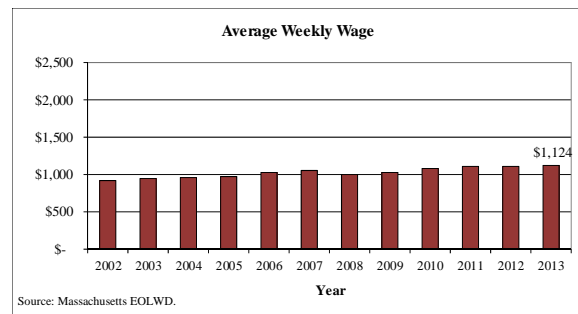
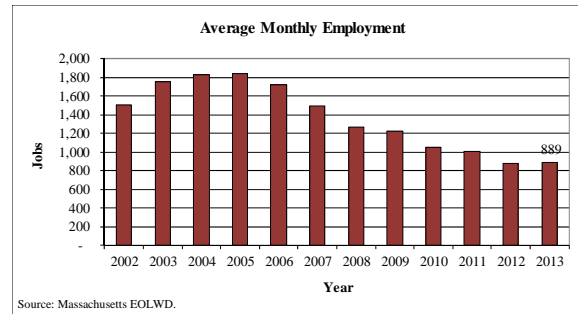
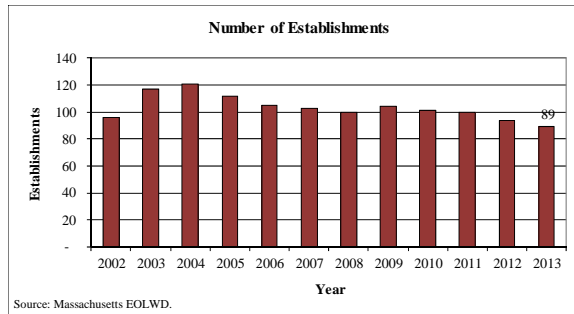
Annual wages: **Fishing**

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**

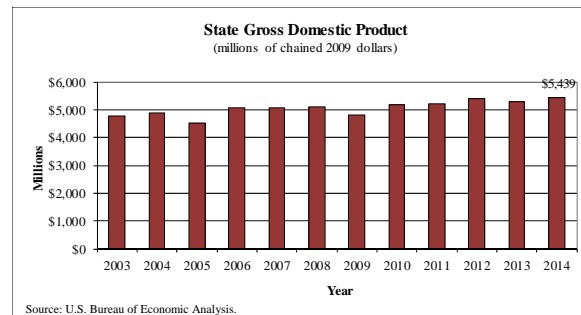
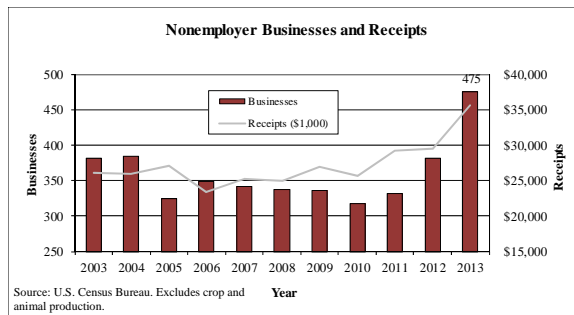
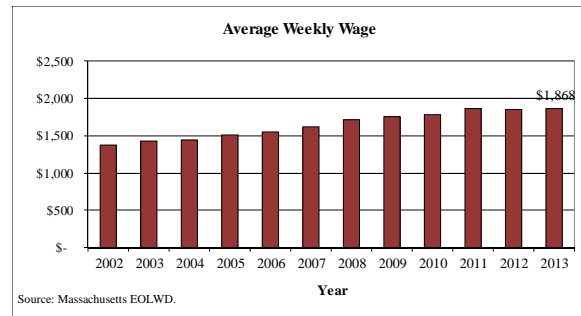
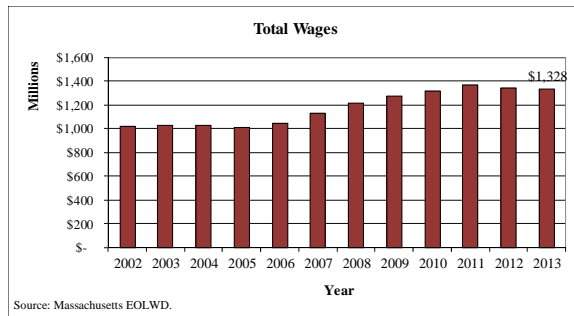
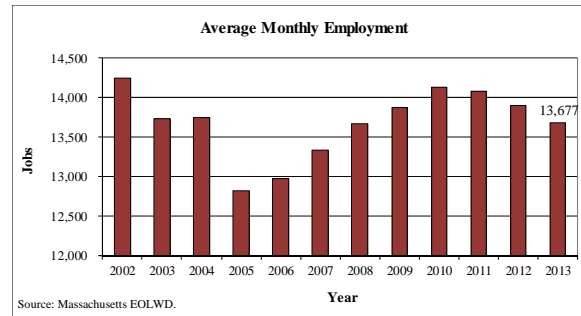
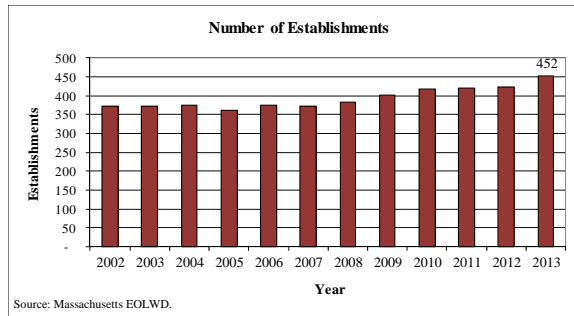
Annual wages: **Nonmetallic mineral mining and quarrying**

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: **1.3%**

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: **Water, sewage and other systems**

Nonemployer establishments: Subsector detail N/A

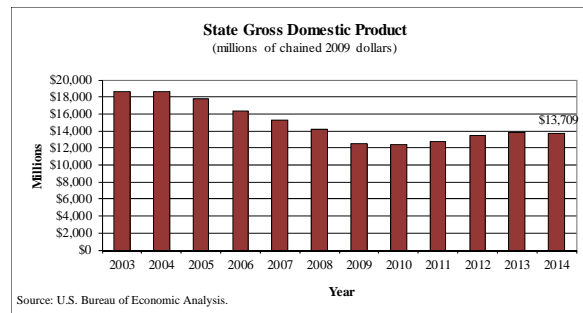
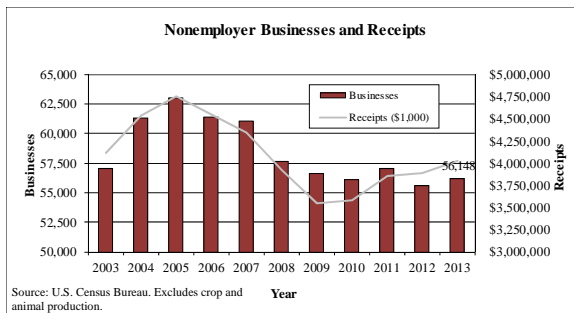
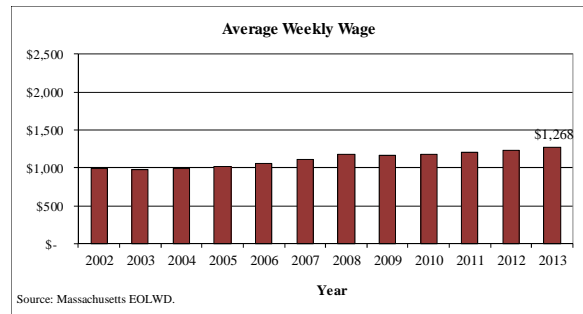
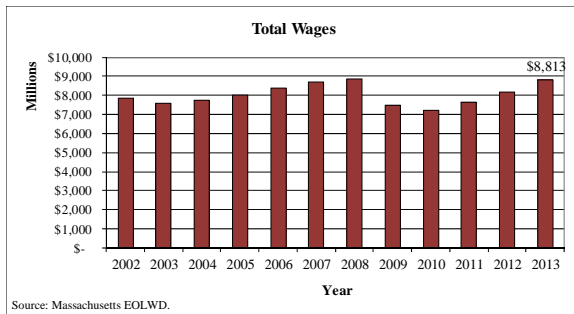
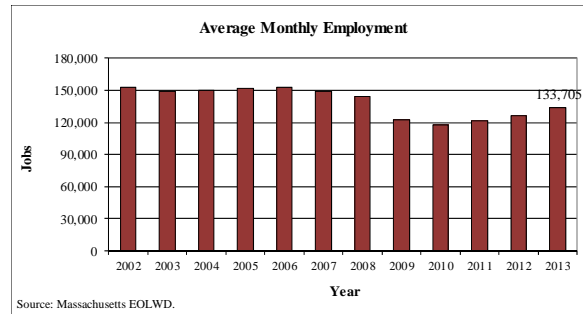
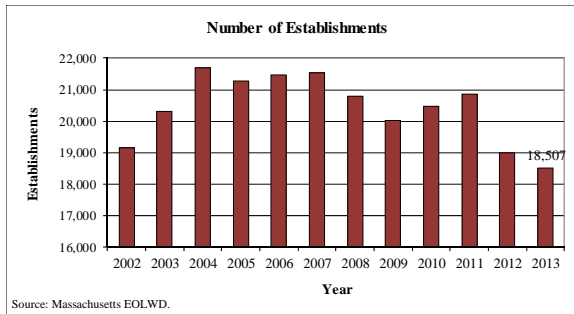
Employees: **Power generation and supply**

Annual wages: **Power generation and supply**

Average weekly wage: **Natural gas distribution**

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: **3.2%**

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**

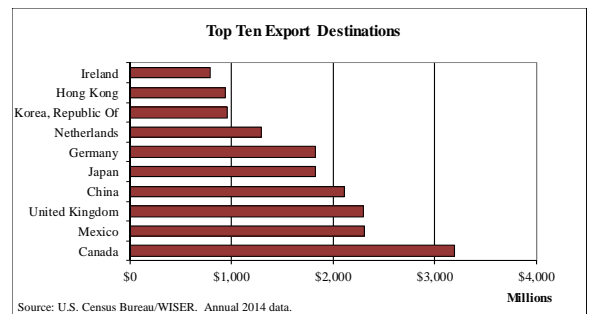
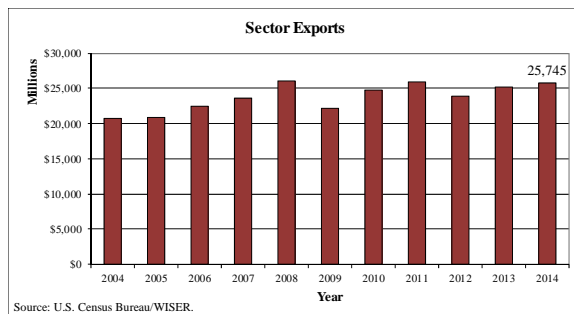
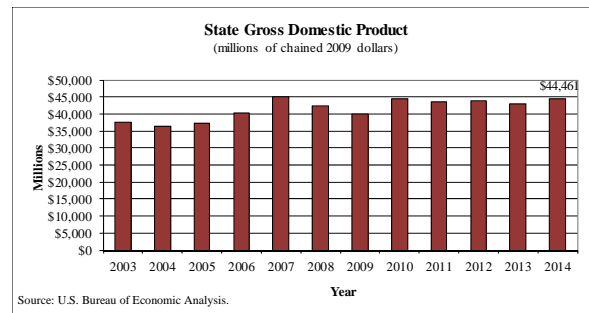
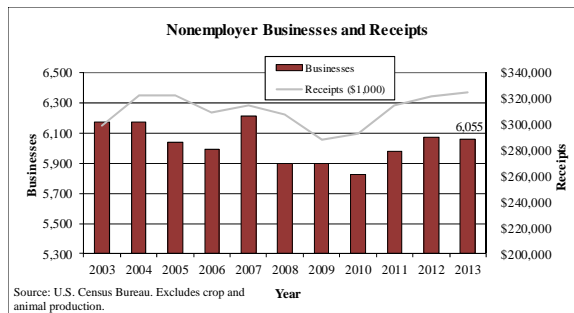
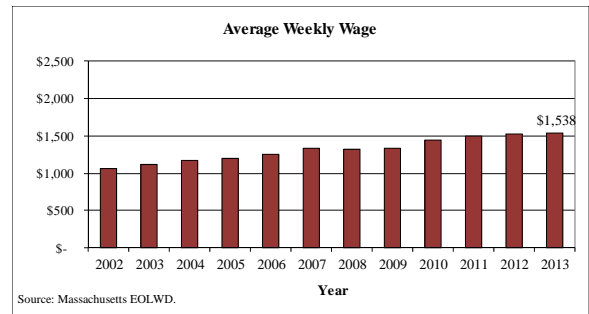
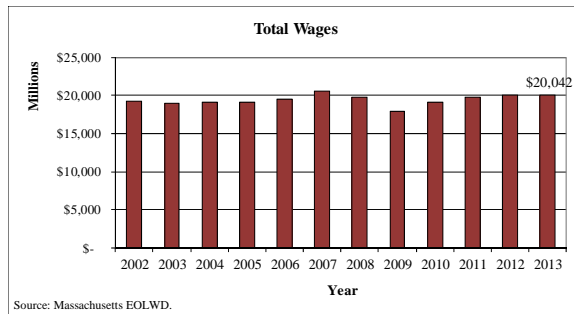
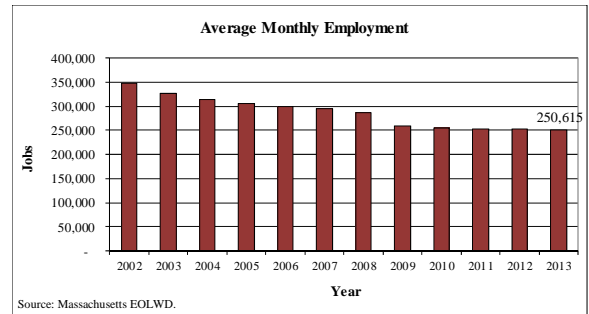
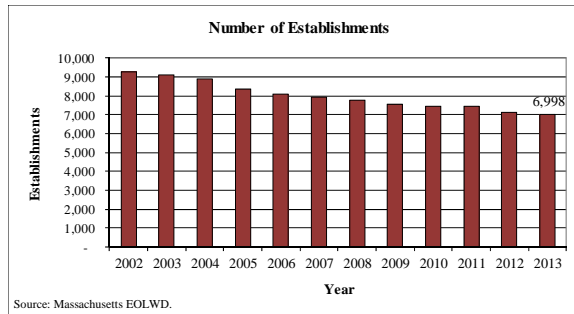
Annual wages: **Building equipment contractors**

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**

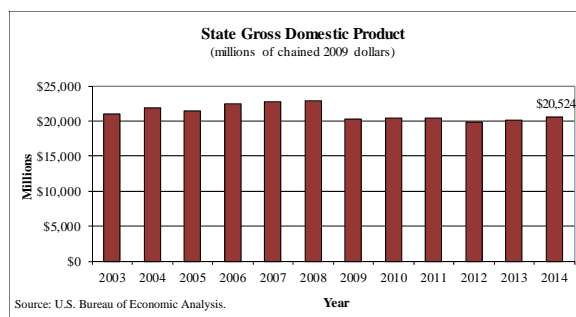
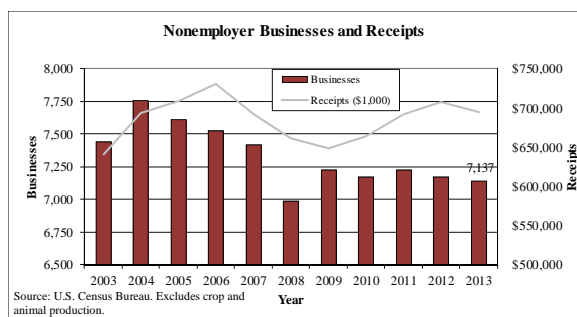
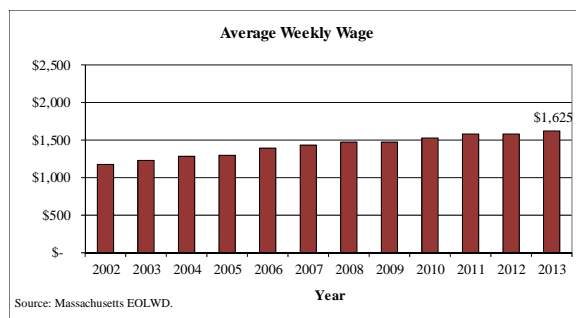
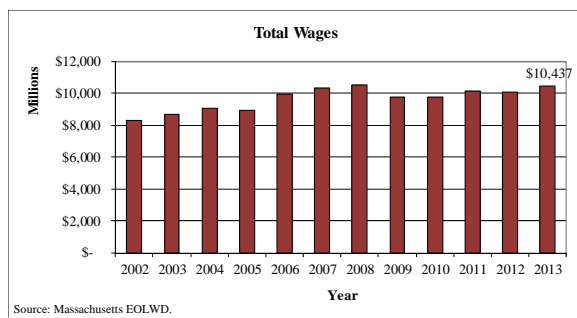
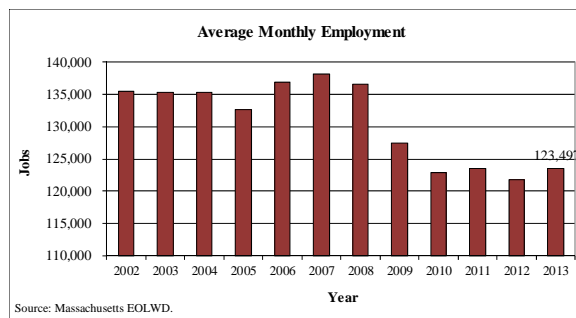
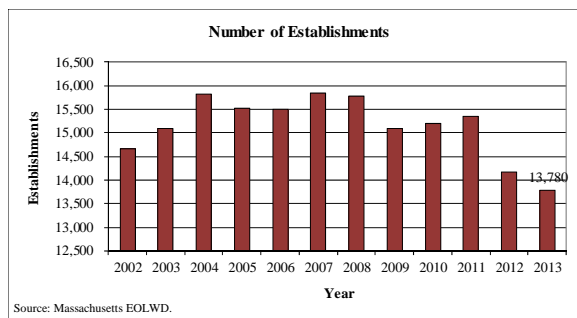
Annual wages: **Electronic instrument**

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 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: **4.8%**

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**

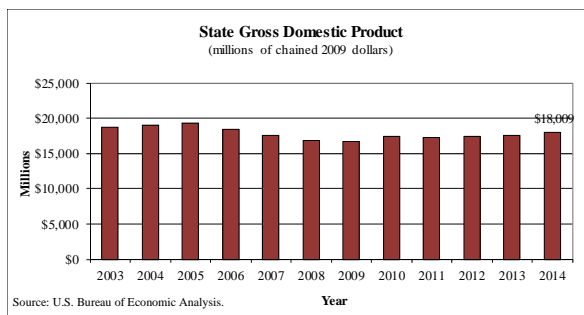
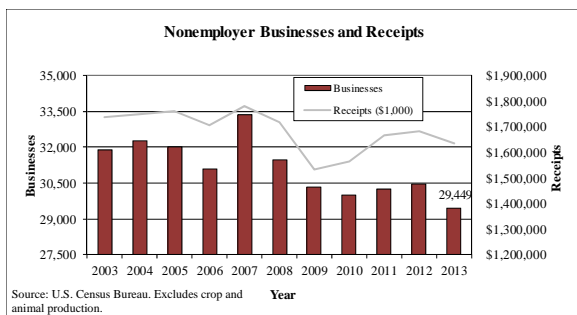
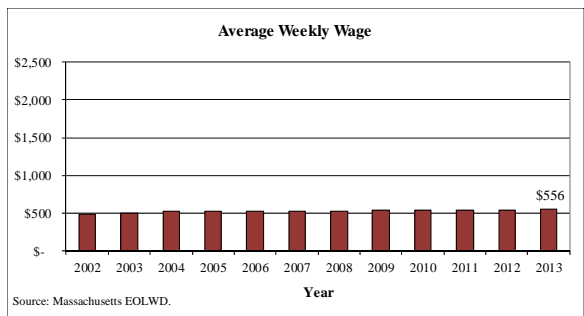
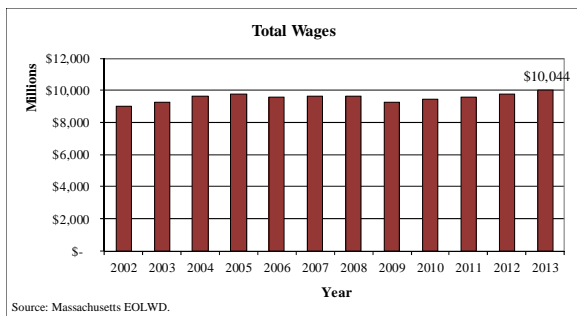
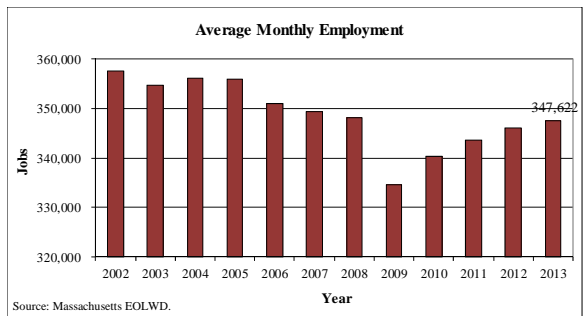
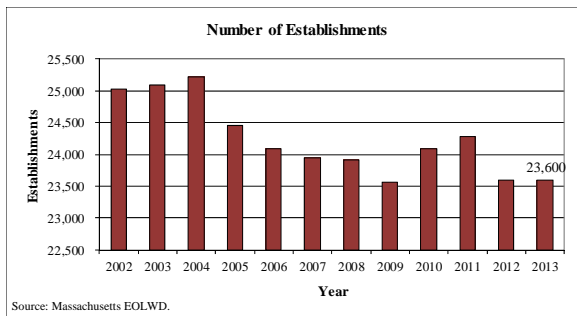
Employees: **Electronic markets and agents/brokers**

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: **4.2%**

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**

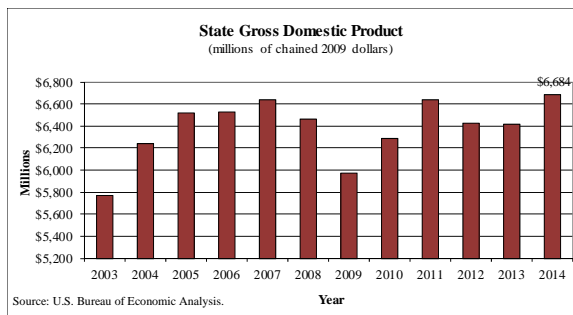
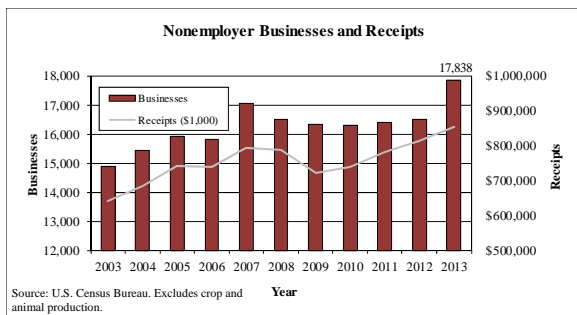
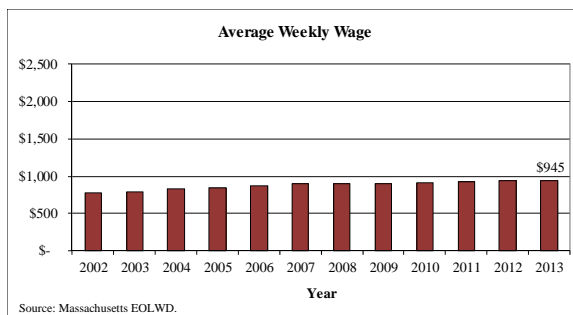
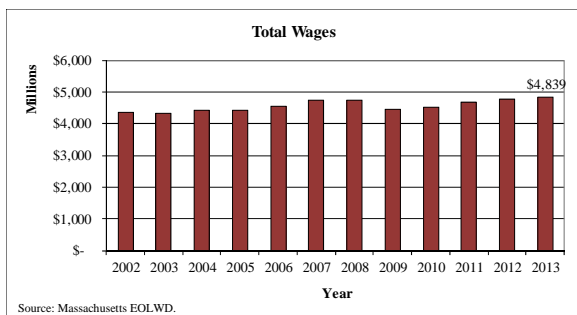
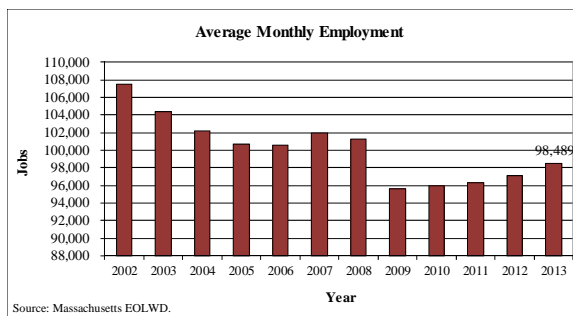
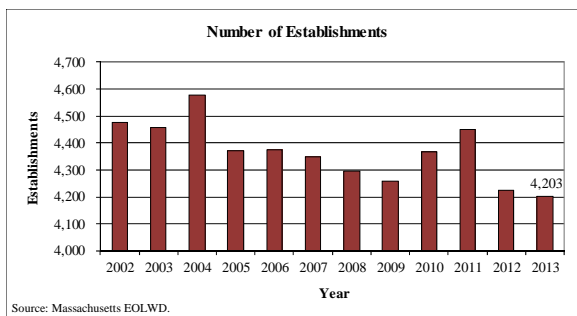
Employees: **Grocery stores**

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: **1.6%**

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**

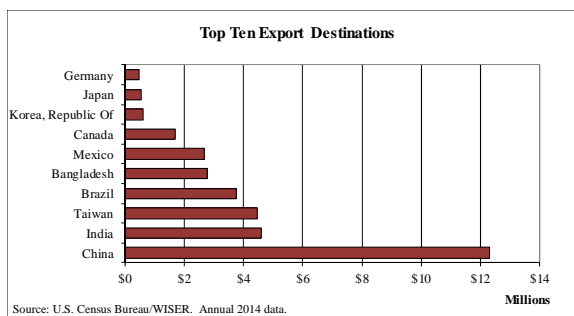
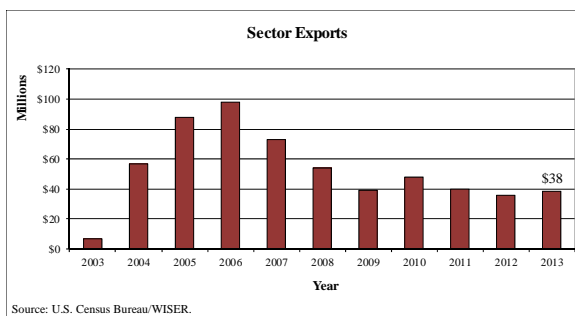
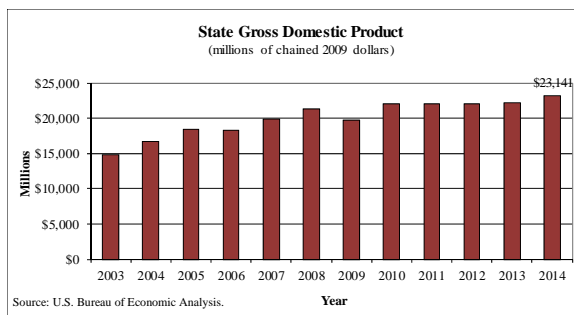
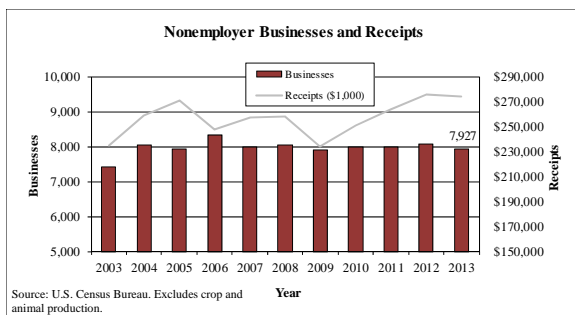
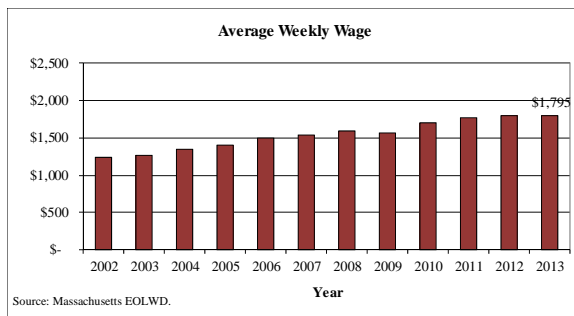
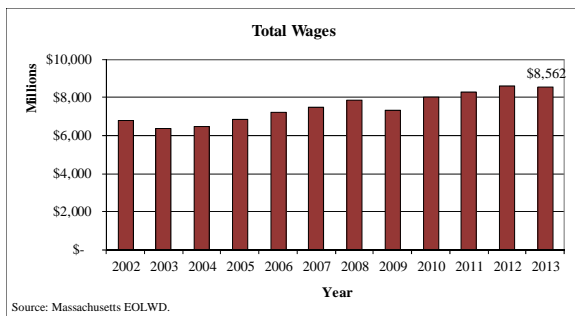
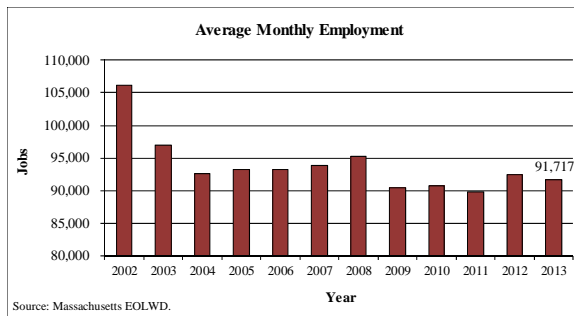
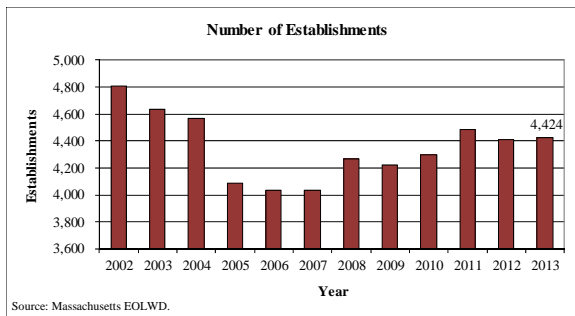
Employees: **Couriers**

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.



Summary.

GDP contribution to state total: **5.4%**

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**

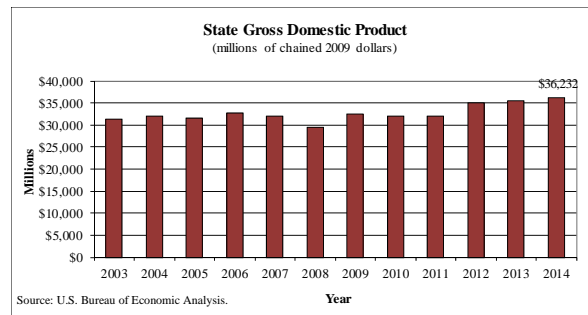
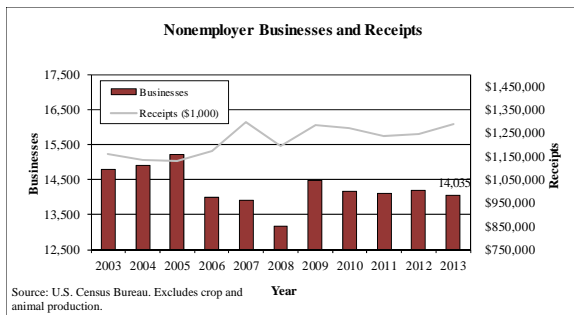
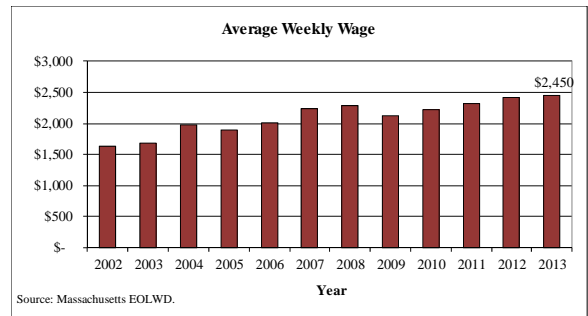
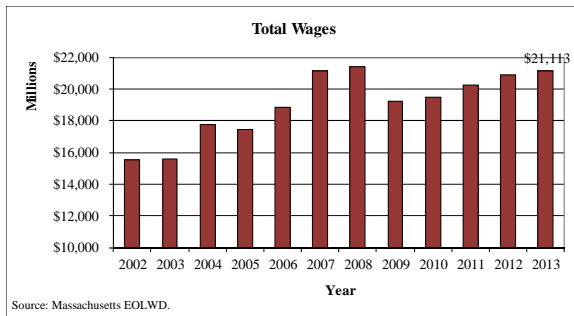
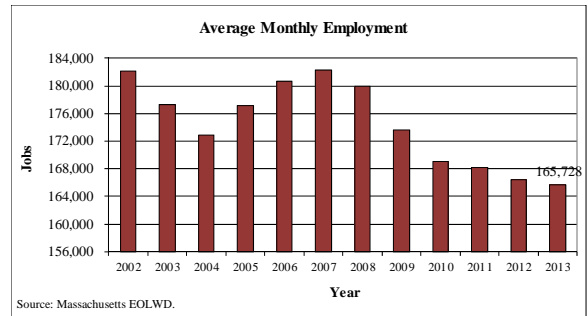
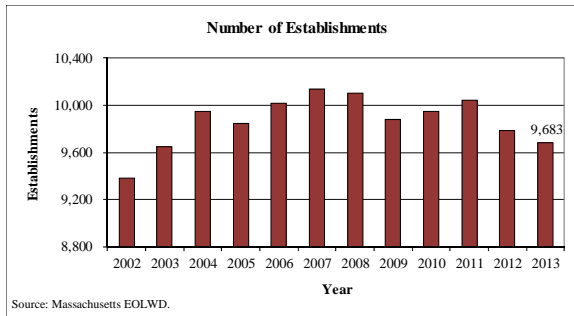
Annual wages: **Software publishers**

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 transactions.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **8.5%**

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**

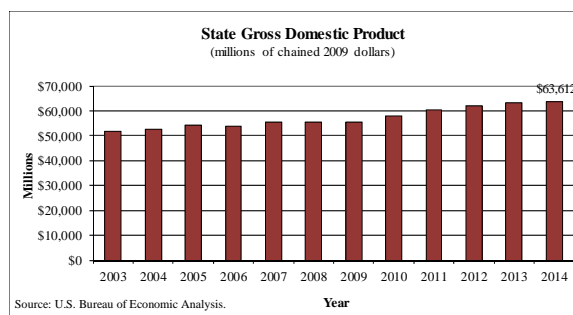
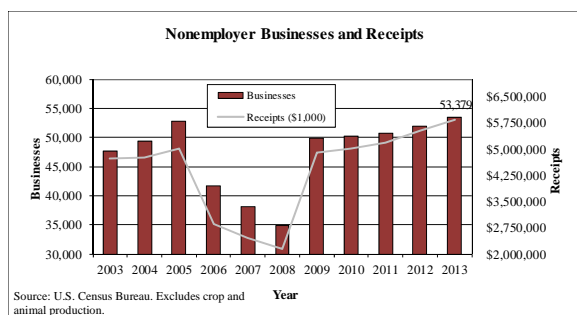
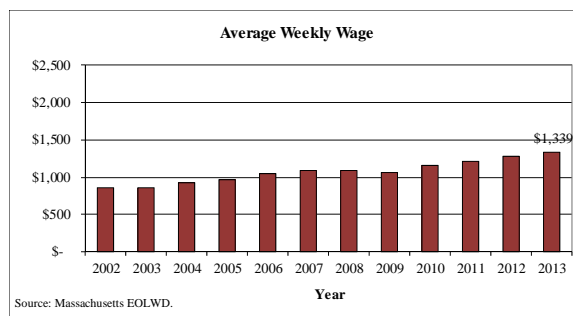
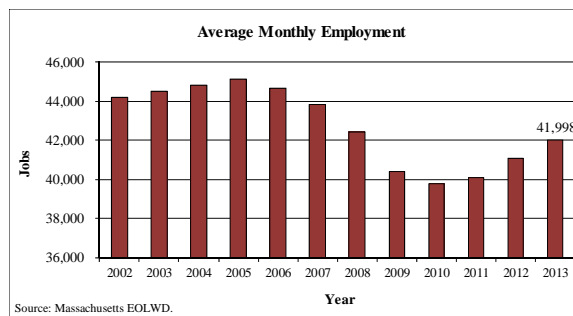
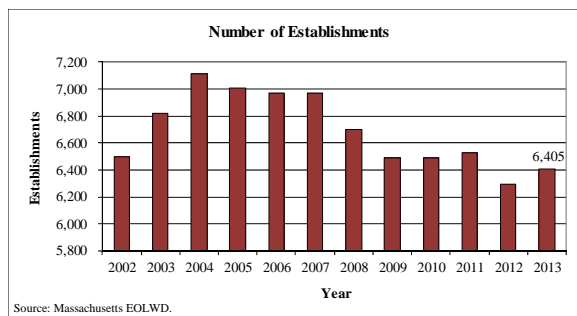
Employees: **Depository credit intermediation**

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: **15.0%**

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**

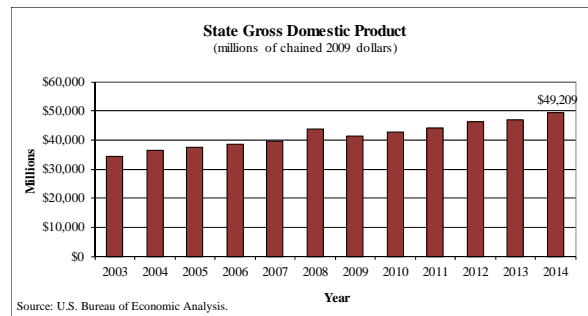
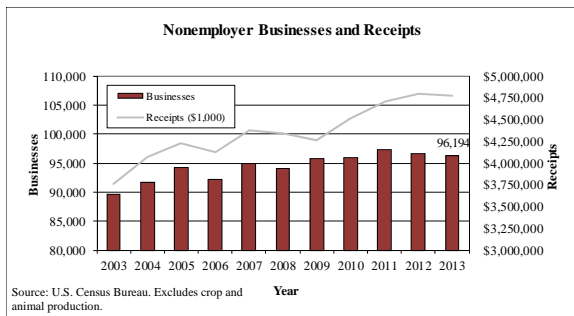
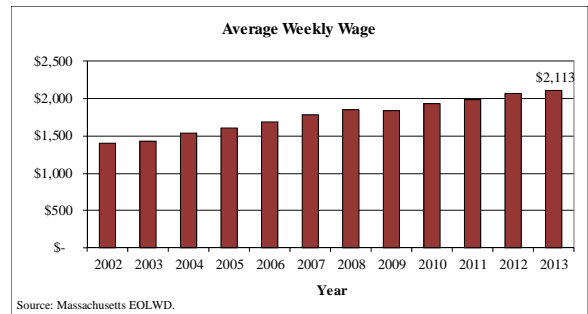
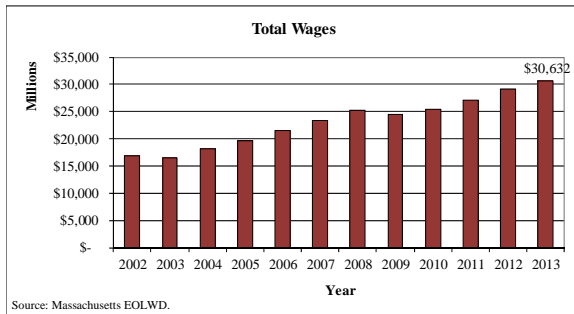
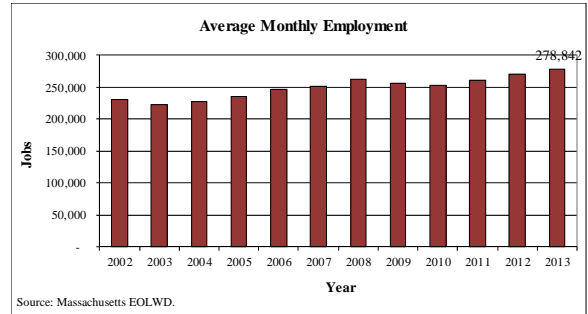
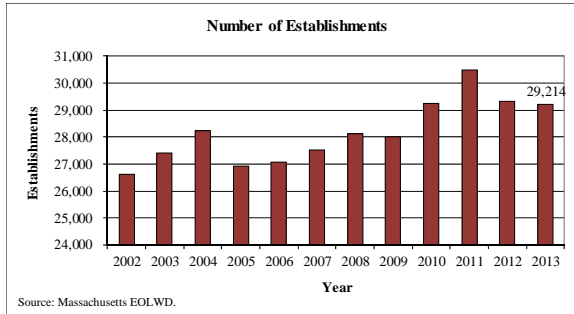
Employees: **Activities related to real estate**

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: **11.6%**

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**

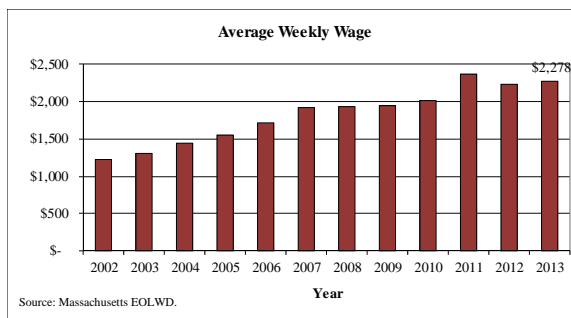
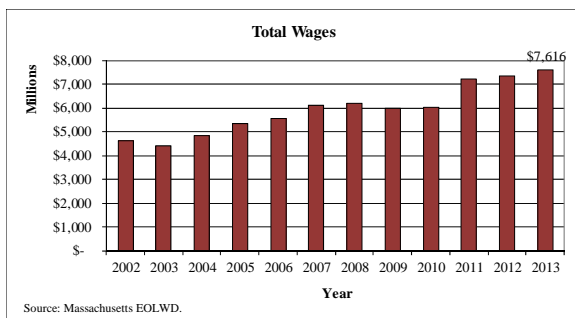
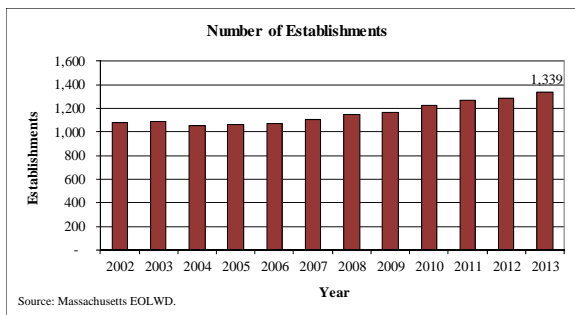
Employees: **Computer systems design and related services**

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

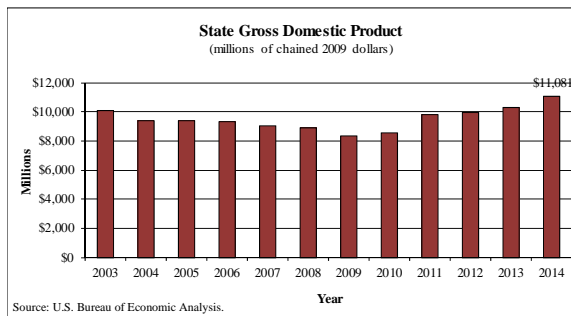
Average weekly wage: **Computer systems design and related services**

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: **13 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**

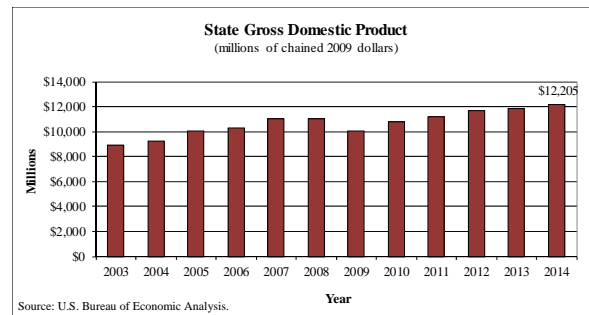
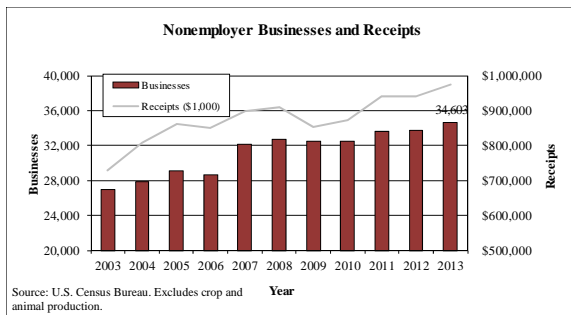
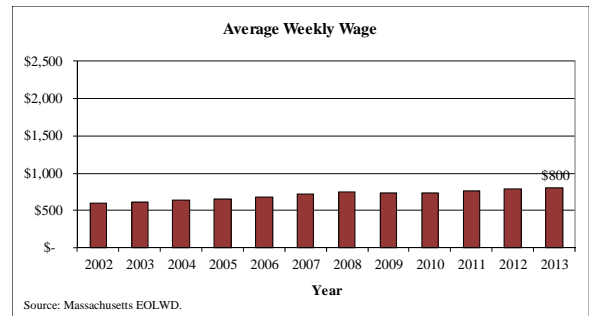
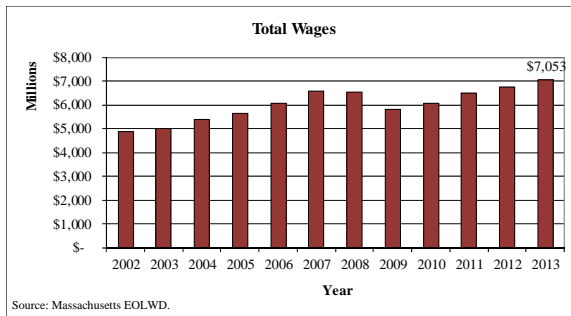
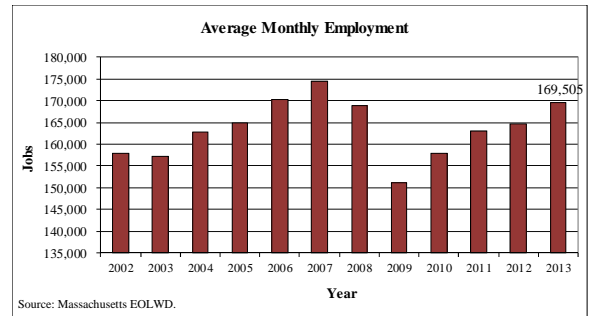
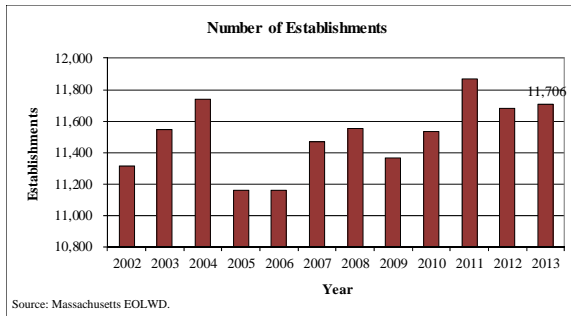
Employees: Subsector detail **N/A**

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: **2.9%**

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**

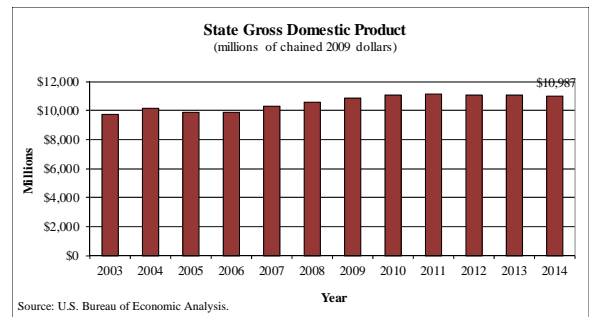
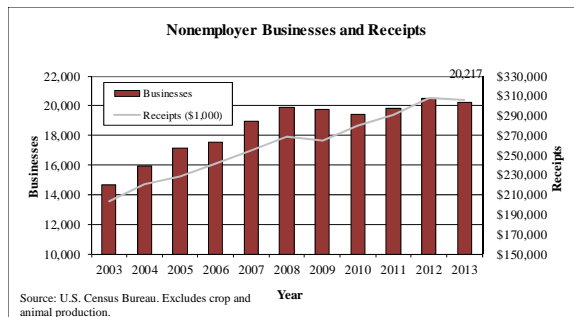
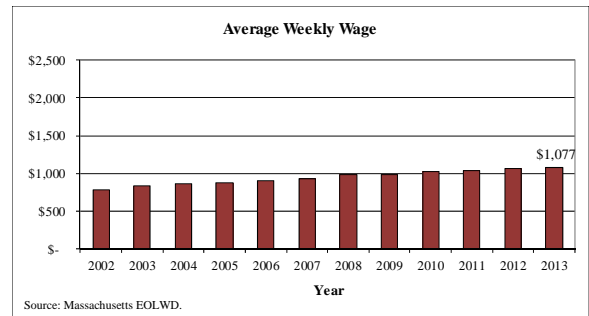
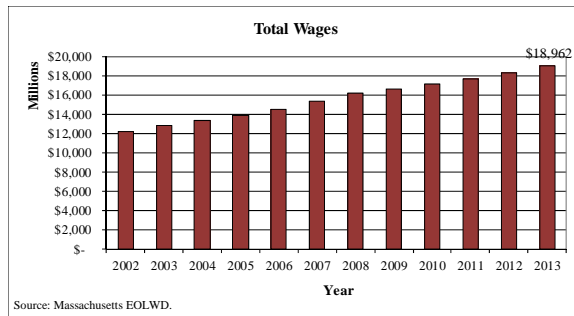
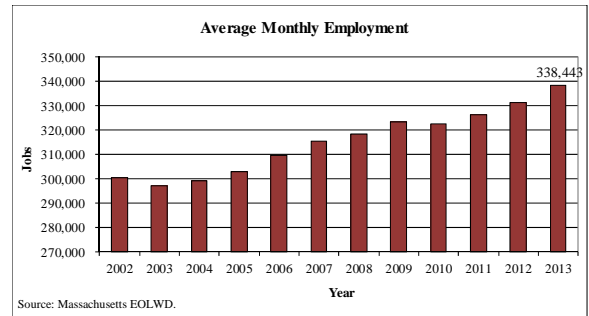
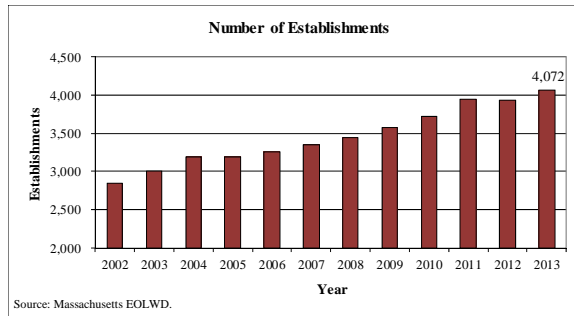
Employees: **Employment services**

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: 2.6%

GDP rank: 14 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

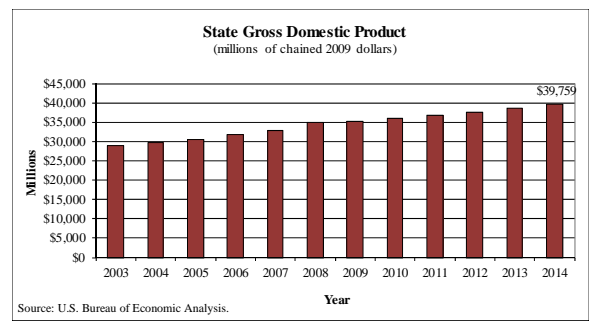
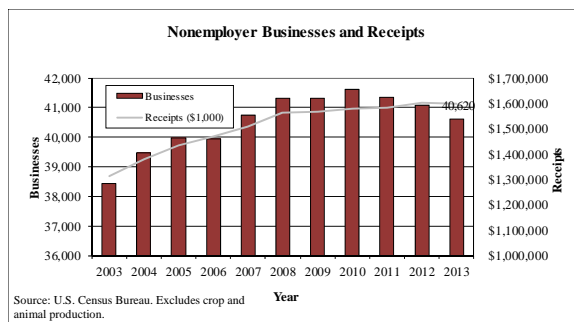
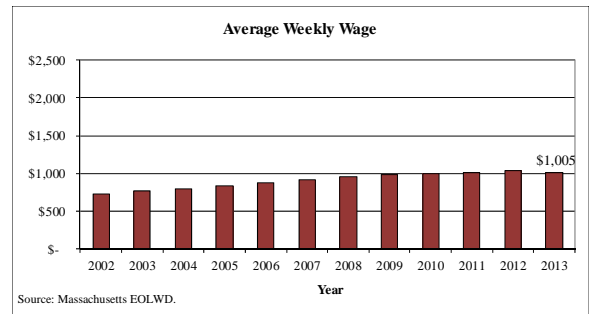
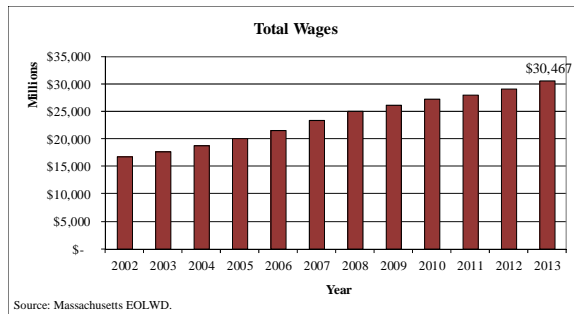
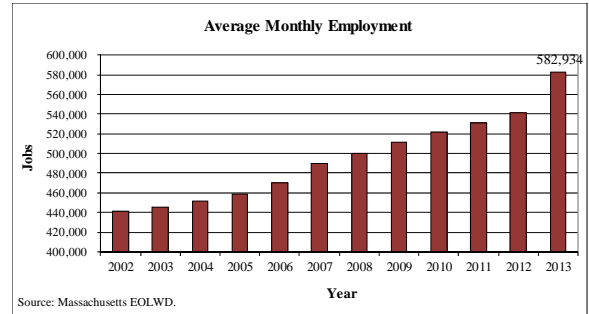
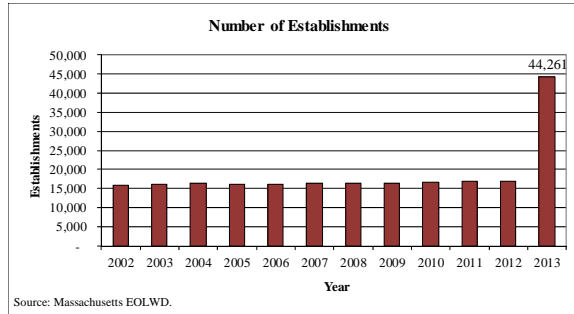
Employees: **Elementary and secondary schools**

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 on QCEW.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **9.4%**

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: **Offices of physicians**

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

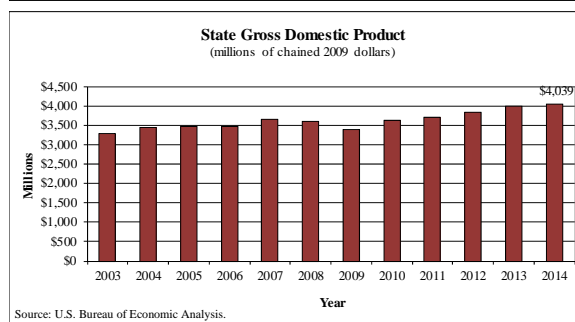
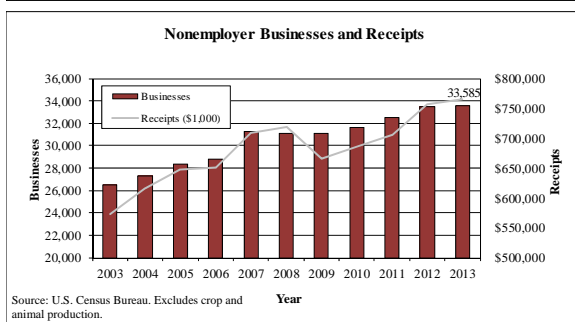
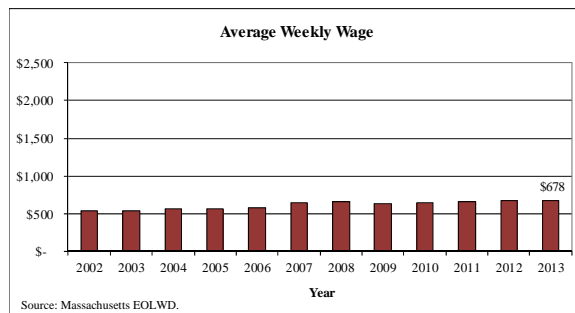
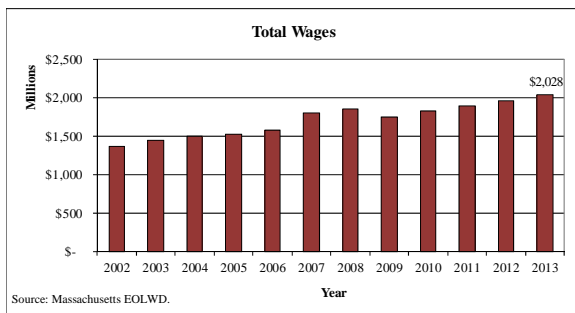
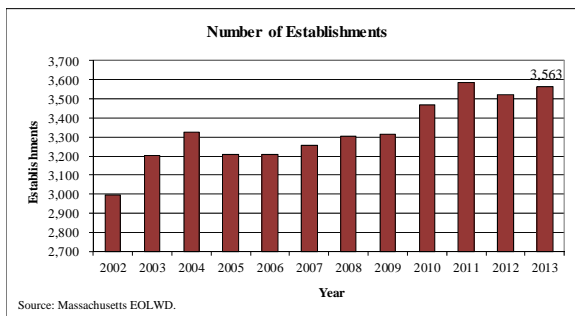
Employees: **General medical and surgical hospitals**

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**

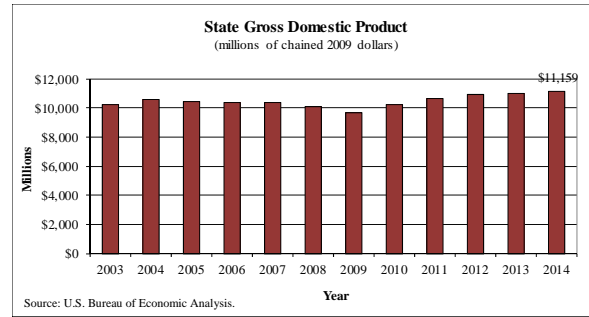
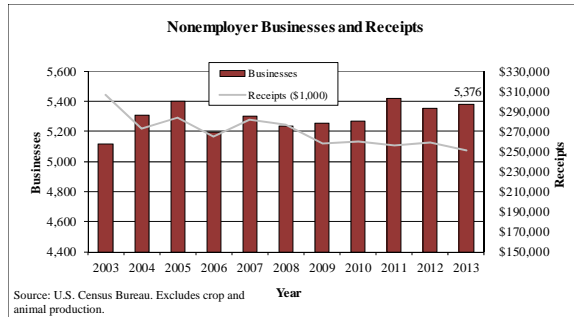
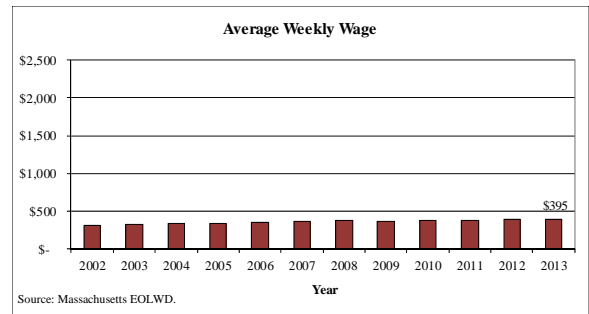
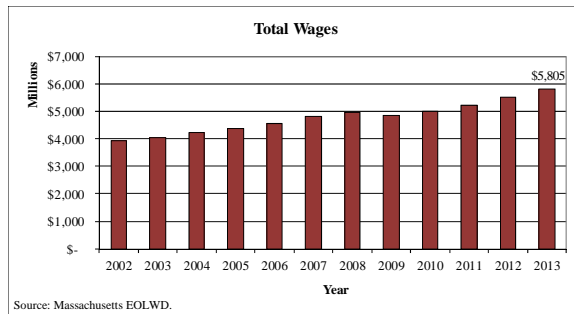
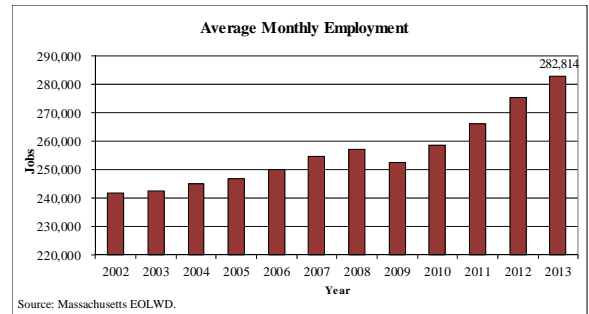
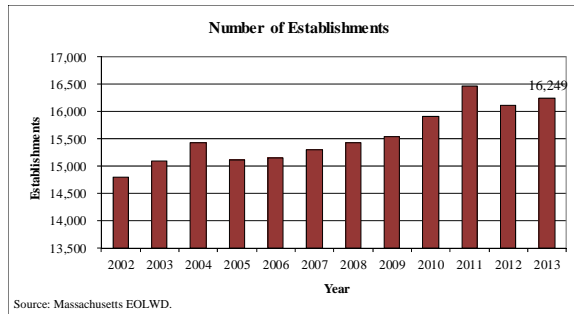
Employees: **Other amusement & recreation industries**

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: **2.6%**

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**

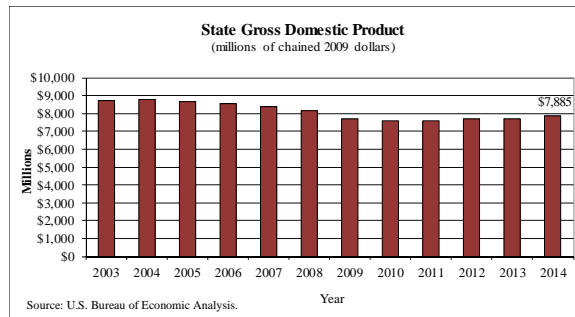
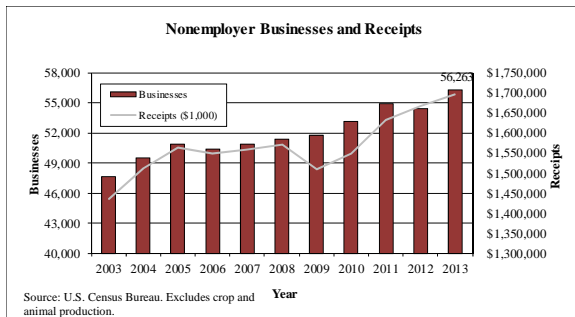
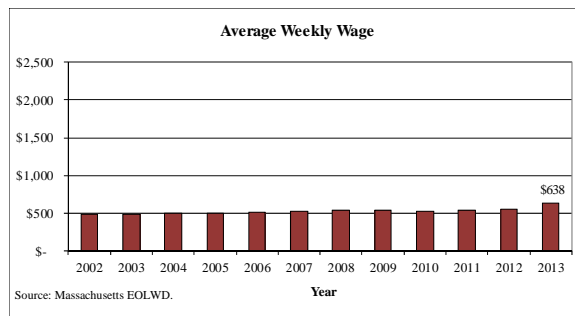
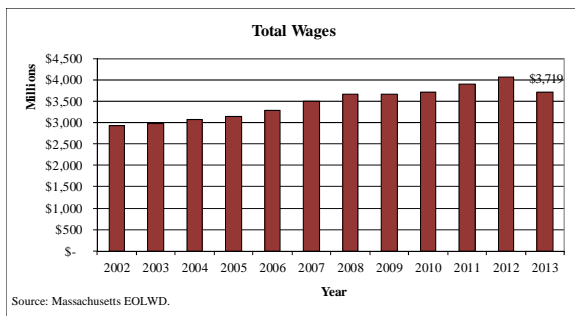
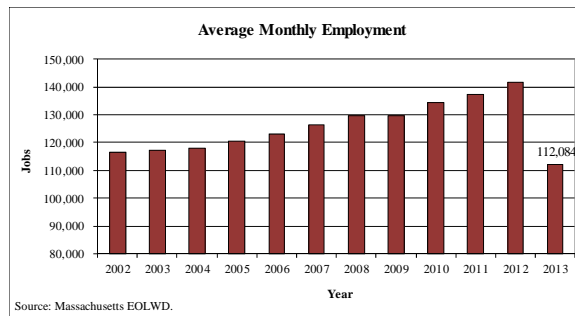
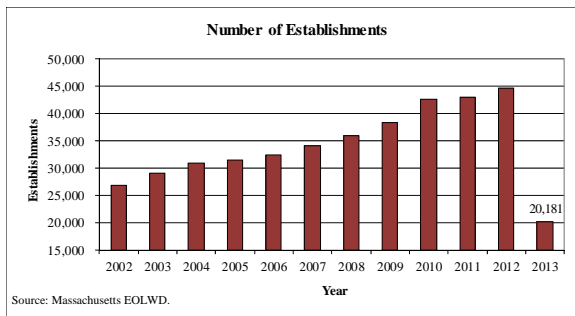
Employees: **Restaurants and other eating places**

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.



State export data are not available for this sector.

Summary.

GDP contribution to state total: **1.9%**

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: **Private households**

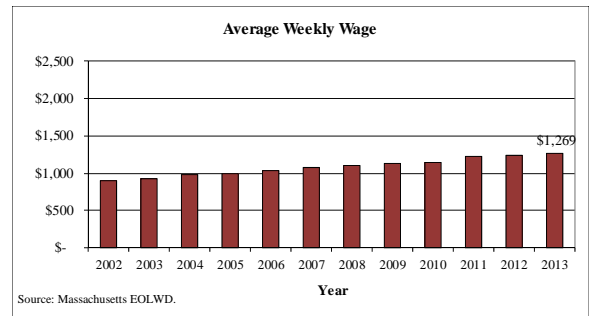
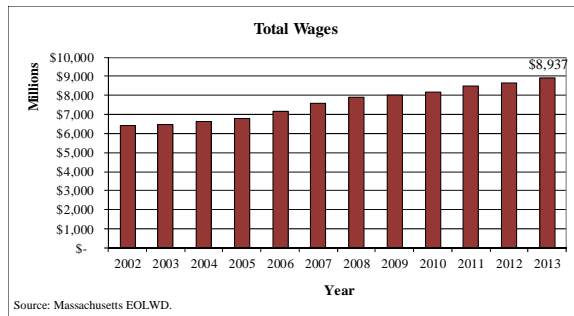
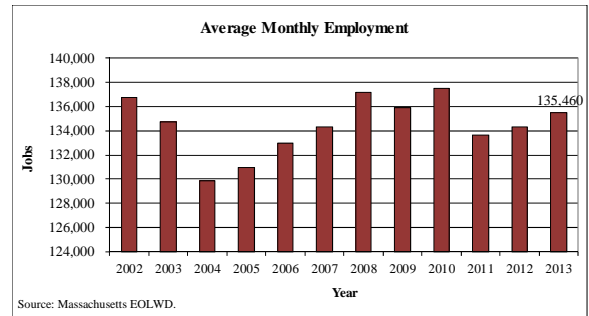
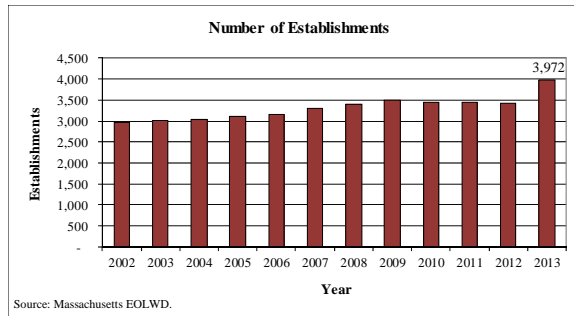
Annual wages: **Automotive repair and maintenance**

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

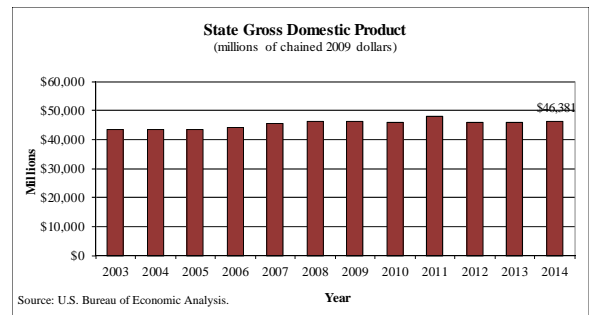
Annual receipts at nonemployer establishments: **Other personal services**

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 on QCEW.

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: **10.9%**

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: **Executive, legislative, & general government**

Nonemployer establishments: **N/A**

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

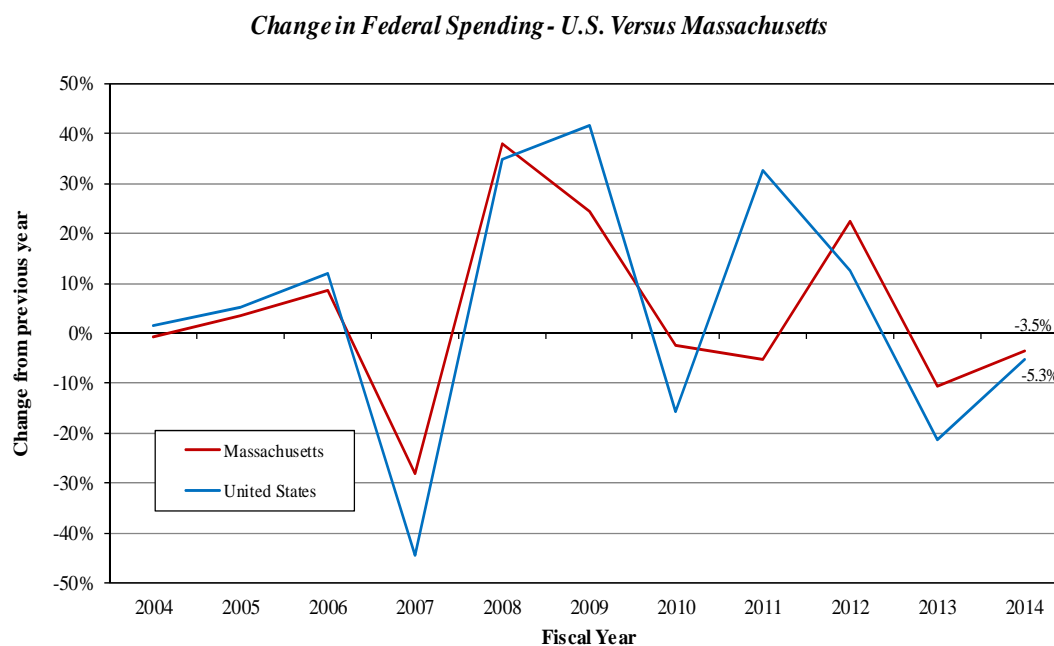
Annual wages: **Justice, public order, and safety activities**

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 \$70.7 billion in contracts, grants, direct payments, insurance, loans and guarantees, and other spending from the federal government in federal FY 2014. Massachusetts received 2.6 percent of all federal spending in FY 2014 versus 2.5 percent in FY 2013. Federal dollars to Massachusetts have dropped for the last two fiscal years, after a large increase in 2012. The state saw an 11% increase in grants, \$1.7 billion, but the two other large categories, direct payments and contracts decreased. Massachusetts federal contracts have declined over the last three years but their proportion of all federal contracts remains steady. This is in contrast to direct payments and insurance which varies widely over the last decade.



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

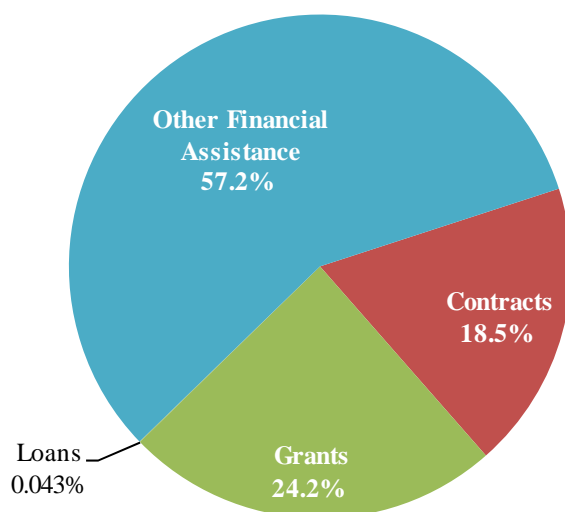
| FY | Massachusetts* | YOY change | United States | YOY change |
|------|----------------|------------|---------------|------------|
| 2003 | \$52.5 | | \$2,327.5 | |
| 2004 | 52.1 | -0.7% | 2,366.3 | 1.7% |
| 2005 | 53.9 | 3.4% | 2,491.2 | 5.3% |
| 2006 | 58.5 | 8.5% | 2,788.9 | 12.0% |
| 2007 | 42.1 | -28.1% | 1,545.1 | -44.6% |
| 2008 | 48.4 | 15.0% | 2,083.7 | 34.9% |
| 2009 | 72.2 | 49.3% | 2,948.4 | 41.5% |
| 2010 | 70.6 | -2.3% | 2,484.5 | -15.7% |
| 2011 | 67.0 | -5.1% | 3,291.3 | 32.5% |
| 2012 | 82.0 | 22.5% | 3,707.5 | 12.6% |
| 2013 | 73.3 | -10.6% | 2,916.9 | -21.3% |
| 2014 | 70.7 | -3.5% | 2,763.7 | -5.3% |

SOURCE: <http://www.usaspending.gov> as of July 21, 2015.

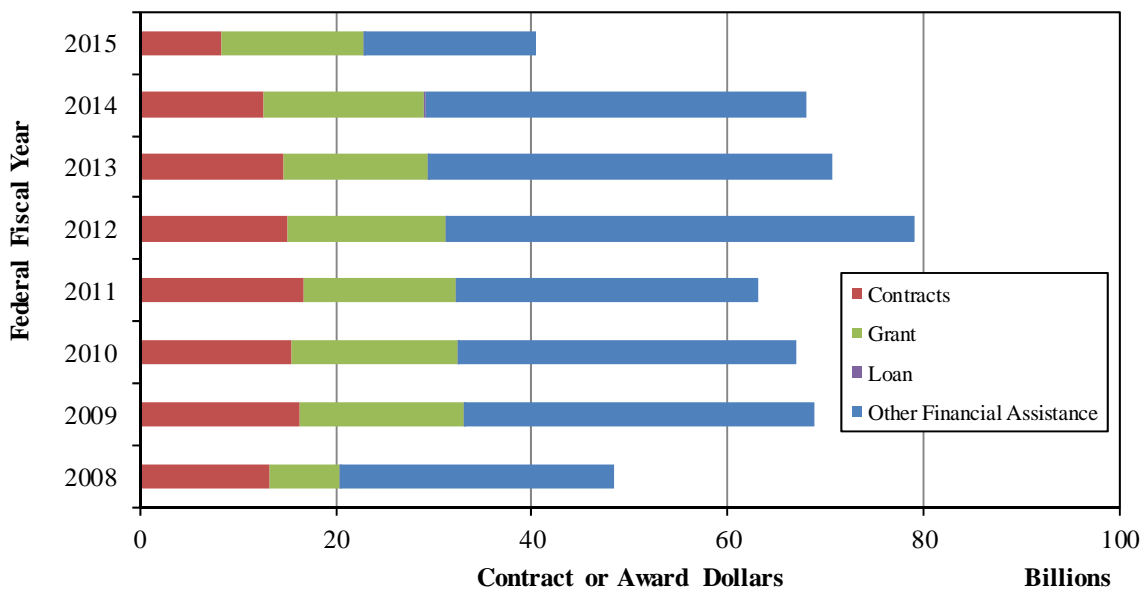
*NOTE: Awardee was located in Massachusetts.

In FY 2014, the largest portion of federal spending in Massachusetts, 57 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 6 percent and Contracts decreased 14% from FY 2013, but Grants increased 11 percent and Loans increased 1183 percent. The graphs below describes 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 2014



Composition of Federal Spending Awards to Massachusetts Recipients

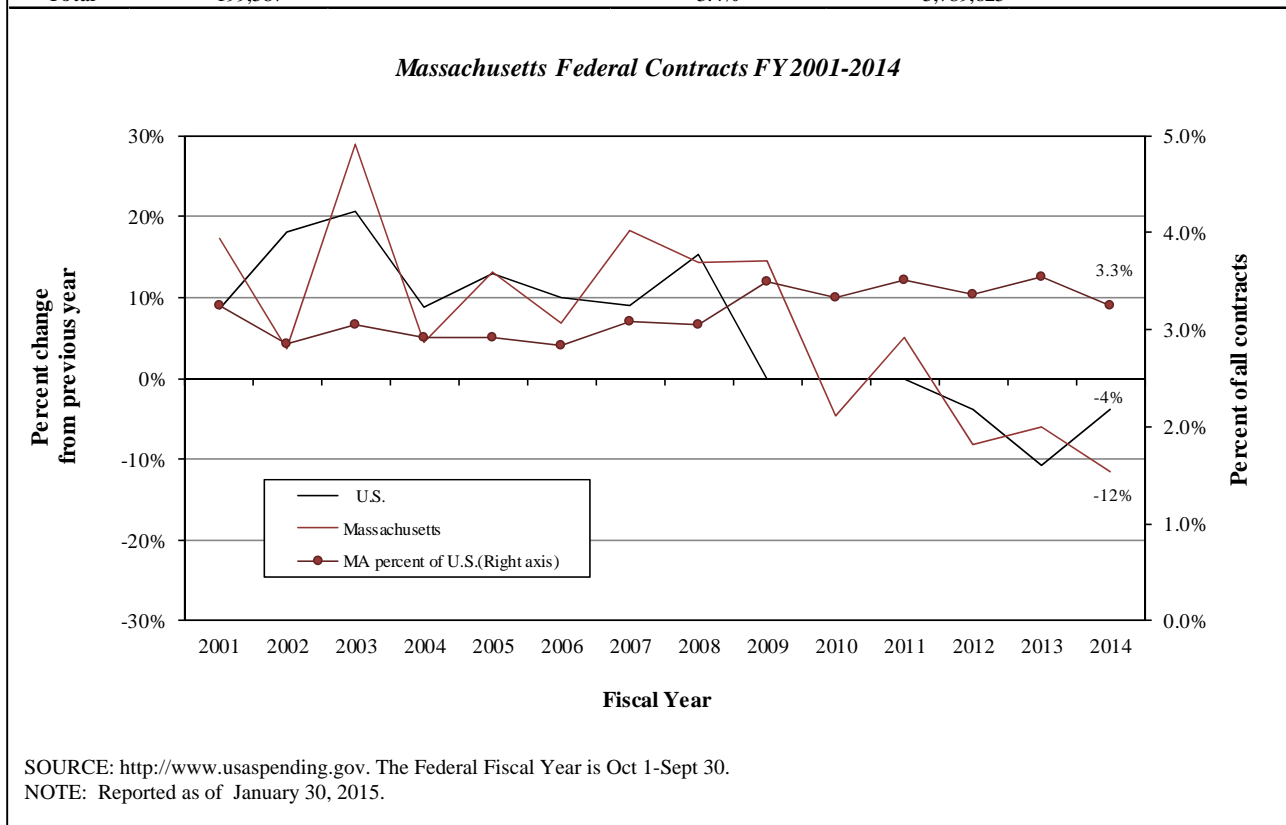


SOURCE: USASpending.gov as of July 21, 2015.

Federal Contracts. The table and graph below compare the annual summary of federal contracts awarded to contractors located in Massachusetts to the total awarded in the U.S. Massachusetts's annual contracts have decreased each of the last three years and it was awarded 24 percent less federal contracts in federal fiscal year 2014 than in 2011. It received 3.3 percent of all federal contracts in 2014, just slightly below its fifteen year average of 3.4 percent.

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 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.

| Federal Contracts Received by Massachusetts Companies as a Percent all Federal Contracts | | | | | |
|---|---------------|--|-------------------|-----------|--|
| <i>(millions of dollars)</i> | | | | | |
| Fiscal Year | Massachusetts | MA percent increase from previous year | MA portion of all | U.S. | U.S. percent increase from previous year |
| 2000 | \$6,173 | | 3.0% | \$205,564 | |
| 2001 | 7,244 | 17.4% | 3.2% | 223,194 | 8.6% |
| 2002 | 7,513 | 3.7% | 2.9% | 263,507 | 18.1% |
| 2003 | 9,690 | 29.0% | 3.0% | 317,998 | 20.7% |
| 2004 | 10,127 | 4.5% | 2.9% | 346,133 | 8.8% |
| 2005 | 11,450 | 13.1% | 2.9% | 391,155 | 13.0% |
| 2006 | 12,222 | 6.7% | 2.8% | 430,519 | 10.1% |
| 2007 | 14,459 | 18.3% | 3.1% | 469,278 | 9.0% |
| 2008 | 16,531 | 14.3% | 3.1% | 541,169 | 15.3% |
| 2009 | 18,932 | 14.5% | 3.5% | 540,475 | -0.1% |
| 2010 | 18,046 | -4.7% | 3.3% | 540,339 | 0.0% |
| 2011 | 18,968 | 5.1% | 3.5% | 539,612 | -0.1% |
| 2012 | 17,406 | -8.2% | 3.4% | 518,369 | -3.9% |
| 2013 | 16,365 | -6.0% | 3.5% | 462,312 | -10.8% |
| 2014 | 14,460 | -11.6% | 3.3% | 444,792 | -3.8% |
| Total | 199,587 | | 3.4% | 5,789,625 | |



Summary of Federal Contracts Performed in Massachusetts

FY 2000 to FY 2015*

Total Dollars: \$172,487,275,396

Number of Transactions: 1,094,407

Top 5 Products or Services Sold

| | |
|---|------------------|
| Gas Turbines & Jet Engines Aircraft | \$13,073,311,779 |
| Precious Metals Primary Forms | \$7,751,406,093 |
| Engineering (Advanced) | \$5,455,326,067 |
| R&D-Electronics & Communications Equipment-Basic Research | \$4,812,288,221 |
| Misc Communication Equipment | \$4,656,774,714 |

Top 5 Prime Award Major Agencies

| | |
|---|-------------------|
| Department of Defense | \$137,661,306,927 |
| Department of the Treasury | \$8,614,138,025 |
| Department of Veterans Affairs | \$4,882,378,796 |
| Department of Transportation | \$3,981,460,800 |
| Department of Health and Human Services | \$3,865,291,775 |

Top 5 Prime Award Sub Agencies

| | |
|-----------------------------|------------------|
| Department of the Army | \$45,505,081,933 |
| Department of the Navy | \$42,836,717,781 |
| Department of the Air Force | \$33,500,350,213 |
| United States Mint | \$7,792,320,759 |
| Missile Defense Agency | \$5,534,136,302 |

Top 5 Prime Award Contractors

| | |
|---------------------------------------|------------------|
| Raytheon Company | \$41,314,009,887 |
| General Dynamics Corporation | \$19,471,456,061 |
| General Electric Company | \$18,635,494,789 |
| Massachusetts Institute of Technology | \$10,829,726,950 |
| Coins 'N Things | \$5,841,784,752 |

Top 5 Contract Sub-Awardees

| | |
|--|---------------|
| BAE Systems Information and Electronic Systems Integration | \$525,180,181 |
| Raytheon Company | \$276,088,944 |
| General Dynamics C4 Systems | \$118,479,982 |
| KEYW Corporation | \$108,639,441 |
| Mercury Systems | \$87,837,077 |

SOURCE: <http://www.usaspending.gov>, Federal Fiscal Year Oct 1-Sept 30.

NOTE: Reported as of January 29, 2015.

Federal Contracts Performed in Massachusetts

Fiscal Year: 2014

Total Dollars: \$12,578,074,924

This amount is 2.8% of all awarded dollars for the fiscal year.

Massachusetts is ranked 9th among states, D.C. and territories for this year.

Number of Transactions: 42,147

Top 5 Products or Services Sold

| | |
|---|---------------|
| Precious Metals Primary Forms | \$992,175,061 |
| R&D- Defense System: Electronics/Communication Equipment (Basic Research) | \$956,326,771 |
| Gas Turbines and Jet Engines, Aircraft, Prime Moving; and Components | \$955,280,101 |
| Support- Professional: Engineering/Technical | \$891,834,510 |
| Miscellaneous Communication Equipment | \$833,936,218 |

Top 5 Prime Award Major Agencies

| | |
|---|-----------------|
| Department of Defense | \$9,453,625,981 |
| Department of the Treasury | \$1,013,953,221 |
| Department of Veterans Affairs | \$500,544,275 |
| Department of Health and Human Services | \$333,242,957 |
| Department of Transportation | \$305,782,570 |

Top 5 Prime Award Sub Agencies

| | |
|-----------------------------|-----------------|
| Department of the Navy | \$2,853,452,324 |
| Department of the Army | \$2,637,740,581 |
| Department of the Air Force | \$2,493,806,540 |
| United States Mint | \$993,000,521 |
| Missile Defense Agency | \$716,992,890 |

Top 5 Prime Award Contractors

| | |
|---------------------------------------|-----------------|
| Raytheon Company | \$3,135,148,266 |
| General Dynamics Corporation | \$1,226,180,762 |
| Massachusetts Institute of Technology | \$977,780,049 |
| General Electric Company | \$967,550,188 |
| Coins 'N Things INC. | \$672,266,448 |

Top 5 Contract Sub-Awardees

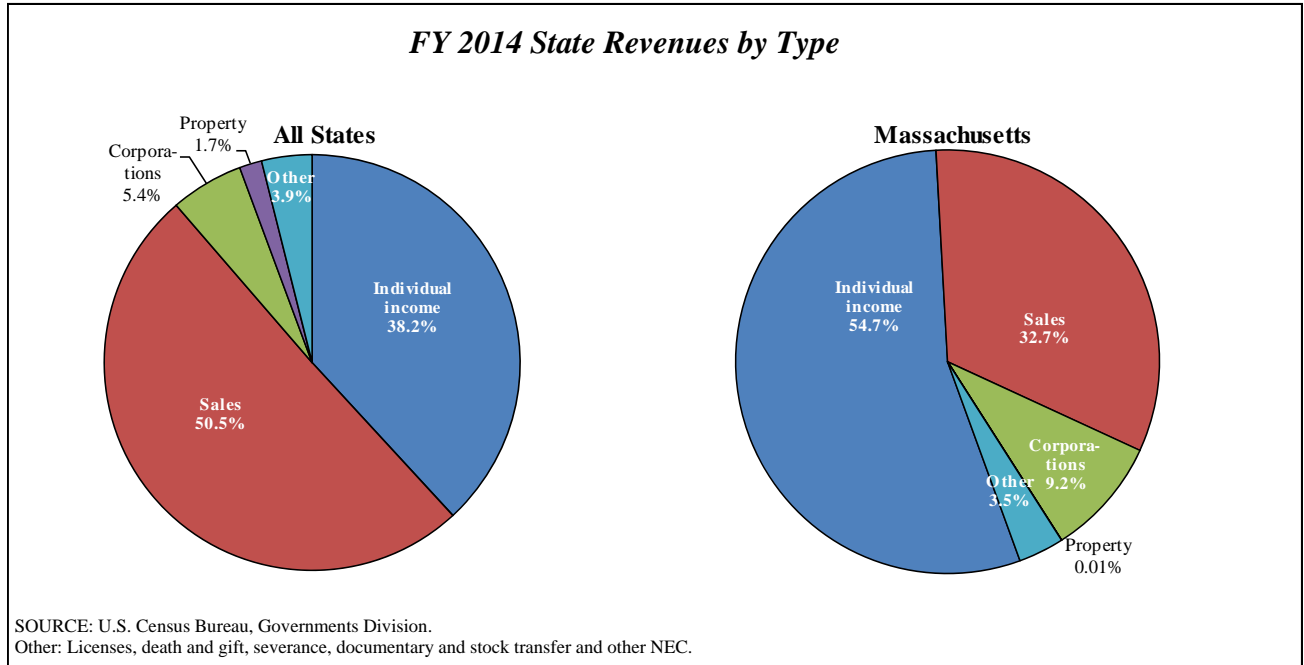
| | |
|---------------------------------|--------------|
| KEYW Corporation, the | \$56,044,366 |
| Charles Stark Draper Laboratory | \$35,923,102 |
| Ranor | \$21,204,112 |
| Sevenson Environmental Services | \$17,876,547 |
| P. H. Mechanical | \$11,560,000 |

SOURCE: <http://www.usaspending.gov>, Federal Fiscal Year Oct 1-Sept 30.

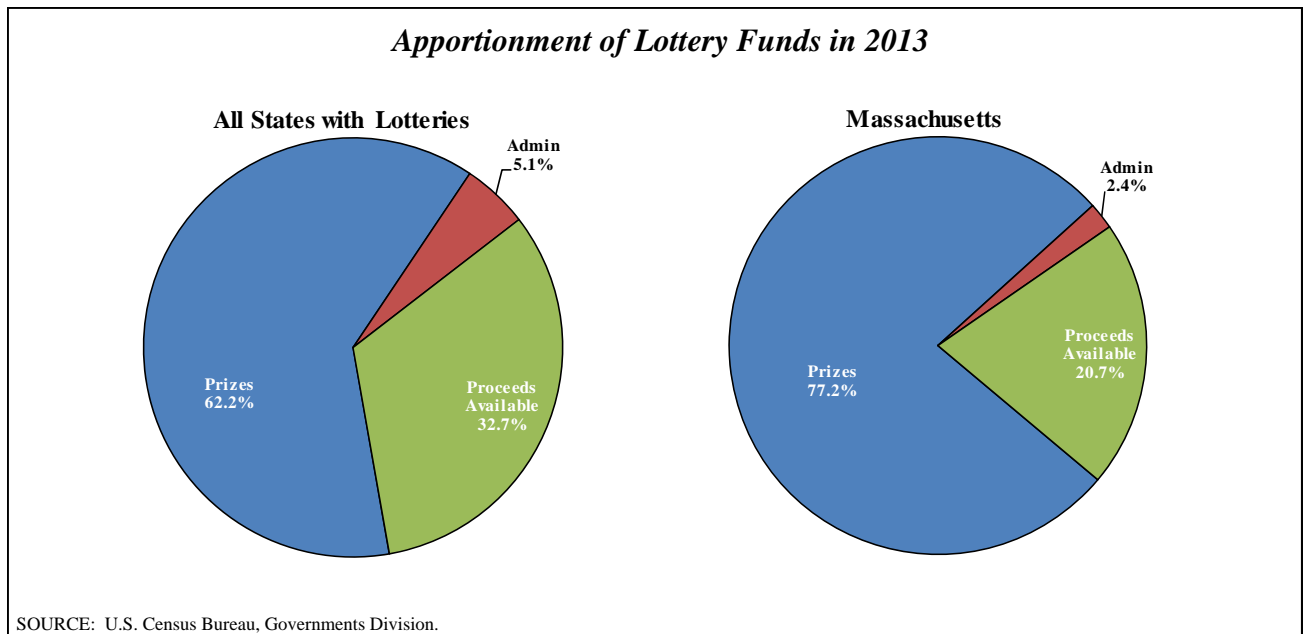
NOTE: Reported as of January 29, 2015.

State Revenues. Taxes collected by all states in FY 2014 totaled \$865.8 billion, 2.3 percent more than FY 2013. Massachusetts collected \$25.2 billion in FY 2014, 5.6 percent more than in FY 2013. Massachusetts ranked 9th in the nation in total taxes collected in 2014 up from 10th in 2013.

In fiscal year 2014, the average state collected 83.4 percent of its revenue from individual income tax and sales and gross receipts tax. 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 35.8 percent of Massachusetts's \$1.3 billion in new revenue in 2014 and 95.7 percent of all U.S. state's \$19.5 billion in new revenue. Seven states do not have an individual income tax.



State Lottery Proceeds. Massachusetts ranked third in revenue, \$4.57 billion, and prize money awarded, \$3.52 billion, among the 43 states with lotteries in FY 2013. Massachusetts lottery revenue increased 2.5 percent from the previous year.

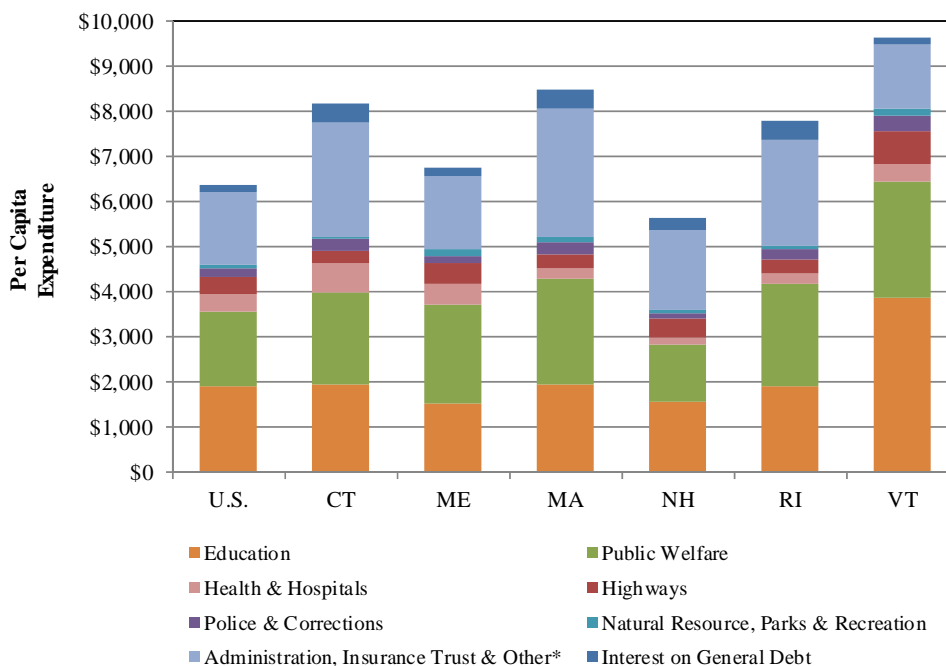


State Expenditures. The following table and graph depict fiscal 2013 per capita state government general expenditures by category for the six New England states and the U.S. average state expenditure. Massachusetts ranked 6th in the nation in per capita expenditures, \$8,483 in 2013, while it ranked 6th and spent \$8,500 in 2012. This represents a 0.2 percent decrease in per capita expenditures from 2012 to 2013, with the largest per capita dollar increase in the Public Welfare function.

| General expenditures, by function | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Education | \$1,183 | \$1,346 | \$1,401 | \$1,640 | \$1,649 | \$1,735 | \$1,814 | \$1,867 | \$1,948 | \$1,944 |
| Public Welfare | \$1,647 | \$1,719 | \$1,843 | \$1,877 | \$1,952 | \$2,030 | \$2,103 | \$2,227 | \$2,285 | \$2,325 |
| Health & Hospitals | \$172 | \$177 | \$187 | \$227 | \$236 | \$237 | \$235 | \$246 | \$241 | \$245 |
| Highways | \$471 | \$276 | \$261 | \$267 | \$346 | \$294 | \$298 | \$289 | \$310 | \$300 |
| Police & Corrections | \$215 | \$222 | \$248 | \$274 | \$293 | \$294 | \$279 | \$274 | \$277 | \$288 |
| Natural Resource, Parks & Recreation | \$90 | \$76 | \$81 | \$87 | \$89 | \$96 | \$91 | \$89 | \$81 | \$94 |
| Administration, Insurance Trust & Other* | \$1,815 | \$1,660 | \$1,690 | \$1,890 | \$1,901 | \$2,126 | \$2,558 | \$2,488 | \$2,894 | \$2,854 |
| Interest on General Debt | \$401 | \$435 | \$487 | \$518 | \$558 | \$561 | \$522 | \$474 | \$464 | \$433 |
| Total | \$5,994 | \$5,911 | \$6,198 | \$6,779 | \$7,023 | \$7,373 | \$7,901 | \$7,954 | \$8,500 | \$8,483 |

| General expenditures, by function | U.S. | CT | ME | MA | NH | RI | VT |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Education | \$1,895 | \$1,952 | \$1,520 | \$1,944 | \$1,563 | \$1,889 | \$3,842 |
| Public Welfare | \$1,642 | \$2,035 | \$2,178 | \$2,325 | \$1,271 | \$2,277 | \$2,600 |
| Health & Hospitals | \$413 | \$623 | \$449 | \$245 | \$143 | \$214 | \$377 |
| Highways | \$355 | \$294 | \$463 | \$300 | \$422 | \$303 | \$727 |
| Police & Corrections | \$201 | \$251 | \$160 | \$288 | \$127 | \$242 | \$361 |
| Natural Resource, Parks & Recreation | \$85 | \$63 | \$148 | \$94 | \$75 | \$84 | \$153 |
| Administration, Insurance Trust & Other* | \$1,607 | \$2,532 | \$1,645 | \$2,854 | \$1,735 | \$2,327 | \$1,394 |
| Interest on General Debt | \$146 | \$399 | \$175 | \$433 | \$270 | \$451 | \$150 |
| Total | \$6,345 | \$8,149 | \$6,738 | \$8,483 | \$5,607 | \$7,788 | \$9,604 |
| 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)*

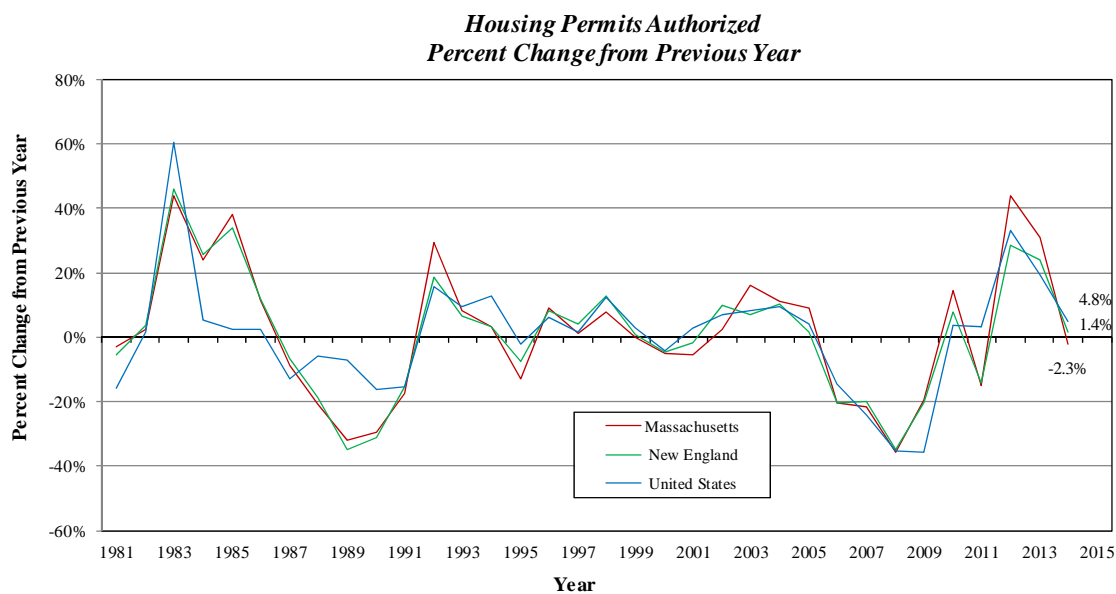


SOURCE: U.S. Census Bureau, Governments Division. *Other includes utility, liquor store, other and unallocable expenditures. Update February 3, 2015

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.

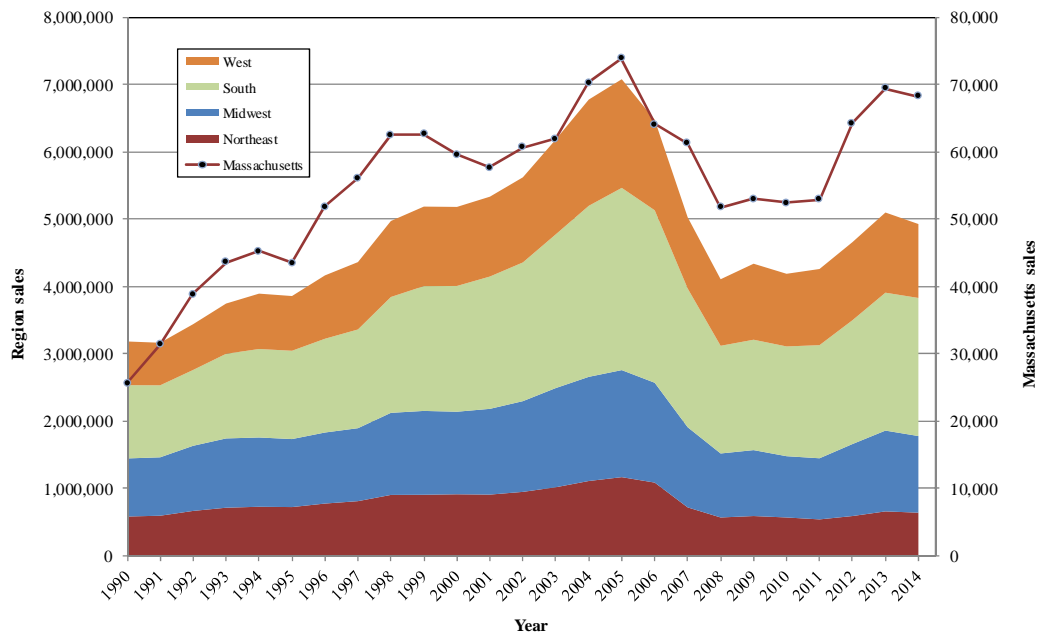
| <i>Housing Permits Authorized</i> | | | | | | |
|-----------------------------------|---------------|------------------------------|-------------|------------------------------|---------------|------------------------------|
| Year | Massachusetts | | New England | | United States | |
| | Total Units | 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 | 14,237 | -2.3% | 29,042 | 1.4% | 1,038,491 | 4.8% |



SOURCE: U.S. Census Bureau. Reported data plus data imputed for non-reporters & partial reporters. January 2015. 2014 data is preliminary.

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.

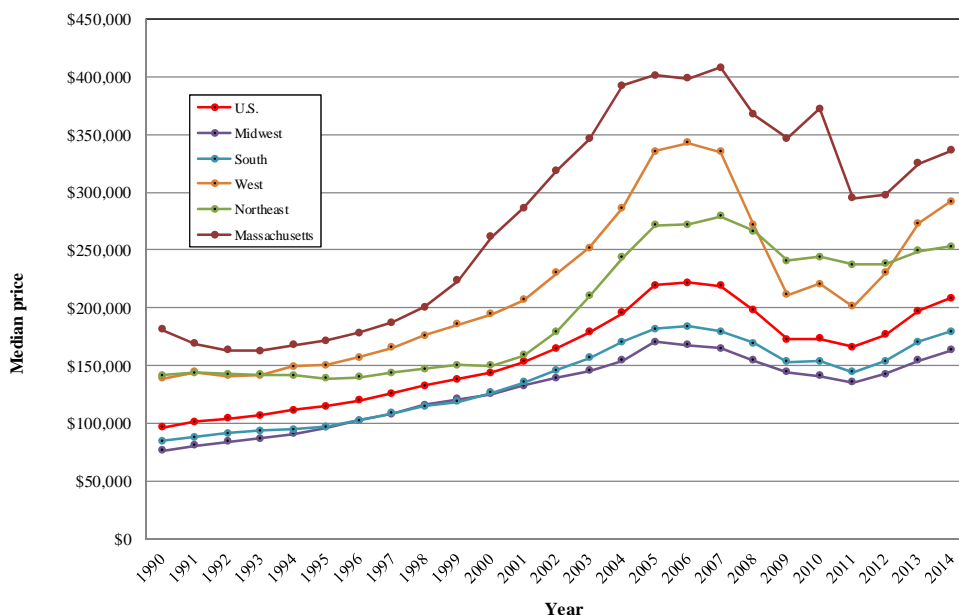
| <i>Sales of Existing Homes United States, National Regions and Massachusetts</i> | | | | | | |
|--|-------------|------------------|----------------|--------------|-------------|----------------------|
| Year | U.S. | Northeast | Midwest | South | West | Massachusetts |
| 1990 | 3,184,000 | 583,000 | 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 | 69,423 |
| 2014 | 4,930,000 | 640,000 | 1,140,000 | 2,050,000 | 1,100,000 | 68,262 |



SOURCE: National Association of Realtors.

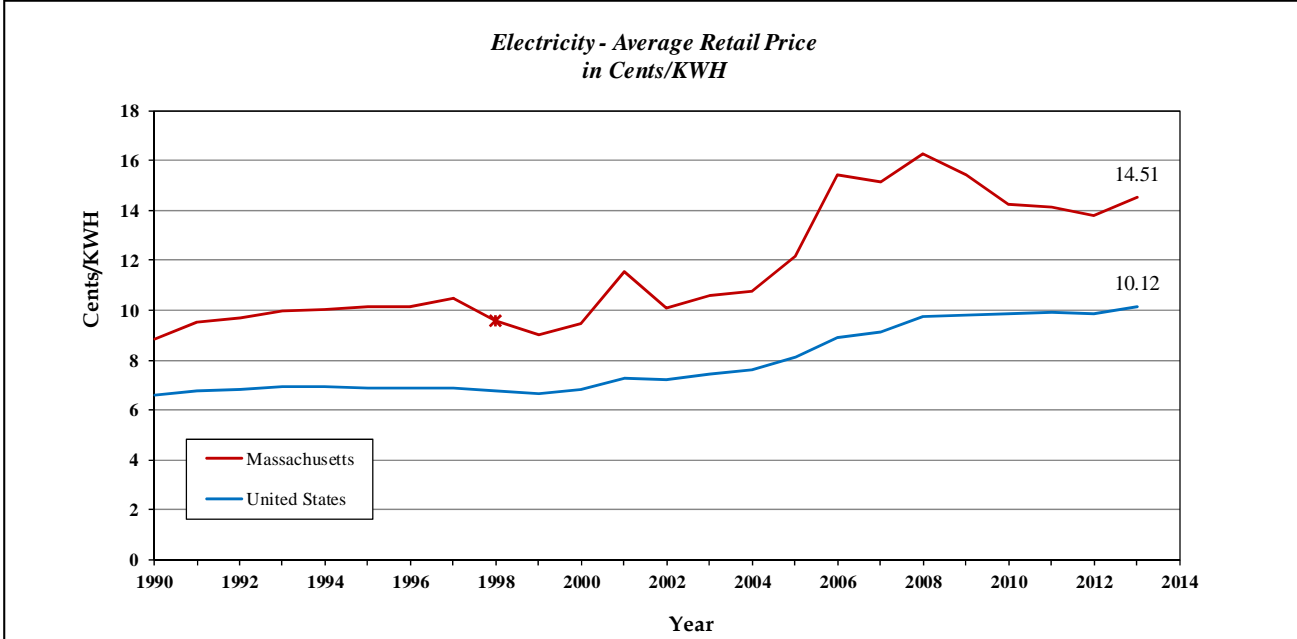
Home prices. Massachusetts sales prices are much higher than the national median but they are 20 percent less than the 2007 peak.

| <i>Median Sales Price of Existing Homes United States, National Regions and Massachusetts</i> | | | | | | |
|---|-----------|-----------|-----------|-----------|-----------|---------------|
| 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 | \$208,500 | \$253,200 | \$163,200 | \$179,400 | \$292,000 | \$336,000 |

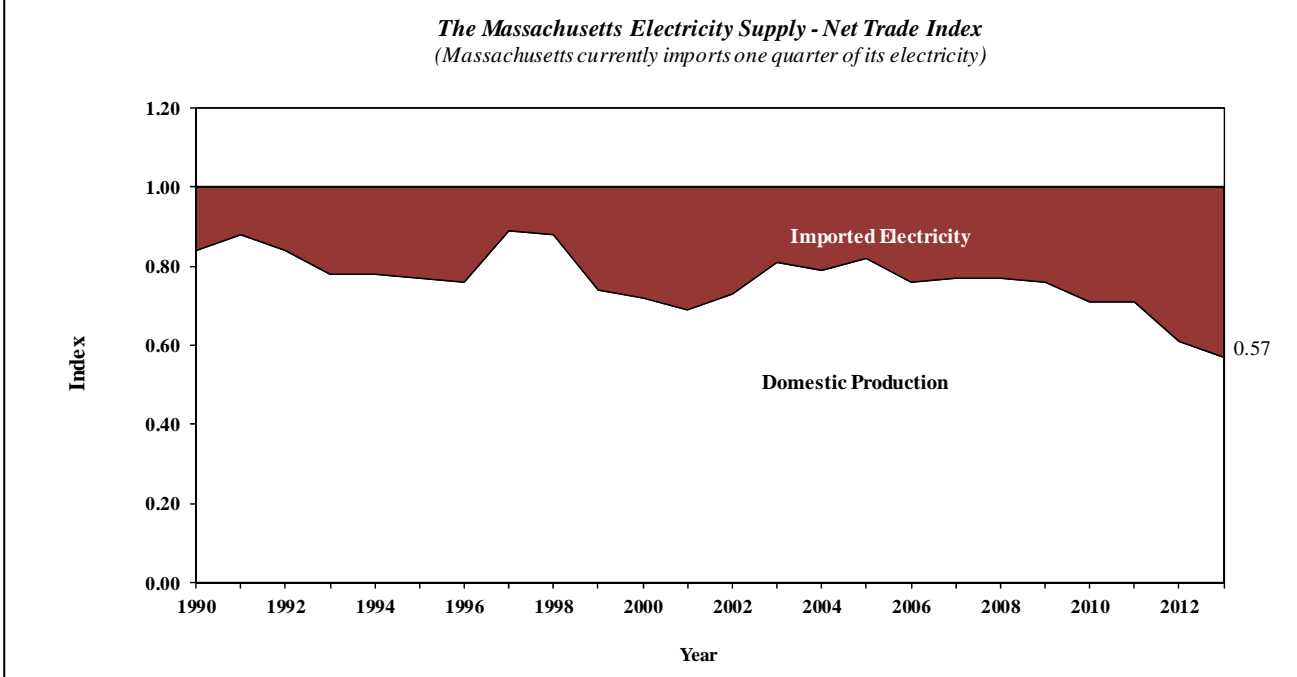


SOURCE: National and Massachusetts Associations of Realtors.

Electricity Prices, Supply and Capacity by Source. Massachusetts had the sixth highest electric rate in the country in 2013, 14.57 cents per kilowatt hour, while the U.S. average was 10.12. This was an increase of 5.2 percent for Massachusetts and an increase of 2.8 percent for the U.S. from the previous year. Massachusetts electric utilities generated \$8.0 billion in revenue in 2013. This was 5.2 percent less than in 2012, while they sold 0.1 percent less electricity. The Massachusetts Net Electricity Trade Index, which represents the state's electricity self-sufficiency, was 0.57 in 2013, the latest data available. This means that Massachusetts imported 43 percent of its electricity supply, 26.0 million megawatt hours, from out-of-state. In 2013, 56.8 percent of Massachusetts electricity was generated by burning natural gas, our top fuel source for power generation.

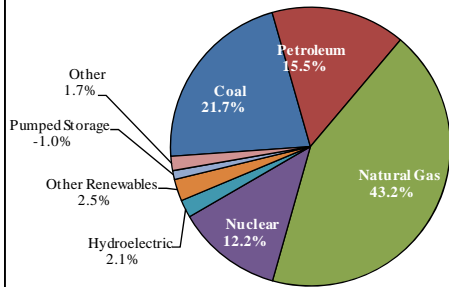


SOURCE: U.S. Dept. of Energy, http://www.eia.doe.gov/cneaf/electricity/st_profiles/massachusetts.html.
 *NOTE: Massachusetts restructured the electric utility industry, to establish consumer electricity rate savings by March 1, 1998.
<https://malegislature.gov/Laws/SessionLaws/Acts/1997/Chapter164>

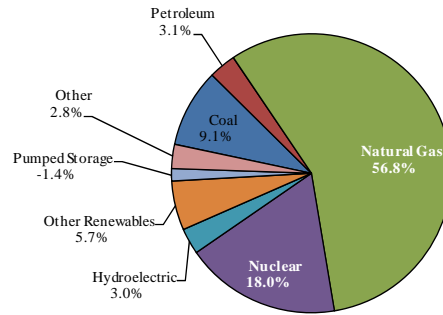


SOURCE: U.S. Dept. of Energy, http://www.eia.doe.gov/cneaf/electricity/st_profiles/massachusetts.html.

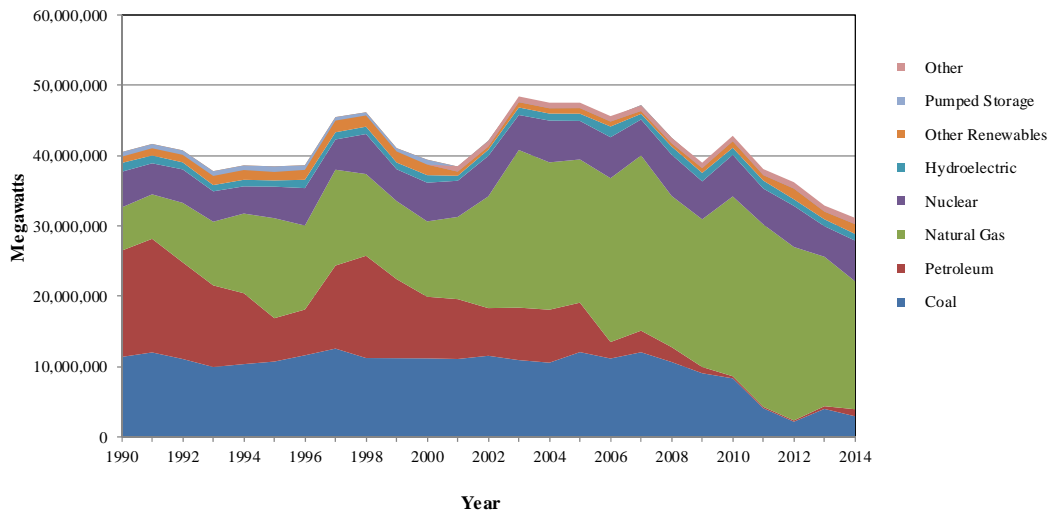
Electric Power Generated in Massachusetts by Primary Energy Source 2004



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 museum and attraction attendance, 11.3 million visitors in 2014 compared to 2013. Museum attendance was down 1.2 percent in April 2015 compared to April 2014. For April FY 2015 year-to-date, net room occupancy tax collections totaled \$187.7 million, a 10.5 percent increase from the same period in FY2014.

Transportation and Warehousing. Massachusetts's major air and seaports are managed by the Massachusetts Port Authority (Massport), an independent public authority. Based on preliminary total passenger volume in 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. Massport reported that as of June 2015 year-to-date, total airport flight operations were down 0.3 percent and total airport passengers were up 4.4 percent from the same period in 2014. According to the FAA, in calendar year 2014, preliminary data ranked Logan Airport 25th in the nation in total air cargo volume. In 2014, Massport reported the airport handled 585 million pounds of cargo; a 8.8 percent increase from 2013. Massport reported that as of June 2015 year-to-date, the combined cargo volume was up 5.0 percent and total express mail was up 0.8 percent from the same period in 2014. Please refer to the Aviation Activity charts on the following page.

Massport's Port of Boston properties processed 181,612 full TEUs (twenty-foot equivalent units) of containerized cargo in 2014, an increase of 10.0 percent from calendar year 2013. It also processed 60,048 automobiles, an increase of 15.0 percent and 316,851 cruise passengers, a 17.0 percent decrease, compared to 2013.

The Army Corps of Engineers reported Massachusetts total waterborne cargo shipped or received in 2012 decreased by 1.8 percent to 15.1 million short tons from 2011. Waterborne cargo in New England decreased 12.7 percent while the U.S. decreased 2.6 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 | 15,425,869 |
| 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 |
| Marthas 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 | 5,483 |
| 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 | 15,815,646 |

| 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 | 913,017,225 |

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% | 4.2% |
| 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% |
| Marthas 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% | -56.6% |
| Total | 2.9% | 1.6% | -7.0% | -2.6% | 6.2% | 5.6% | 0.5% | 3.5% | 4.2% |

| 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% | 5.3% |

SOURCE: Federal Aviation Administration June 25, 2015.

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

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

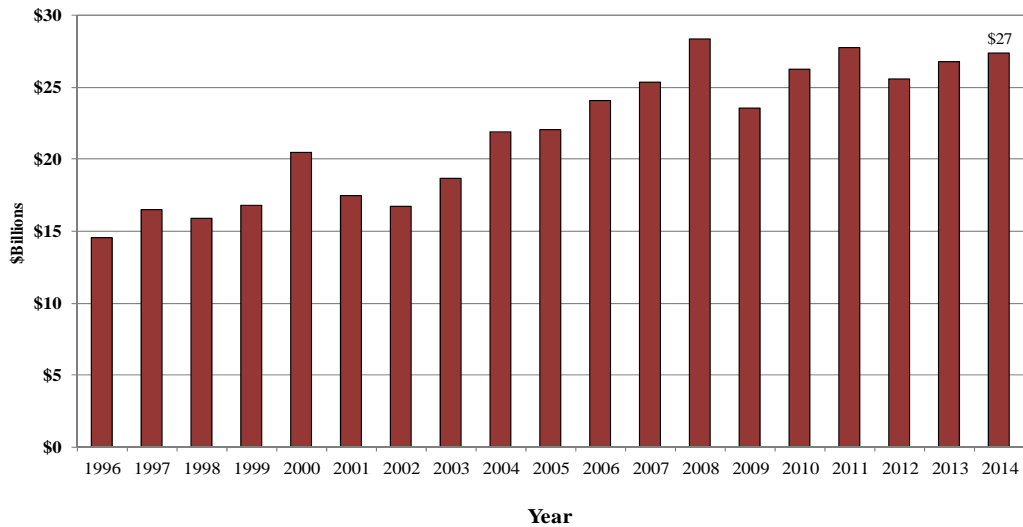
| State | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| U.S. total | 2,551,939 | 2,527,622 | 2,588,440 | 2,563,972 |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

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 |
|---------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| U.S. total | 6.6% | -1.0% | 2.4% | -0.9% | -3.4% | -10.8% | 5.6% | 1.4% | -2.6% | -1.4% |
| Massachusetts | 3.7% | -9.4% | -4.9% | 2.3% | -7.3% | -3.8% | -9.4% | -32.0% | 12.2% | 9.1% |
| Maine | 2.4% | -0.3% | -13.1% | -4.5% | -7.8% | -7.1% | -9.1% | -1.2% | -26.7% | -6.9% |
| Connecticut | 8.1% | -2.3% | -1.4% | 4.2% | -9.7% | -7.9% | -3.2% | -20.0% | -18.0% | 6.8% |
| Rhode Island | 3.7% | 12.4% | 0.4% | 1.5% | -6.0% | -20.1% | -1.1% | 0.8% | -9.7% | 19.9% |
| New Hampshire | -3.5% | 9.6% | -8.2% | -16.5% | -4.8% | -6.5% | -17.3% | 12.9% | -27.7% | 10.7% |
| Vermont | - | - | - | - | - | - | - | - | - | - |
| New England | 3.7% | -1.9% | -6.5% | -0.5% | -7.7% | -7.8% | -7.4% | -14.5% | -12.7% | 5.7% |

SOURCE: Army Corps of Engineers, Waterborne Commerce Statistics Center (WCSC) June 2015, <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 2014 exports, in millions)

| Country | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Canada | \$2,917 | \$2,927 | \$3,166 | \$3,480 | \$3,907 | \$3,086 | \$3,244 | \$3,796 | \$3,474 | \$3,734 | \$3,631 |
| United Kingdom | \$1,508 | \$1,628 | \$1,972 | \$2,306 | \$3,504 | \$4,049 | \$3,214 | \$3,285 | \$2,589 | \$1,408 | \$2,349 |
| Mexico | \$755 | \$782 | \$824 | \$996 | \$1,163 | \$902 | \$1,273 | \$1,437 | \$1,609 | \$1,860 | \$2,320 |
| China | \$894 | \$884 | \$1,291 | \$1,375 | \$1,563 | \$1,372 | \$2,195 | \$2,088 | \$1,877 | \$1,977 | \$2,291 |
| Japan | \$1,814 | \$1,893 | \$2,287 | \$2,166 | \$2,427 | \$1,717 | \$2,045 | \$2,044 | \$1,993 | \$1,763 | \$1,858 |
| Germany | \$2,516 | \$2,151 | \$2,515 | \$2,370 | \$2,489 | \$1,750 | \$1,872 | \$2,046 | \$1,803 | \$1,837 | \$1,849 |
| Netherlands | \$2,505 | \$3,000 | \$2,696 | \$2,215 | \$2,675 | \$1,982 | \$1,695 | \$1,107 | \$1,077 | \$1,290 | \$1,328 |
| Korea, Republic Of | \$650 | \$803 | \$875 | \$821 | \$666 | \$624 | \$893 | \$1,030 | \$1,030 | \$902 | \$993 |
| Hong Kong | \$523 | \$507 | \$561 | \$579 | \$590 | \$525 | \$668 | \$751 | \$709 | \$1,762 | \$963 |
| Switzerland | \$278 | \$269 | \$237 | \$211 | \$446 | \$362 | \$471 | \$563 | \$434 | \$1,281 | \$804 |
| Total Exports, Top Destinations | \$14,359 | \$14,842 | \$16,425 | \$16,519 | \$19,431 | \$16,368 | \$17,569 | \$18,148 | \$16,594 | \$17,815 | \$18,385 |
| All other countries | \$7,540 | \$7,210 | \$7,632 | \$8,833 | \$8,938 | \$7,225 | \$8,736 | \$9,723 | \$9,020 | \$9,009 | \$8,979 |
| Total Exports | \$21,899 | \$22,052 | \$24,057 | \$25,351 | \$28,369 | \$23,593 | \$26,305 | \$27,871 | \$25,615 | \$26,823 | \$27,364 |
| Change from Prior Year | 17.4% | 0.7% | 9.1% | 5.4% | 11.9% | -16.8% | 11.5% | 6.0% | -8.1% | 4.7% | 2.0% |

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 |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Computer and Electronic Products | \$7,519 | \$7,012 | \$7,513 | \$7,711 | \$7,821 | \$6,600 | \$7,488 | \$7,704 | \$7,310 | \$7,268 | \$8,151 |
| Chemicals | \$4,910 | \$5,285 | \$5,189 | \$5,258 | \$5,515 | \$3,863 | \$3,626 | \$3,364 | \$3,448 | \$3,614 | \$3,508 |
| Miscellaneous Manufactured Commodities | \$1,930 | \$2,114 | \$2,240 | \$2,319 | \$3,120 | \$2,737 | \$3,046 | \$3,186 | \$3,054 | \$3,287 | \$3,062 |
| Machinery, Except Electrical | \$2,447 | \$2,311 | \$2,739 | \$2,881 | \$2,615 | \$2,008 | \$3,454 | \$3,643 | \$3,388 | \$3,070 | \$2,942 |
| Primary Metal Manufacturing | \$423 | \$405 | \$647 | \$982 | \$2,052 | \$2,735 | \$2,398 | \$2,794 | \$1,947 | \$2,841 | \$2,392 |
| Transportation Equipment | \$461 | \$485 | \$557 | \$932 | \$1,237 | \$1,107 | \$1,059 | \$1,119 | \$1,106 | \$1,118 | \$1,249 |
| Electrical Equipment, Appliances, and Component | \$752 | \$810 | \$871 | \$769 | \$624 | \$508 | \$558 | \$679 | \$718 | \$801 | \$1,192 |
| Fabricated Metal Products, Nesoi | \$621 | \$664 | \$679 | \$615 | \$721 | \$605 | \$809 | \$864 | \$733 | \$805 | \$787 |
| Waste and Scrap | \$326 | \$330 | \$597 | \$849 | \$1,373 | \$666 | \$654 | \$1,101 | \$784 | \$743 | \$755 |
| Plastics and Rubber Products | \$404 | \$470 | \$530 | \$582 | \$587 | \$563 | \$751 | \$810 | \$676 | \$679 | \$752 |
| Total Exports, Top Massachusetts Industries | \$19,792 | \$19,884 | \$21,563 | \$22,899 | \$25,664 | \$21,392 | \$23,842 | \$25,264 | \$23,163 | \$24,227 | \$24,791 |
| 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 |
| Total Exports | \$21,899 | \$22,052 | \$24,057 | \$25,351 | \$28,369 | \$23,593 | \$26,305 | \$27,871 | \$25,615 | \$26,823 | \$27,364 |

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.iee.org>

U.S. Patent Office

<http://www.uspto.gov>