## ECONOMIC INFORMATION—QUARTER 4, FY2010

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## EXHIBIT A

## ECONOMIC INFORMATION - Quarter 4, FY 2010

The information in this section was prepared by the Massachusetts State Data Center (MassSDC) at the University of Massachusetts Donahue Institute and 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 demographic information and statistical 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 30, 2010. Information in the text, tables, charts, and graphs is current as of July 1, 2010.** 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  |               |               |
|---|---------------|---------------|
| Population (p. A-2)   | Massachusetts | United States |
| Estimated Percent Change in Population, April 1, 2000–July 1, 2009  | 3.9%          | 9.1%          |
| Personal Income, Consumer Prices, and Poverty (p. A-7)  |               |               |
| Per Capita Personal Income, 2009p   | \$49,875      | \$39,138      |
| Average Annual Pay, All Industries, 2009 (p)  | \$56,239      | \$45,551      |
| Percent Change in CPI-U*, 2008-2009   | -0.7%         | -0.4%         |
| Percent Change in CPI-U*, May 2009 - May 2010   | 2.7%          | 2.0%          |
| Poverty Rate, 2006-2008 Average   | 11.5%         | 12.7%         |
| Average Weekly Earnings, Manufacturing Production Workers: 2009   | \$826.80      | \$725.87      |
| Percent Change from previous year   | 0.2%          | 0.2%          |
| Employment (p. A-16)  |               |               |
| Percent Change in Nonfarm Payroll Employment (Not Seasonally Adjusted),   |               |               |
| May 2009-May 2010p  | 0.0%          | -0.4%         |
| Unemployment Rate, 2009   | 8.4%          | 9.3%          |
| Unemployment Rate, May 2010 (seasonally adjusted)   | 9.2%          | 9.7%          |
| Economic Base and Performance (p. A-28)   |               |               |
| Percent Change in Gross Domestic Product, 2007-2008   | 1.9%          | 0.7%          |
| Percent Change in International Exports, 2008-2009  | -16.7%        | -18.7%        |
| Percent Change in Housing Permits Authorized, 2008-2009   | -19.6%        | -35.6%        |
| Education (p. A-22)   |               |               |
| Expenditure Per Pupil K-12 Public, 2008   | \$13,454      | \$10,259      |
| Percent of Adults with a Bachelor's Degree or higher, 2008  | 38.1%         | 27.7%         |
| *NOTE: Percent changes in the Consumer Price Index for All Urban Consumers (CF<br>Boston-Worcester-Lawrence, MA-NH-ME-CT CMSA & the United States. p = pr | ,             |               |

#### EXHIBIT A-1 Quarter 4, FY 2010

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 twenty-five 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 twenty-five 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 and with the exception of the recession of the early 1990s and a seventeen month stretch between 2006 and 2007, considerably lower unemployment rates in Massachusetts than in the United States since 1980. While the state unemployment rate fell to 9.2 percent in May 2010, the state has seen a slower rise in unemployment than the nation as a whole. In 2008, 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, economic base and performance, and human resources 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, 2009 to be 841.0 persons per square mile, as compared to 86.8 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, 99.6 percent of the state's population lived 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, 2009 population estimated at 645,169, or 9.8 percent of the state's population. Boston is the hub of the seven-county Boston-Cambridge-Quincy, MA-NH Metropolitan Statistical Area (MSA), which includes the two southeastern New Hampshire counties, and which had a total population in 2009 estimated at 4,588,680 or 31.8 percent of the total New England population. The three county Boston-Quincy, MA Metropolitan division is the largest component of that MSA, with a total population in 2009 estimated at 1,918,227.

The second largest MSA in the state is the Worcester, MA MSA, with a 2009 population estimated at 803,701. The city of Worcester, situated approximately 40 miles west of Boston with a 2009 population estimated at 182,421, is the second largest city in New England as well as the second largest in the state. As a major medical and education center, the Worcester area is home to 18 patient care facilities, including the University of Massachusetts Medical School, and thirteen other colleges and universities.

The third largest MSA in Massachusetts is the three-county Springfield, MA MSA, with a 2009 population estimated at 698,903. Springfield, the third largest city in the Commonwealth with a 2009 population estimated at 155,575, 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 System, Big Y Supermarkets, MassMutual Financial Group, and Hasbro Games (Milton Bradley). In addition, Springfield is home to three independent colleges.

As the following graph and table indicate, the population in Massachusetts generally grows at a similar rate 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 2009, the Massachusetts population has only grown by 3.9 percent since Census 2000; fourteen states have grown more slowly.



The following table compares the population level and percentage change in the population of Massachusetts with those of the New England states and the United States.

|      |         | -       | n thousa | 9 <b>72-2009</b><br>nds) |          |         |
|------|---------|---------|----------|--------------------------|----------|---------|
|      | Massaci | husetts | New En   | gland                    | United S | States  |
|      |         | Percent |          | Percent                  |          | Percent |
| Year | Total   | Change  | Total    | Change                   | Total    | Change  |
| 1972 | 5,760   | 0.4%    | 12,082   | 0.7%                     | 209,284  | 1.2%    |
| 1973 | 5,781   | 0.4%    | 12,140   | 0.5%                     | 211,357  | 1.0%    |
| 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 | 6,363   | 0.7%    | 13,953   | 0.8%                     | 282,172  | 1.1%    |
| 2001 | 6,412   | 1.0%    | 14,052   | 0.9%                     | 285,082  | 1.3%    |
| 2002 | 6,441   | 0.5%    | 14,135   | 0.6%                     | 287,804  | 1.0%    |
| 2003 | 6,452   | 0.2%    | 14,192   | 0.4%                     | 290,326  | 0.9%    |
| 2004 | 6,451   | 0.0%    | 14,216   | 0.2%                     | 293,046  | 0.9%    |
| 2005 | 6,453   | 0.0%    | 14,227   | 0.1%                     | 295,753  | 0.9%    |
| 2006 | 6,466   | 0.2%    | 14,259   | 0.2%                     | 298,593  | 1.0%    |
| 2007 | 6,499   | 0.5%    | 14,298   | 0.3%                     | 301,580  | 1.0%    |
| 2008 | 6,544   | 0.7%    | 14,363   | 0.5%                     | 304,375  | 0.9%    |

SOURCE: United States Department of Commerce, Bureau of the Census. 1980 figures are census counts as of April 1, 1980; figures for all other years shown are estimates as of July 1.

EXHIBIT A-4 Quarter 4, FY 2010

The next twenty-five 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.

|      |       | Pr      | •     |           | -           | n by Age G | roup  |          |               |
|------|-------|---------|-------|-----------|-------------|------------|-------|----------|---------------|
|      |       |         |       | 2000-2030 | (in thousan | ıds)       |       |          |               |
| Year | 0-4   | 5-17    | 18-24 | 25-44     | 45-64       | 65-84      | 85+   | All Ages | Mediaı<br>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          |

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.

Interim Population Projections through 2030 released April 21, 2005 by the Population Division, Bureau of the Census, United States Department of Commerce.



Interim Population Projections through 2030 released April 21, 2005 by the Population Division, Bureau of the Census, United States Department of Commerce.



EXHIBIT A-6 Quarter 4, FY 2010

#### PERSONAL INCOME, CONSUMER PRICES, AND POVERTY

*Personal Income*. Real per capita income levels in Massachusetts increased faster than the national average between 1994 and 1997. In 2000, Massachusetts had its highest per capita income growth in 16 years, exceeding the national growth rate by 2.4 percentage points. From 2001 to 2003, real income in both Massachusetts and the United States declined, with steeper declines in Massachusetts. However, real income levels in Massachusetts remained well above the national average. In 2004 and 2005, income growth was comparable in the state and the nation. In 2006 and 2007, income in the state grew faster than in the nation. In 2008, real income fell in both the state and the nation. Only the District of Columbia, Connecticut, and New Jersey have had higher levels of per capita personal income. 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 1970-2009.

|       |        |   | Per Capite | a Personal I | ncome, 1 | 970-2009p                        |       |       |       |
|-------|--------|---|------------|--------------|----------|----------------------------------|-------|-------|-------|
|       |        | minal Income Real Income<br>urrent dollars) (in 2009 dollars) |            |              |          | Percent Change<br>in Real Income |       |       |       |
| Year  | MA     | N.E.  | U.S.       | MA           | N.E.     | U.S.                             | MA    | N.E.  | U.S.  |
| 1970  | 4,472  | 4,438   | 4,084      | 26,006       | 25,446   | 22,582                           | 0.5%  | -0.3% | 0.7%  |
| 1971  | 4,743  | 4,674   | 4,340      | 26,275       | 25,462   | 22,990                           | 1.0%  | 0.1%  | 1.8%  |
| 1972  | 5,102  | 5,025   | 4,717      | 27,294       | 26,312   | 24,210                           | 3.9%  | 3.3%  | 5.3%  |
| 1973  | 5,541  | 5,477   | 5,230      | 27,978       | 27,013   | 25,271                           | 2.5%  | 2.7%  | 4.4%  |
| 1974  | 6,011  | 5,954   | 5,708      | 27,446       | 26,412   | 24,839                           | -1.9% | -2.2% | -1.7% |
| 1975  | 6,453  | 6,376   | 6,172      | 27,035       | 26,206   | 24,612                           | -1.5% | -0.8% | -0.9% |
| 1976  | 6,993  | 6,954   | 6,754      | 27,247       | 27,031   | 25,465                           | 0.8%  | 3.1%  | 3.5%  |
| 1977  | 7,611  | 7,586   | 7,402      | 28,198       | 27,926   | 26,205                           | 3.5%  | 3.3%  | 2.9%  |
| 1978  | 8,422  | 8,407   | 8,243      | 29,652       | 29,125   | 27,123                           | 5.2%  | 4.3%  | 3.5%  |
| 1979  | 9,371  | 9,381   | 9,138      | 29,928       | 29,553   | 27,003                           | 0.9%  | 1.5%  | -0.4% |
| 1980  | 10,570 | 10,598  | 10,091     | 29,916       | 29,569   | 26,273                           | 0.0%  | 0.1%  | -2.7% |
| 1981  | 11,744 | 11,800  | 11,209     | 29,907       | 29,739   | 26,455                           | 0.0%  | 0.6%  | 0.7%  |
| 1982  | 12,892 | 12,833  | 11,901     | 31,559       | 30,722   | 26,458                           | 5.5%  | 3.3%  | 0.0%  |
| 1983  | 13,942 | 13,770  | 12,583     | 32,659       | 31,644   | 27,104                           | 3.5%  | 3.0%  | 2.4%  |
| 1984  | 15,639 | 15,342  | 13,807     | 34,919       | 33,671   | 28,509                           | 6.9%  | 6.4%  | 5.2%  |
| 1985  | 16,798 | 16,440  | 14,637     | 35,896       | 34,782   | 29,184                           | 2.8%  | 3.3%  | 2.4%  |
| 1986  | 18,003 | 17,592  | 15,338     | 37,511       | 36,315   | 30,023                           | 4.5%  | 4.4%  | 2.9%  |
| 1987  | 19,397 | 18,958  | 16,137     | 38,724       | 37,482   | 30,475                           | 3.2%  | 3.2%  | 1.5%  |
| 1988  | 21,127 | 20,612  | 17,244     | 39,767       | 38,811   | 31,272                           | 2.7%  | 3.5%  | 2.6%  |
| 1989  | 22,095 | 21,848  | 18,402     | 39,340       | 38,963   | 31,838                           | -1.1% | 0.4%  | 1.8%  |
| 1990  | 22,797 | 22,462  | 19,354     | 38,369       | 37,795   | 31,769                           | -2.5% | -3.0% | -0.2% |
| 1991  | 23,314 | 22,867  | 19,818     | 37,588       | 36,803   | 31,217                           | -2.0% | -2.6% | -1.7% |
| 1992  | 24,422 | 24,077  | 20,799     | 38,421       | 37,487   | 31,804                           | 2.2%  | 1.9%  | 1.9%  |
| 1993  | 25,182 | 24,773  | 21,385     | 38,502       | 37,527   | 31,750                           | 0.2%  | 0.1%  | -0.2% |
| 1994  | 26,393 | 25,804  | 22,297     | 39,833       | 38,156   | 32,278                           | 3.5%  | 1.7%  | 1.7%  |
| 1995  | 27,662 | 27,048  | 23,262     | 40,774       | 38,990   | 32,746                           | 2.4%  | 2.2%  | 1.7%  |
| 1996  | 29,279 | 28,521  | 23,202     | 41,915       | 39,982   | 33,421                           | 2.4%  | 2.5%  | 2.1%  |
| 1997  | 30,911 | 30,087  | 25,654     | 43,039       | 41,171   | 34,291                           | 2.7%  | 3.0%  | 2.6%  |
| 1997  | 33,006 | 32,128  | 27,258     | 44,939       | 43,343   | 35,876                           | 4.4%  | 5.3%  | 4.6%  |
| 1999  | 34,671 | 33,581  | 28,333     | 46,053       | 44,389   | 36,485                           | 2.5%  | 2.4%  | 1.7%  |
| 2000  | 38,210 | 36,601  | 30,318     | 48,653       | 46,790   | 37,772                           | 5.6%  | 5.4%  | 3.5%  |
| 2000  | 39,472 | 37,965  | 31,145     | 48,055       | 40,790   | 37,729                           | -1.0% | 0.9%  | -0.1% |
|       | 39,472 |   |            |              |          | 37,729                           |       |       |       |
| 2002  | · · ·  | 38,089  | 31,462     | 46,950       | 46,416   |                                  | -2.6% | -1.7% | -0.6% |
| 2003  | 40,098 | 38,758  | 32,271     | 45,974       | 45,937   | 37,627                           | -2.1% | -1.0% | 0.3%  |
| 2004  | 42,032 | 40,801  | 33,881     | 46,903       | 46,740   | 38,479                           | 2.0%  | 1.7%  | 2.3%  |
| 2005  | 43,770 | 42,335  | 35,424     | 47,285       | 46,791   | 38,913                           | 0.8%  | 0.1%  | 1.1%  |
| 2006  | 47,162 | 45,569  | 37,698     | 49,419       | 48,609   | 40,117                           | 4.5%  | 3.9%  | 3.1%  |
| 2007  | 49,644 | 47,897  | 39,392     | 51,034       | 49,815   | 40,759                           | 3.3%  | 2.5%  | 1.6%  |
| 2008  | 50,897 | 48,944  | 40,166     | 50,553       | 48,952   | 40,023                           | -0.9% | -1.7% | -1.8% |
| 2009p | 49,875 | 47,994  | 39,138     | 49,875       | 47,994   | 39,138                           | -1.3% | -2.0% | -2.2% |

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.

EXHIBIT A-8 Quarter 4, FY 2010

*Annual Pay in Nominal Dollars.* Massachusetts saw steady growth in average annual pay for most of the past decade, until 2009. 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 2001, average annual wages in the state have grown at the same average annual rate to the nation, at 2.9 percent. The level of average annual pay in Massachusetts in 2009 (preliminary) was 23.5 percent higher than the national average: \$56,239 compared to \$45,551. However, average annual pay in Massachusetts fell slightly in 2009 for the first time in the decade, from \$56,746 in 2008.

*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, Massachusetts shares of the New England and overall U.S. totals increased, but in the subsequent years the Massachusetts shares of New England the U.S. decreased slightly before rising again in 2007 and 2008, then staying constant at 50.2 percent and 2.9 percent respectively in 2009.

|      | (in mil      | llions of dollar | rs)       |             |
|------|--------------|------------------|-----------|-------------|
|      |              |                  | М         | A as a pct. |
| Year | <i>U.S.</i>  | <i>N.E</i> .     | MA        | of N.E.     |
| 1990 | \$ 2,729,807 | \$170,035        | \$82,353  | 48.4%       |
| 1991 | \$ 2,802,016 | \$169,101        | \$81,605  | 48.3%       |
| 1992 | \$ 2,964,907 | \$176,532        | \$85,257  | 48.3%       |
| 1993 | \$ 3,069,735 | \$181,878        | \$88,236  | 48.5%       |
| 1994 | \$ 3,225,744 | \$189,275        | \$92,297  | 48.8%       |
| 1995 | \$ 3,413,758 | \$200,510        | \$98,274  | 49.0%       |
| 1996 | \$ 3,612,171 | \$212,088        | \$104,565 | 49.3%       |
| 1997 | \$ 3,872,441 | \$228,515        | \$112,601 | 49.3%       |
| 1998 | \$ 4,177,476 | \$246,171        | \$121,971 | 49.5%       |
| 1999 | \$ 4,456,833 | \$264,389        | \$132,683 | 50.2%       |
| 2000 | \$ 4,823,727 | \$291,636        | \$149,379 | 51.2%       |
| 2001 | \$ 4,948,357 | \$299,079        | \$151,715 | 50.7%       |
| 2002 | \$ 4,993,197 | \$297,067        | \$148,724 | 50.1%       |
| 2003 | \$ 5,133,724 | \$303,347        | \$150,509 | 49.6%       |
| 2004 | \$ 5,419,559 | \$319,880        | \$158,685 | 49.6%       |
| 2005 | \$ 5,694,792 | \$330,876        | \$163,474 | 49.4%       |
| 2006 | \$ 6,060,261 | \$349,092        | \$172,880 | 49.5%       |
| 2007 | \$ 6,400,720 | \$370,097        | \$184,477 | 49.8%       |
| 2008 | \$ 6,538,004 | \$378,604        | \$190,196 | 50.2%       |
| 2009 | \$ 6,275,111 | \$363,874        | \$182,730 | 50.2%       |

*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 2002 and May 2010. 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. 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. Annual declines in the CPI-U for Boston and the U.S. were 0.7 and 0.4 percent, respectively, in 2009. The latest available data for May 2010 show that the CPI-U for the Boston metropolitan area increased at a rate of 2.7 percent over May 2009, while the U.S. index increased by 2.0 percent over the same period.



## Consumer Price Index for All Urban Consumers (CPI-U), 1970-2009

(not seasonally adjusted; 1982-1984 base period average=100)

|        | Boston M | etro Area  | United States |            |  |
|--------|----------|------------|---------------|------------|--|
| Year   | CPI-U    | Pct.Change | CPI-U         | Pct. Chang |  |
| 1970   | 40.2     |            | 38.8          |            |  |
| 1971   | 42.2     | 5.0%       | 40.5          | 4.49       |  |
| 1972   | 43.7     | 3.6%       | 41.8          | 3.29       |  |
| 1973   | 46.3     | 5.9%       | 44.4          | 6.29       |  |
| 1974   | 51.2     | 10.6%      | 49.3          | 11.09      |  |
| 1975   | 55.8     | 9.0%       | 53.8          | 9.19       |  |
| 1976   | 60.0     | 7.5%       | 56.9          | 5.89       |  |
| 1977   | 63.1     | 5.2%       | 60.6          | 6.59       |  |
| 1978   | 66.4     | 5.2%       | 65.2          | 7.69       |  |
| 1979   | 73.2     | 10.2%      | 72.6          | 11.39      |  |
| 1980   | 82.6     | 12.8%      | 82.4          | 13.59      |  |
| 1981   | 91.8     | 11.1%      | 90.9          | 10.39      |  |
| 1982   | 95.5     | 4.0%       | 96.5          | 6.29       |  |
| 1983   | 99.8     | 4.5%       | 99.6          | 3.29       |  |
| 1984   | 104.7    | 4.9%       | 103.9         | 4.39       |  |
| 1985   | 109.4    | 4.5%       | 107.6         | 3.69       |  |
| 1986   | 112.2    | 2.6%       | 109.6         | 1.99       |  |
| 1987   | 117.1    | 4.4%       | 113.6         | 3.69       |  |
| 1988   | 124.2    | 6.1%       | 118.3         | 4.19       |  |
| 1989   | 131.3    | 5.7%       | 124.0         | 4.89       |  |
| 1990   | 138.9    | 5.8%       | 130.7         | 5.49       |  |
| 1991   | 145.0    | 4.4%       | 136.2         | 4.29       |  |
| 1992   | 148.6    | 2.5%       | 140.3         | 3.09       |  |
| 1993   | 152.9    | 2.9%       | 144.5         | 3.09       |  |
| 1994   | 154.9    | 1.3%       | 148.2         | 2.69       |  |
| 1995   | 158.6    | 2.4%       | 152.4         | 2.8        |  |
| 1996   | 163.3    | 3.0%       | 156.9         | 3.09       |  |
| 1997   | 167.9    | 2.8%       | 160.5         | 2.39       |  |
| 1998   | 171.7    | 2.3%       | 163.0         | 1.69       |  |
| 1999   | 176.0    | 2.5%       | 166.6         | 2.29       |  |
| 2000   | 183.6    | 4.3%       | 172.2         | 3.49       |  |
| 2000   | 191.5    | 4.3%       | 172.2         | 2.89       |  |
| 2001   | 191.5    | 2.6%       | 179.9         | 1.69       |  |
| 2002   | 203.9    | 3.8%       | 179.9         | 2.39       |  |
| 2003   | 203.9    | 2.7%       | 184.0         | 2.79       |  |
| 2004   | 209.5    | 3.3%       | 195.3         | 3.49       |  |
| 2005   | 223.1    | 3.1%       | 201.6         | 3.2        |  |
|        |          |            |               |            |  |
| 2007   | 227.4    | 1.9%       | 207.3         | 2.89       |  |
| 2008   | 235.4    | 3.5%       | 215.3         | 3.89       |  |
| 2009   | 233.8    | -0.7%      | 214.5         | -0.49      |  |
| May-09 | 231.9    |            | 213.9         |            |  |
| May-10 | 238.1    | 2.7%       | 218.2         | 2.09       |  |

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 point of 111.9 in July 2007, followed by an all time low of 37.4 in January 2009. It recovered to 54.8 by May 2009, and has since fluctuated between a low of 46.4 in February 2010 and a high of 62.7 in May 2010, before dropping again to 52.9 in June. The Massachusetts index has been significantly higher than the U.S. index since both reached their lowest point in January 2009. The Mass Insight Corporation reported that the Massachusetts index rose substantially from 38.0 in January 2009, the lowest index since Mass Insight began tracking it in 1991, to 80.0 in April 2010, its most recent measured value. The following graph and table detail the recent record of these measures.



|         | Jai               | 1001 nuary 2001   | - April 201   | 0 (1985=10        | 90)              |                   |
|---------|-------------------|-------------------|---------------|-------------------|------------------|-------------------|
|         | Consumer Co<br>MA | onfidence<br>U.S. | Present<br>MA | Situation<br>U.S. | Future Exp<br>MA | ectations<br>U.S. |
| Jan-01  | 101.0             | 115.7             | 139.0         | 170.4             | 76.0             | 79.3              |
| Apr-01  | 104.0             | 109.9             | 124.0         | 156.0             | 91.0             | 79.1              |
| Jul-01  | 99.0              | 116.3             | 108.0         | 151.3             | 93.0             | 92.9              |
| Oct-01  | 91.0              | 85.3              | 94.0          | 107.2             | 90.0             | 70.7              |
| Jan-02  | 107.0             | 97.8              | 72.0          | 98.1              | 130.0            | 97.6              |
| Apr-02  | 109.0             | 110.5             | 84.0          | 106.8             | 125.0            | 109.6             |
| Jul-02  | 92.0              | 97.4              | 68.0          | 99.4              | 108.0            | 96.1              |
| Oct-02  | 78.0              | 79.6              | 48.0          | 77.2              | 97.0             | 81.1              |
| Jan-03  | 63.0              | 78.8              | 28.0          | 75.3              | 86.0             | 81.1              |
| Apr-03  | 77.0              | 81.0              | 31.0          | 75.2              | 108.0            | 84.8              |
| Jul-03  | 77.0              | 77.0              | 41.0          | 63.0              | 101.0            | 86.3              |
| Oct-03  | 82.0              | 81.7              | 36.0          | 67.0              | 112.0            | 91.5              |
| Jan-04  | 91.0              | 97.7              | 48.0          | 86.1              | 119.0            | 105.3             |
| Apr-04  | 89.0              | 93.0              | 53.0          | 90.4              | 113.0            | 94.8              |
| Jul-04  | 97.0              | 105.7             | 66.0          | 106.4             | 119.0            | 105.3             |
| 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              |

## Consumer Confidence, Present Situation, and Future Expectations for Massachusetts and the U.S. January 2001 - April 2010 (1985=100)

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

**Poverty.** Through 2008, the Massachusetts poverty rate remained well below the national average. Since 1980, the percentage of the Massachusetts poverty universe below the poverty line has varied between 7.7 percent and 12.2 percent. During the same time, the national poverty rate varied between 11.3 percent and 15.1 percent. The estimated poverty rate in Massachusetts increased from 11.2 percent in 2007 to 11.3 percent in 2008, while the poverty rate in the United States increased from 12.5 percent in 2007 to 13.2 percent in 2008. These official poverty estimates are based on a sample of households and are not adjusted for regional differences in the cost of living. The following chart illustrates the lower poverty rates in Massachusetts (1985 - 2008) compared with the national average during similar periods. Poverty estimates for states are not as reliable as national estimates. Not everyone has a poverty status determined; the poverty universe excludes foster children, college students in dormitories, military personnel in barracks, nursing home residents, and other groups of people in institutionalized settings. Poverty data for 2009 are not yet available.



*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 14.4 percent of total personal income in Massachusetts in 2008. 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 47.1 billion dollars for 2008. Just over 50 percent of government transfer payments to individuals were medical payments.



#### **EMPLOYMENT**

*Employment by Industry.* The chart on this page shows the annual level of non-agricultural payroll employment in Massachusetts on the North American Industry Classification System (NAICS) basis 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 2008-2009 period with the corresponding shares for the 1990-1991 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 have grown to take the place of manufacturing in driving the Massachusetts economy and now account for more than half of total payroll employment, while Financial Activities, Government, Information, Trade, Transportation & Utilities have remained 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. In 2009, employment began to decline again, down 3.6 percent from 0.3 percent growth in 2008, and down 5.0 percent from the last peak in 2001. The comparable growth rate for the nation in 2009 was down 4.5 percent from 2008 and down 0.7 percent from 2001. The latest seasonally adjusted estimate for the state (3.18 million for May 2010) is about 202 thousand below the peak month in 2001 (3.38 million in February 2001) and about 47.8 thousand below the 2009 peak in January (3.23 million).

After years of moderate but steady declines or near-zero growth in the late nineties and early 2000s, manufacturing employment 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). The declines for manufacturing employment in 2007 and 2008 were similar to the steady declines prior to 2002. In 2009, the decline was a steep 9.7 percent. The seasonally adjusted estimates for the first five months of 2010 average 5.2 percent below the comparable estimates for 2009.



EXHIBIT A-16 Quarter 4, FY 2010

# Massachusetts Non-Farm Payroll Employment

(NAICS Industry basis)



EXHIBIT A-17 Quarter 4, FY 2010

*Largest Employers in Massachusetts.* The following inset lists the twenty-five largest private employers in Massachusetts based upon employment covered by the Unemployment Insurance system for June, 2009. Partners Healthcare Systems, Inc. replaces Tufts University from the June 2008 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.

| Baystate Medical Center, Inc.<br>Beth Israel Deaconess Medical Center<br>Boston Medical Center Corporation<br>Boston University<br>Brigham & Women's Hospital, Inc.<br>Demoulas Super Markets, Inc.<br>E.M.C. Corporation<br>General Hospital Corporation<br>Harvard University | Raytheon Company<br>S & S Credit Company, Inc.<br>Shaw's Supermarkets, Inc.<br>Southcoast Hospitals Group, Inc.<br>State Street Bank & Trust Company<br>Target Corporation<br>The Children's Hospital Corporation |
|---|---|
| Boston Medical Center Corporation<br>Boston University<br>Brigham & Women's Hospital, Inc.<br>Demoulas Super Markets, Inc.<br>E.M.C. Corporation<br>General Hospital Corporation  | Shaw's Supermarkets, Inc.<br>Southcoast Hospitals Group, Inc.<br>State Street Bank & Trust Company<br>Target Corporation  |
| Boston University<br>Brigham & Women's Hospital, Inc.<br>Demoulas Super Markets, Inc.<br>E.M.C. Corporation<br>General Hospital Corporation   | Southcoast Hospitals Group, Inc.<br>State Street Bank & Trust Company<br>Target Corporation   |
| Brigham & Women's Hospital, Inc.<br>Demoulas Super Markets, Inc.<br>E.M.C. Corporation<br>General Hospital Corporation  | State Street Bank & Trust Company<br>Target Corporation   |
| Demoulas Super Markets, Inc.<br>E.M.C. Corporation<br>General Hospital Corporation  | Target Corporation  |
| E.M.C. Corporation<br>General Hospital Corporation  |   |
| General Hospital Corporation  | The Children's Hospital Corporation   |
|   |   |
| Unruged University  | UMass Memorial Medical Center, Inc.   |
|   | United Parcel Service, Inc.   |
| Home Depot U.S.A., Inc.   | Verizon New England, Inc.   |
| Massachusetts CVS Pharmacy, LLC   | Wal-Mart Associates, Inc.   |
| Massachusetts Institute of Technology   |   |
| SOURCE: Massachusetts Executive Office of Labor & Assistance, Research Department 1-11-10.  | Workforce Development, Division of Unemployment   |

*Massachusetts Companies in the Fortune 500 List.* The economic base of Massachusetts is anchored by the thirteen 2010 Fortune 500 companies headquartered here. When comparing the 2010 Fortune 500 to 2009's, eleven Massachusetts companies gained and two lost rank. Biogen Idec climbed 75 places on the list, the largest leap for a Massachusetts company.

| Ra   | nk   |                                      |                                      | 2009 revenues |
|------|------|--------------------------------------|--------------------------------------|---------------|
| 2010 | 2009 | Company                              | Industry                             | (millions)    |
| 71   | 86   | Liberty Mutual Ins. Group (Boston)   | Insurance: P & C (stock)             | \$31,094      |
| 93   | 135  | Mass. Mutual Life Ins. (Springfield) | Insurance: Life, Health (mutual)     | \$25,424      |
| 95   | 108  | Raytheon (Waltham)                   | Aerospace and Defense                | \$24,881      |
| 101  | 109  | Staples (Framingham)                 | Specialty Retailers                  | \$24,276      |
| 119  | 131  | TJX (Framingham)                     | Specialty Retailers                  | \$20,288      |
| 166  | 172  | EMC (Hopkinton)                      | Computer Peripherals                 | \$14,026      |
| 232  | 269  | BJ's Wholesale Club (Natick)         | Specialty Retailers                  | \$10,187      |
| 234  | 258  | Thermo Fisher Scientific (Waltham)   | Scientific, Photo, Control Equipment | \$10,110      |
| 249  | 206  | State St. Corp. (Boston)             | Commercial Banks                     | \$9,362       |
| 279  | 320  | Boston Scientific (Natick)           | Medical Products & Equipment         | \$8,188       |
| 368  | 291  | Global Partners (Waltham)            | Energy                               | \$5,818       |
| 458  | 502  | Genzyme (Cambridge)                  | Pharmaceuticals                      | \$4,516       |
| 471  | 546  | Biogen Idec (Cambridge)              | Pharmaceuticals                      | \$4,377       |

SOURCE: Fortune, May 4, 2010 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 April 30, 2010, the Massachusetts Unemployment Trust Fund had a balance of \$301.1 million. This balance is the sum of the private contributory account balance of \$199.7 million and the government contributory account balance of \$101.4 million. This compares to a negative February 2010 balance of -\$47.6 million with a negative private contributory portion of -\$152.3 million.. The May 2010 Unemployment Insurance Trust Fund report indicated that the private contributory account balance was estimated to be \$2.089 billion by the end of 2014 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 seventeen months starting in December 2005, but only three of those differences exceeded 0.2%. Since April 2007, the state rate has been at or below the comparable U.S. rate, seasonally adjusted. In October 2007, the Massachusetts rate was 4.4 percent, the lowest it had been since October 2001. By May 2010, the Massachusetts rate had dropped to 9.2 percent from 9.5 percent in February 2010. 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.

#### (in thousands) **Civilian Labor Force** Unemployed **Unemployment Rate** MA Rate as Year MA N.E. U.S. MA N.E. U.S. N.E. U.S. Pct. of U.S. MA 1969 80,734 100 2,832 3.9% 2,581 5,201 198 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% 136.1% 1973 2,557 5,387 89,429 171 336 4,365 6.7% 6.2% 4.9% 1974 5,514 91,949 2,637 190 368 5,156 7.2% 6.7% 5.6% 128.5% 1975 2,725 93,775 11.2% 10.3% 5,633 305 578 7,929 8.5% 131.5% 1976 2,726 5,714 96,158 268 521 7,406 9.8% 9.1% 7.7% 127.3% 1977 5,820 99,009 6,991 7.9% 7.5% 111.3% 2,760 218 437 7.1% 1978 2,809 5,936 102,251 173 343 6,202 6.2% 5.8% 101.6% 6.1% 1979 2,863 6,080 104,962 156 326 6,137 5.5% 5.4% 94.8% 5.8% 1980 2,885 6,154 106,940 164 365 7,637 5.7% 5.9% 80.3% 7.1% 84.2% 1981 2,938 6,268 108,670 189 400 8,273 6.4% 6.4% 7.6% 1982 6,345 110,204 82.5% 2,966 236 489 10,678 8.0% 7.7% 9.7% 1983 2,972 6,386 10,717 72.9% 111,550 209 434 7.0% 6.8% 9.6% 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% 7.2% 56.9% 4.4% 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 104 6,701 3.3% 3,156 6,907 121,669 215 3.1% 5.5% 60.0% 1989 7,004 123,869 4.2% 3.9% 79.2% 3,189 132 274 6,528 5.3% 1990 3,226 7,128 125,840 204 409 7,047 6.3% 5.7% 112.5% 5.6% 1991 3,199 7,112 8.8% 7.8% 126,346 283 558 8,628 6.8% 129.4% 1992 7,105 128,105 281 573 8.8% 8.1% 117.3% 3,181 9,613 7.5% 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% 5.6% 1995 3,205 7,053 132,304 176 375 7,404 5.5% 5.3% 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% 7,348 92 204 67.5% 2000 3,366 142,583 5,692 2.7% 2.8% 4.0% 143,734 2001 3,401 7,424 126 3.7% 78.7% 266 6,801 3.6% 4.7% 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% 7,476 2004 3,381 147,401 177 8,149 5.2% 4.9% 94.5% 366 5.5% 2005 3,383 7,516 149,320 164 353 7,591 4.8% 4.7% 94.1% 5.1% 2006 3,419 7,605 151,428 162 344 7,001 4.7% 4.5% 4.6% 102.2% 2007 3,435 7,650 153,124 153 340 7,078 4.4% 4.4% 4.6% 95.7% 2008 5.4% 91.4% 3,465 7,710 154,287 183 413 8,924 5.3% 5.8% 2009 3,473 7,737 154,142 293 641 14,265 8.4% 8.3% 9.3% 90.3%

Annual Average Civilian Labor Force and Unemployment, 1969-2009

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





(seasonally adjusted)



EXHIBIT A-21 Quarter 4, FY 2010

## EDUCATION AND TECHNOLOGY

*Educational Attainment.* The availability of a skilled and well-educated population is an important resource for the Commonwealth. Approximately three in eight adults in Massachusetts had a bachelor's degree or more in 2008 according to the Census Bureau's American Community Survey (ACS). ACS also found that Massachusetts had a smaller proportion of persons who had not completed high school, 11.3 percent, than the national average of 15.0 percent.





Massachusetts' black and Hispanic population achieved college degrees at roughly half the rate of its white population, they fared much better than the national average. The most current Census data is shown below.

*Higher Education Data.* Massachusetts has a higher minority enrollment in institutions of higher education than New England. However, the percentage of enrolled blacks, Hispanics, and Asians in higher education in Massachusetts is below the national average. These percentages, which do not include military academy enrollment, are seen in the chart below.

|               |            | White | Black | Asian | ]          | Hispanic or |
|---------------|------------|-------|-------|-------|------------|-------------|
|               | Total      | alone | alone | alone | Other race | Latino      |
| United States | 21,326,487 | 71.5% | 14.4% | 6.9%  | 7.2%       | 12.1%       |
| Massachusetts | 540,949    | 77.7% | 8.7%  | 8.1%  | 5.5%       | 6.9%        |

Massachusetts is an internationally recognized center for higher education, with 462,236 students in undergraduate, professional and graduate private and public programs in the 2006/2007 school year, according to the New England Board of Higher Education. Survey data released by the Institute of International Education state that 33,838 foreign students were enrolled in Massachusetts colleges and universities in the 2008/2009 school year. This was an increase of 6.4 percent from the previous year. Massachusetts remains ranked 4th among states for foreign student enrollment.

The Massachusetts public higher education system is composed of universities, state colleges, and community colleges with a combined enrollment of 263,836 students in the 2007 school year. The system awarded 31,986 degrees in the 2007-08 school year. In addition, Massachusetts's system of private higher education enrolled 264,049 full and part-time students in 2007. The strength of both public and private colleges and universities as centers for research and education contributes to the high quality of the Massachusetts work force and plays a key role in attracting and retaining business and industry within the state. Public and private colleges and universities in Massachusetts awarded 47,739 bachelors, 27,575 masters and 3,325 doctoral degrees in 2007.

The higher education system in Massachusetts is particularly strong in post-graduate, scientific, and technical education, with 1,903 science and engineering doctorates awarded in 2007, 4th in the nation. Massachusetts was also ranked 2nd in the U.S. in science and engineering post doctorates in doctorate granting institutions in 2006, with 6,670 post doctorates.

The higher education sector in Massachusetts contributes not only to the quality of its work force, but also to its stature in the nation and the world as a center for basic scientific research and for academic and entrepreneurial research and development. Doctorate-granting institutions in Massachusetts received 4.4 percent or \$2.3 billion of total national academic expenditures on research and development in fiscal 2008. Massachusetts is still ranked sixth in the nation behind California, New York, Texas, Maryland and Pennsylvania. Life sciences receive almost half of the research and development funds performed at Massachusetts educational institutions. Of the \$2.3 billion in total fiscal 2008 outlays for science and engineering research to universities and colleges in Massachusetts, 48.7 percent was for life sciences, 18.3 percent for engineering, 11.3 percent for physical sciences, 9.3 percent for environmental, 4.6 percent for math and computer science, 3.5 percent for social sciences, 2.4 percent for other sciences, and 1.9 percent for psychology.



*Internet Access*. A larger portion of the state's population has access to the internet compared to the nation as a whole according to the latest Census survey taken in 2009. Massachusetts ranked sixth among states and the District of Columbia when comparing the percent (81.7) of individuals who had access to the internet in their household. The previous Census survey in 2007 ranked Massachusetts third when 76.3 percent had access.

**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 2009, 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 the United Kingdom, France and Canada for origination of U.S. patents. Since 1977, Massachusetts has received more new patents than any other New England state. With 4,038 new patents in 2009, Massachusetts innovators were responsible for over twice as many patents as Connecticut, which originated 1,661 patents in 2009.



**Primary and Secondary Education Expenditures.** Although spending on education is not necessarily an indicator of results, Massachusetts has spent from 12 to 32 percent more per pupil on primary and secondary education than the national average since 1981. During the 2007-2008 school year, Massachusetts increased per student expenditures 5.6 percent to \$13,454; 32 percent higher than the national average and ninth in the nation. The table below shows expenditures per pupil for Massachusetts and the United States since fiscal 1981.

|             | (in current,  | unadjusted dollars) |                 |
|-------------|---------------|---------------------|-----------------|
| Fiscal Year | Massachusetts | United States       | Ratio (MA/U.S.) |
| 1981        | \$2,735       | \$2,307             | 1.19            |
| 1982        | 2,823         | 2,525               | 1.12            |
| 1983        | 3,072         | 2,736               | 1.12            |
| 1984        | 3,298         | 2,940               | 1.12            |
| 1985        | 3,653         | 3,222               | 1.13            |
| 1986        | 4,031         | 3,479               | 1.16            |
| 1987        | 4,491         | 3,682               | 1.22            |
| 1988        | 4,965         | 3,927               | 1.26            |
| 1989        | 5,485         | 4,307               | 1.27            |
| 1990        | 5,766         | 4,643               | 1.24            |
| 1991        | 5,881         | 4,902               | 1.20            |
| 1992        | 5,952         | 5,023               | 1.18            |
| 1993        | 6,141         | 5,160               | 1.19            |
| 1994        | 6,423         | 5,327               | 1.21            |
| 1995        | 6,783         | 5,529               | 1.23            |
| 1996        | 7,033         | 5,689               | 1.24            |
| 1997        | 7,331         | 5,923               | 1.24            |
| 1998        | 7,651         | 6,137               | 1.25            |
| 1999        | 8,106         | 6,458               | 1.26            |
| 2000        | 8,444         | 6,836               | 1.24            |
| 2001        | 9,038         | 7,284               | 1.24            |
| 2002        | 9,856         | 7,701               | 1.28            |
| 2003        | 10,223        | 8,019               | 1.27            |
| 2004        | 10,693        | 8,287               | 1.29            |
| 2005        | 11,267        | 8,701               | 1.29            |
| 2006        | 11,981        | 9,138               | 1.31            |
| 2007        | 12,738        | 9,666               | 1.32            |
| 2008        | 13,454        | 10,259              | 1.31            |

*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 on the following page compare the data available for Massachusetts to the nation.



EXHIBIT A-27 Quarter 4, FY 2010

#### 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, quarterly and annual state GDP estimates by industry. *Mass*Benchmarks 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 is released more frequently and in some cases, are among the components used to calculate State GDP.

| State Gross Domestic Product - Annual Change<br>(millions of chained 2000 dollars) |           |               |           |               |               |               |  |  |  |
|--|-----------|---------------|-----------|---------------|---------------|---------------|--|--|--|
|  | Mas       | Massachusetts |           | v England     | United States |               |  |  |  |
| Year   | GDP       | Annual change | GDP       | Annual change | GDP           | Annual change |  |  |  |
| 1997   | \$227,074 |               | \$487,671 |               | \$8,620,955   |               |  |  |  |
| 1998   | \$240,617 | 6.0%          | \$511,374 | 4.9%          | \$9,004,670   | 4.5%          |  |  |  |
| 1999   | \$255,189 | 6.1%          | \$531,902 | 4.0%          | \$9,404,251   | 4.4%          |  |  |  |
| 2000   | \$274,949 | 7.7%          | \$565,835 | 6.4%          | \$9,749,103   | 3.7%          |  |  |  |
| 2001   | \$276,634 | 0.6%          | \$570,313 | 0.8%          | \$9,836,576   | 0.9%          |  |  |  |
| 2002   | \$274,997 | -0.6%         | \$568,750 | -0.3%         | \$9,981,850   | 1.5%          |  |  |  |
| 2003   | \$280,881 | 2.1%          | \$579,651 | 1.9%          | \$10,225,679  | 2.4%          |  |  |  |
| 2004   | \$286,541 | 2.0%          | \$597,196 | 3.0%          | \$10,580,223  | 3.5%          |  |  |  |
| 2005   | \$289,869 | 1.2%          | \$605,048 | 1.3%          | \$10,912,180  | 3.1%          |  |  |  |
| 2006   | \$297,634 | 2.7%          | \$620,103 | 2.5%          | \$11,218,785  | 2.8%          |  |  |  |
| 2007   | \$306,503 | 3.0%          | \$634,166 | 2.3%          | \$11,439,232  | 2.0%          |  |  |  |
| 2008   | \$312,476 | 1.9%          | \$640,735 | 1.0%          | \$11,523,637  | 0.7%          |  |  |  |

## **Real GDP - Annual and Latest Quarterly Change**



EXHIBIT A-28 Quarter 4, FY 2010

#### **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 twelve months prior. Since the beginning of the decade, Massachusetts' peaks have been higher and it troughs deeper than the U.S. Beginning in September 2009, Massachusetts began what looks like the "v-shaped" recovery we were hoping for. The bottom table compares Massachusetts' index to its New England neighbors.



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

|               | May   | 1-Month | 3-Month | 12-Month |  |  |
|---------------|-------|---------|---------|----------|--|--|
| Area          | 2010  | Change  | Change  | Change   |  |  |
| U.S.          | 158.6 | 0.5%    | 1.3%    | 0.5%     |  |  |
| Massachusetts | 172.5 | 0.5%    | 1.2%    | 1.5%     |  |  |
| Connecticut   | 155.0 | 0.5%    | 1.4%    | 0.8%     |  |  |
| Maine         | 138.4 | 0.2%    | 0.9%    | -1.6%    |  |  |
| New Hampshire | 195.1 | 0.8%    | 2.1%    | 2.4%     |  |  |
| Rhode Island  | 150.9 | 0.6%    | 1.2%    | -2.4%    |  |  |
| Vermont       | 154.9 | 0.1%    | 0.2%    | 0.4%     |  |  |
|               |       |         |         |          |  |  |

SOURCE: Federal Reserve Bank of Philadelphia. 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 national index is based on a survey of manufacturers and the Boston region's 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, suppliers deliveries, inventories, customer's 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 2010 national index indicated that the manufacturing sector was expanding for the eleventh consecutive month. Its June components all indicated expansion except for two; inventories and customer's inventories. The Boston region's June index indicated that overall business conditions were contracting but they had been expanding in February and May. Half of the Boston region's components were above 50, half were below 50 while the business confidence component has been above 50 since June 2009. See the second graph below for the current and previous month's component values.



EXHIBIT A-30 Quarter 4, FY 2010

#### ECONOMIC BASE AND PERFORMANCE-INTERNATIONAL TRADE

*Exports.* Massachusetts ranked 14th in the United States, and first in New England, with \$23.6 billion in international exports in 2009. This represents a 16.7 percent decrease from the previous year's export value from the Commonwealth, while national exports decreased by 18.7 percent. Total exports from New England also shrank 14.9 percent. The United Kingdom replaced Canada, our top trading partner in 2008, as our top trading partner in 2009.





## EXHIBIT A-32 Quarter 4, FY 2010

### 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 and rental and leasing, professional and technical services, finance and insurance, and manufacturing, contributed 47.3 percent of the GDP in 2008. The following pie chart displays the latest sector contributions to the Massachusetts GDP.



*GDP Subsectors.* When measured in chained 2000 dollars, the change in Massachusetts total GDP was 10.8 percent between 2001 and 2007. Between 2001 and 2007 (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.

| (chained 2000 dollars)                        |                          |  |  |  |  |
|---|--------------------------|--|--|--|--|
| NAICS* Industry Subsector                     | Percent change 2001-2007 |  |  |  |  |
| Computer and electronic product manufacturing | 121.5%                   |  |  |  |  |
| Information and data processing services      | 109.3%                   |  |  |  |  |
| Chemical manufacturing                        | 84.4%                    |  |  |  |  |
| Machinery manufacturing                       | 57.7%                    |  |  |  |  |
| Paper manufacturing                           | -13.7%                   |  |  |  |  |
| Plastics and rubber products manufacturing    | -16.7%                   |  |  |  |  |
| Miscellaneous manufacturing                   | -20.5%                   |  |  |  |  |
| Fabricated metal product manufacturing        | -26.6%                   |  |  |  |  |

\*North American Industry Classification System.

## EXHIBIT A-33 Quarter 4, FY 2010

#### Gross Domestic Product by Industry in Massachusetts

(as a percent of total GDP chained 2000 dollars)

| NAICS* Industry Sector                                   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   | 2007   | 2008   |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Total Gross Domestic Product by State                    | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Private industries                                       | 91.5%  | 91.5%  | 91.4%  | 91.9%  | 92.1%  | 92.1%  | 92.3%  | 92.5%  | 92.6%  |
| Agriculture, forestry, fishing, and hunting              | 0.2%   | 0.2%   | 0.2%   | 0.2%   | 0.3%   | 0.3%   | 0.3%   | 0.3%   | 0.39   |
| Mining   | 0.0%   | 0.1%   | 0.1%   | 0.1%   | 0.1%   | 0.0%   | 0.0%   | 0.1%   | 0.0    |
| Utilities  | 1.3%   | 1.1%   | 1.1%   | 1.2%   | 1.3%   | 1.2%   | 1.2%   | 1.2%   | 1.2    |
| Construction   | 4.1%   | 4.3%   | 4.1%   | 3.8%   | 3.6%   | 3.4%   | 3.1%   | 2.6%   | 2.5    |
| Manufacturing  | 13.5%  | 12.7%  | 12.9%  | 13.6%  | 12.8%  | 12.7%  | 13.6%  | 14.4%  | 13.7   |
| Wholesale trade  | 5.9%   | 6.4%   | 6.3%   | 6.4%   | 6.3%   | 6.0%   | 6.0%   | 5.7%   | 5.6    |
| Retail trade   | 5.3%   | 5.7%   | 5.8%   | 5.9%   | 5.9%   | 6.3%   | 6.1%   | 6.0%   | 5.9    |
| Transportation and warehousing, excluding Postal Service | 1.9%   | 1.8%   | 1.8%   | 1.7%   | 1.8%   | 1.8%   | 1.7%   | 1.7%   | 1.6    |
| Information  | 4.7%   | 5.0%   | 5.0%   | 5.0%   | 5.4%   | 6.0%   | 5.8%   | 6.0%   | 6.3    |
| Finance and insurance                                    | 10.9%  | 10.8%  | 10.8%  | 10.9%  | 11.2%  | 10.4%  | 10.5%  | 10.6%  | 10.3   |
| Real estate, rental, and leasing                         | 12.9%  | 13.6%  | 13.6%  | 13.5%  | 13.4%  | 13.2%  | 13.3%  | 13.4%  | 13.4   |
| Professional and technical services                      | 10.4%  | 10.3%  | 10.0%  | 9.8%   | 10.6%  | 11.1%  | 11.4%  | 11.9%  | 12.9   |
| Management of companies and enterprises                  | 2.7%   | 2.2%   | 2.1%   | 2.1%   | 1.8%   | 1.8%   | 1.8%   | 1.7%   | 1.7    |
| Administrative and waste services                        | 3.0%   | 2.7%   | 2.6%   | 2.7%   | 2.6%   | 2.7%   | 2.7%   | 2.7%   | 2.7    |
| Educational services                                     | 2.2%   | 2.1%   | 2.2%   | 2.1%   | 2.1%   | 2.0%   | 2.0%   | 2.0%   | 2.0    |
| Health care and social assistance                        | 7.4%   | 7.4%   | 7.7%   | 7.9%   | 7.9%   | 8.2%   | 8.3%   | 8.3%   | 8.5    |
| Arts, entertainment, and recreation                      |        | 0.7%   | 0.8%   | 0.8%   | 0.8%   | 0.8%   | 0.8%   | 0.8%   | 0.8    |
| Accommodation and food services                          |        | 2.4%   | 2.4%   | 2.4%   | 2.4%   | 2.4%   | 2.4%   | 2.4%   | 2.4    |
| Other services, except government                        |        | 2.0%   | 2.0%   | 2.0%   | 1.9%   | 1.9%   | 1.8%   | 1.8%   | 1.8    |
| Government   |        | 8.5%   | 8.6%   | 8.2%   | 8.0%   | 8.0%   | 7.8%   | 7.6%   | 7.6    |

## Rank of Industry Contribution to GDP in Massachusetts

(millions of chained 2000 dollars)

| NAICS* Industry Sector                                   | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|--|------|------|------|------|------|------|------|------|------|
| Total Gross Domestic Product by State                    |      |      |      |      |      |      |      |      |      |
| Private industries                                       |      |      |      |      |      |      |      |      |      |
| Agriculture, forestry, fishing, and hunting              | 19   | 19   | 19   | 19   | 19   | 19   | 19   | 19   | 1    |
| Mining   | 20   | 20   | 20   | 20   | 20   | 20   | 20   | 20   | 2    |
| Utilities  | 17   | 17   | 17   | 17   | 17   | 17   | 17   | 17   | 1    |
| Construction   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 11   | 1    |
| Manufacturing  | 1    | 2    | 2    | 1    | 2    | 2    | 1    | 1    |      |
| Wholesale trade  | 7    | 7    | 7    | 7    | 7    | 8    | 8    | 9    |      |
| Retail trade   | 8    | 8    | 8    | 8    | 8    | 7    | 7    | 8    |      |
| Transportation and warehousing, excluding Postal Service | 16   | 16   | 16   | 16   | 15   | 16   | 16   | 15   | 1    |
| Information  | 9    | 9    | 9    | 9    | 9    | 9    | 9    | 7    |      |
| Finance and insurance                                    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    |      |
| Real estate, rental, and leasing                         | 2    | 1    | 1    | 2    | 1    | 1    | 2    | 2    |      |
| Professional and technical services                      | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    |      |
| Management of companies and enterprises                  | 12   | 13   | 14   | 14   | 16   | 15   | 15   | 16   | I    |
| Administrative and waste services                        | 11   | 11   | 11   | 11   | 11   | 11   | 11   | 10   |      |
| Educational services                                     | 14   | 14   | 13   | 13   | 13   | 13   | 13   | 13   | I    |
| Health care and social assistance                        | 6    | 6    | 6    | 6    | 6    | 5    | 5    | 5    |      |
| Arts, entertainment, and recreation                      | 18   | 18   | 18   | 18   | 18   | 18   | 18   | 18   | I    |
| Accommodation and food services                          | 13   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 1    |
| Other services, except government                        | 15   | 15   | 15   | 15   | 14   | 14   | 14   | 14   | 1    |
| Government   | 5    | 5    | 5    | 5    | 5    | 6    | 6    | 6    |      |

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

*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 wage for the establishments with employees. The data are reported annually and quarterly for employees in the private, federal government, state government, and local government sectors.

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. This is 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. State GDP is inflation adjusted to 2000 while the new U.S. GDP is inflation adjusted to 2005. U.S. GDP is available quarterly.

Foreign exports from the U.S. Census Bureau's Foreign Trade Division and WISERTrade, are available for four industries on a quarterly 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.
- 2. GDP rank: This sector's GDP rank versus all state sectors.
- 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 business.
- 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 who 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.
- 11. Large employers in Massachusetts: A few of the state's largest employers in this sector, from ReferenceUSA.com.
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.





Average Weekly Wage \$1.000 \$899 \$900 \$800 \$700 \$600 \$500 \$400 2001 2002 2003 2004 2005 2006 2007 2008 2009 Q1-Q3 Year Source: Massachusetts EOLWD





#### Summary.

GDP contribution to state total: **0.3%** GDP rank: **19 of 20** Nonemployer to employer establishment ratio: **5.5 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 Large employers in Massachusetts: Idlywilde Farm, Brown and Regan LLC, Bartlett's Ocean View Farm

**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.



85 Businesses \$6,500 80 \$5,500 75 \$4,500 70 \$3 500 65 60 \$2,500 2005 2008 2001 2002 2003 2004 2006 2007 Source: U.S. Census Bureau. Excludes crop and Year











#### Summary.

GDP contribution to state total: 0.03%

GDP rank: 20 of 20

Nonemployer to employer establishment ratio: **0.6 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: Support activities for mining

Annual receipts at nonemployer establishments: Nonmetallic mineral mining and quarrying

Most valuable export: Minerals and ores

Large employers in Massachusetts: GulfOil Ltd., Specialty Minerals, S. M. Larusso and Sons and P. J. Keating

**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 Appendix page 4 for electricity prices, supply and capacity by source. See the appendix, pages five and six for supplemental tables regarding electricity generation, supply and capacity.



Nonemployer Businesses and Receipts Businesses \$29,000 500 eceipts (\$1,000) \$27,000 450 \$25,000 400 \$23,000 \$21,000 2 337 350 \$19,000 300 \$17,000 \$15,000 250 2005 2006 2007 2008 2001 2002 2003 2004 Source: U.S. Census Bureau. Excludes crop and Year animal production

Year

#### State export data are not available for this sector.

#### Summary.

Source: Massachusetts EOLWD. \* Annualized

GDP contribution to state total: **1.2%** GDP rank: **17 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: 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: **Power generation and supply** 

A were large weekly wage. I ower generation and suppry

Annual receipts at nonemployer establishments: Subsector detail N/A

Large employers in Massachusetts: Bay State Gas CO, Mass Water Resources Authority, and National Grid USA

Q1-Q3





**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: 2.5% GDP rank: 11 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: Printing and related support activities

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: Shaw Group Inc., Suffolk Construction Company and R.H. White Company







**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.



Sector Exports \$30,000 \$25,000 23.874 \$20,000 \$15,000 \$10,000 \$5,000 \$0 2005 2001 2002 2003 2004 2006 2007 2008 2009 2010\* Year Source: U.S. Census Bureau/WISER. \*Q1 2010 Annualized.







#### Summary.

GDP contribution to state total: 13.7%

GDP rank: 1 of 20

Nonemployer to employer establishment ratio: **0.8 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: Agricultural chemical mfg.

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

Large employers in Massachusetts: EMC Corporation, Yankee Candle and Wyeth Pharmaceuticals

inployors in Massachuseus. ENTE Corporation, Tankee Canale and Wyen Tharmaceuter



**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.



Source: Massachusetts EOLWD. \* Annualized



#### State export data are not available for this sector.

#### Summary.

GDP contribution to state total: **5.6%** GDP rank: **9 of 20** Nonemployer to employer establishment ratio: **0.4 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 Large employers in Massachusetts: Vertex Pharmaceuticals, Teradyne and C&S 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: **5.9%** GDP rank: **8 of 20** Nonemployer to employer establishment ratio: **1.3 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: Automobile dealers

Annual receipts at nonemployer establishments: Direct selling establishments

Large employers in Massachusetts: Walmart, CVS, Walgreen's, Wholefoods, Shaw's, Stop and Shop, TJX Co.





**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 page 6 and 7 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:**16th** Nonemployer to employer establishment ratio: **3.8 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: General freight trucking

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

Annual receipts at nonemployer establishments: General freight trucking

Large employers in Massachusetts: U.S. Post Office, MassPort, UPS and the Maine Central Railroad







**NAICS** 51 – Information. The Information sector comprises establishments engaged in the following processes: (a) producing and distributing information and cultural products, (b) providing the means to transmit or distribute these products as well as data or communications, and (c) processing data.











#### Summary.

GDP contribution to state total: 6.3%

GDP rank: 7 of 20

Nonemployer to employer establishment ratio: 1.9 to 1

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

Establishments with employees: Newspaper, book, & directory publishers

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

Large employers in Massachusetts: Boston Globe, Christian Science Monitor, Houghton Mifflin Harcourt and Thompson Research

**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: **10.3%** GDP rank: **4 of 20** Nonemployer to employer establishment ratio: **1.3 to 1** 

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

Establishments with employees: Insurance agencies, brokerages & support

Nonemployer establishments: Agencies, brokerages, and other insurance related activities

Employees: Depository credit intermediation

Annual wages: Other financial investment activities

Average weekly wage: Other investment pools and funds

Annual receipts at nonemployer establishments: Other financial investment activities

Large employers in Massachusetts: Deutsche Bank, Fidelity Investments Life Ins., John Hancock Life Ins. and Liberty Mutual Group





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: 13.4% GDP rank: 2 of 20 Nonemployer to employer establishment ratio: 5.2 to 1

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

Establishments with employees: Offices of real estate agents & brokers

Nonemployer establishments: Offices of real estate agents and brokers

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

Large employers in Massachusetts: John Hancock Life Ins., Liberty Mutual Group, Mass Mutual Financial Group





Year

**NAICS 54 - Professional and Technical Services.** The 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 and, 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: **12.9%** GDP rank: **3 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

Large employers in Massachusetts: Massachusetts Institute of Technology, Alcatel-Lucent, Ropes and Gray LLP







# EXHIBIT A-47 Quarter 4, FY 2010

NAICS 55 - Management of Companies and Enterprises. The Management of Companies and Enterprises sector comprises (1) 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 (2) 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: 1.7% GDP rank: 15 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

Large employers in Massachusetts: State Street Corp and Boston Private Financial Holdings

**NAICS 56 - Administrative and Waste Services.** This sector comprises establishments performing routine support activities for the day-today 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.



Source: Massachusetts EOLWD. \* Annualized



#### State export data are not available for this sector.

#### Summary.

GDP contribution to state total: 2.7% GDP rank: 10 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: 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

Large employers in Massachusetts: Technical Futures, ABM Janitorial Services and American Cleaning Co.







**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.



Source: Massachusetts EOLWD. \* Annualized



#### State export data are not available for this sector.

#### Summary.

GDP contribution to state total: **2.0%** GDP rank: **13 of 20** Nonemployer to employer establishment ratio: **5.8 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

Large employers in Massachusetts: Boston University, Harvard University, MIT, University of Massachusetts-Amherst







**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.





Source: Massachusetts EOLWD. \* Annualized



#### State export data are not available for this sector.

#### Summary.

GDP contribution to state total: **8.5%** GDP rank: **5 of 20** Nonemployer to employer establishment ratio: **2.5 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

Large employers in Massachusetts: Massachusetts General Hospital and Brigham and Women's Hospital







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





Yea

#### Summary.

Source: U.S. Census Bureau. Excludes crop and animal production .

GDP contribution to state total: **0.8%** 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

Large employers in Massachusetts: Boston Red Sox, Delaware North Companies and Museum of Fine Arts





Source: U.S. Bureau of Economic Analysis

**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.





Source: Massachusetts EOLWD. \* Annualized



#### State export data are not available for this sector.

#### Summary.

GDP contribution to state total: **2.4%** 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: Limited-service eating places

Nonemployer establishments: Special food services

Employees: Full-service restaurants

Annual wages: Full-service restaurants

Average weekly wage: Traveler accommodation

Annual receipts at nonemployer establishments: Limited-service eating places

Large employers in Massachusetts: Eurest Dining Services, Canyon Ranch, Four Seasons Boston, Sheraton Boston and Westin-Copley Place







**NAICS 81 - Other Services, Ex. Public Admin.** 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, and providing dry cleaning and laundry services, personal care services, death care services, pet care services, photofinishing services, temporary parking services.







#### State export data are not available for this sector.

#### Summary.

GDP contribution to state total: **1.8%** GDP rank: **14 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: 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

Large employers in Massachusetts: Eastern Enterprise Group, Ancient Order of Hibernians and Greater Lynn Senior Services







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









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

Summary.

GDP contribution to state total: 7.6%

GDP rank: 6 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

Large employers in Massachusetts: Boston Police, Hampden County House of Correction, MWRA, Suffolk County Sheriff

## EXHIBIT A-55 Quarter 4, FY 2010

## **ECONOMIC BASE AND PERFORMANCE—GOVERNMENT REVENUES AND SPENDING**

*Federal Spending in Massachusetts.* Federal government spending contributes significantly to the Massachusetts economy. In fiscal 2008, Massachusetts received over \$72 billion, an 18 percent increase from 2007, and ranked 10th among states in per capita distribution of federal funds, with total spending of \$11,098 per person, excluding loans and insurance. Massachusetts ranked 12th in fiscal 2007. While federal spending in Massachusetts has increased every year since 1990, its share of total U.S. spending has declined steadily since 1990, until 2008. The following graph shows total federal expenditures and the percentage of federal expenditures in Massachusetts. Federal spending includes grants to state and local governments, direct payments to individuals, wage and salary employment, and procurement contracts, and includes only those expenditures that can be associated with individual states and territories.



In FY 2008, 44.5 percent federal spending in Massachusetts was composed of health care and social programs like Medicare, Medicaid, Social Security, unemployment benefits and Section 8 Housing Vouchers; 3.7 percent less than 2007. Massachusetts was 68 percent above the national average in per capita federal grants to state and local governments, receiving \$3,144 per capita compared to a national average of \$1,868. Per capita federal spending on salaries and wages in 2008 was 23 percent lower in Massachusetts than in the rest of the nation at \$635 compared to a national average of \$823, but Massachusetts was 11 percent above the national average in per capita direct federal payments to individuals at \$5,265 compared to a national average of \$1,620 in 2008. The following chart shows the composition of direct federal spending within Massachusetts in fiscal 2008, excluding loans and insurance.



*Federal Contracts.* The total dollar value of all federal contracts performed in Massachusetts increased an average of 20.3 percent per year since 2000, 3.5 percent faster then the 16.8 percent U.S. average. The following two pages compare Massachusetts federal contract dollars to the U.S. total and summarize the fiscal year periods from 2000 to year–to-date July 17, 2010.

| Federal Contracts Performed in Massachusetts and the U.S.<br>(millions of dollars) |               |   |                   |             |  |  |  |  |  |
|--|---------------|---|-------------------|-------------|--|--|--|--|--|
| Fiscal<br>Year   | Massachusetts | MA percent increase from<br>previous year | MA portion of all | <i>U.S.</i> | U.S. percent increase from previous year |  |  |  |  |
| 2000   | \$5,958       |   | 2.8%              | \$214,928   |  |  |  |  |  |
| 2001   | 6,427         | 7.9%                                      | 2.9%              | 221,402     | 3.0%                                     |  |  |  |  |
| 2002   | 6,248         | -2.8%                                     | 2.4%              | 260,828     | 17.8%                                    |  |  |  |  |
| 2003   | 7,572         | 21.2%                                     | 2.5%              | 300,068     | 15.0%                                    |  |  |  |  |
| 2004   | 8,550         | 12.9%                                     | 2.5%              | 345,620     | 15.2%                                    |  |  |  |  |
| 2005   | 9,750         | 14.0%                                     | 2.5%              | 390,724     | 13.1%                                    |  |  |  |  |
| 2006   | 10,404        | 6.7%                                      | 2.4%              | 431,639     | 10.5%                                    |  |  |  |  |
| 2007   | 12,040        | 15.7%                                     | 2.6%              | 468,035     | 8.4%                                     |  |  |  |  |
| 2008   | 13,119        | 9.0%                                      | 2.4%              | 540,584     | 15.5%                                    |  |  |  |  |
| 2009*  | 16,124        | 22.9%                                     | 3.0%              | 537,775     | -0.5%                                    |  |  |  |  |
| 2010*  | 8,829         |   |                   | 292,856     |  |  |  |  |  |
| Total  | \$105,020     |   | 2.6%              | \$4,004,458 |  |  |  |  |  |

SOURCE: http://www.usaspending.gov.

Note: Reported as of July 17, 2010. FY 2010 is partial data.



# Massachusetts Share of Federal Contracts Growing in 2009

# Summary of Federal Contracts Performed in Massachusetts

**Fy 2000 To 2010** Total dollars: \$105,019,735,091

Total number of contractors: 19,628 Total number of transactions: 768,534

# Top 5 Products or Services Sold

| Gas Turbines and Jet Engines, Aircraft; Prime Moving, and Components | \$10,700,231,351 |
|--|------------------|
| Engineering Advanced Development (R&D)                               | \$4,949,962,868  |
| Defense Electronics and Communication Equipment Basic Research (R&D) | \$3,488,508,872  |
| Other Research and Development Advanced Development (R&D)            | \$3,391,983,932  |
| Miscellaneous Communication Equipment                                | \$3,193,858,494  |

# Top 5 Contracting Agencies Purchasing From Contractor(S)

| Department of Defense                   | \$88,283,266,616 |
|---|------------------|
| Department of Veterans Affairs          | \$2,971,063,053  |
| Department of Health and Human Services | \$2,362,198,383  |
| General Services Administration         | \$2,253,271,761  |
| Department of Transportation            | \$1,828,269,413  |
|   |                  |

# **Top 10 Contractors**

| \$23,288,258,316 |
|------------------|
| \$13,590,998,787 |
| \$12,126,878,688 |
| \$6,712,881,558  |
| \$3,388,877,455  |
| \$2,904,660,432  |
| \$1,702,217,815  |
| \$1,639,262,041  |
| \$1,217,597,716  |
| \$950,817,580    |
|                  |
|                  |

# Federal Contracts Performed in Massachusetts in:

## Fiscal Year: 2010

Total dollars: \$8,828,683,068 The amount for this search is 3.0% of all awarded dollars for the fiscal year. This state is ranked 8 among states and the District of Columbia for this year. Total number of contractors: 4,955 Total number of transactions: 51,149

# **Top 5 Products or Services Sold**

| Guided Missiles  | \$872,311,412 |
|--|---------------|
| Gas Turbines and Jet Engines, Aircraft; Prime Moving, and Components | \$857,906,852 |
| Defense Electronics and Communication Equipment Basic Research (R&D) | \$543,489,953 |
| Miscellaneous Communication Equipment                                | \$497,440,263 |
| Engineering Advanced Development (R&D)                               | \$474,981,205 |

# Top 5 Contracting Agencies Purchasing from Contractor(s)

| Department of Defense           | \$7,298,822,644 |
|---------------------------------|-----------------|
| Department of Veterans Affairs  | \$244,549,907   |
| Department of Homeland Security | \$203,955,939   |
| General Services Administration | \$165,627,442   |
| Department of Transportation    | \$150,695,834   |
|                                 |                 |

# Top 10 Contractors

| Raytheon Company   | \$2,665,372,393 |
|--|-----------------|
| General Dynamics Corporation   | \$940,029,422   |
| General Electric Company   | \$845,250,367   |
| Massachusetts Institute Of Technology                                      | \$528,565,513   |
| The Charles Stark Draper Laboratory Inc                                    | \$453,242,511   |
| The Mitre Corporation  | \$312,392,854   |
| Bae Systems Plc  | \$174,909,579   |
| Jacobs Engineering Group In  | \$130,520,852   |
| Brighton Marine Health Center, Inc   | \$124,276,681   |
| Mckesson Corporation   | \$122,563,082   |
| SOURCE: http://www.usaspending.gov.<br>Note: Reported as of July 17, 2010. |                 |

*State Revenues.* Taxes collected by all states in FY 2009 totaled \$715.2 billion, 8.5 percent less than FY 2008. Massachusetts collected \$19.5 billion in FY 2009, 10.8 percent less than it did in FY 2008. Massachusetts' revenues shrank more than any other New England state. Massachusetts ranked 11th in total taxes collected in 2009, no change from 2008.

In fiscal year 2009, Massachusetts collected 55 percent of its revenue from individual income tax. Overall, states received 34 percent of their revenues from individual income taxes and seven states did not have the tax in 2009. In FY 2009, the state collected only 0.5 percent more than it did in FY 2006 without adjusting for inflation. Revenue from licenses, tobacco, death and gift taxes increased a third while documentary, stock transfer and pari-mutuels decreased a third or more during that three year period but contributions from the state's different revenue sources in FY 2009 did not vary by more than one percent from FY 2006.



*State Lottery Proceeds.* Massachusetts ranked fourth in revenue and prize money awarded among the 42 states with lotteries in FY 2009. It ranked sixth on per capita sales and seventh in the portion of revenue used for its administration and seventh in the portion of revenue used for prizes.



*State Expenditures.* The following table and graph depicts fiscal 2008 per capita state general expenditures by category for the six New England states and the U.S. average state expenditure. Massachusetts ranked 9th in the nation in per capita expenditures, \$7,023 in 2008, while it ranked 8th and spent \$6,779 in 2007. This represents a 3.6 percent increase in per capita expenditures from 2007 to 2008 with the largest per capita dollar increase on highways.

| Massachusetts Per Capita State Government General Expenditures, by Type |         |         |         |         |         |         |         |            |         |
|---|---------|---------|---------|---------|---------|---------|---------|------------|---------|
| General expenditures, by function                                       | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    | 2006    | 2007       | 2008    |
| Education   | \$890   | \$1,026 | \$1,020 | \$1,055 | \$1,183 | \$1,346 | \$1,401 | \$1,640 \$ | 5 1,649 |
| Public welfare  | \$1,030 | \$1,135 | \$932   | \$824   | \$1,647 | \$1,719 | \$1,843 | \$1,877 \$ | 1,952   |
| Health & hospitals  | \$308   | \$363   | \$377   | \$372   | \$172   | \$177   | \$187   | \$227 \$   | 236     |
| Highways  | \$439   | \$400   | \$427   | \$378   | \$471   | \$276   | \$261   | \$267 \$   | 346     |
| Police & corrections  | \$191   | \$213   | \$223   | \$230   | \$215   | \$222   | \$248   | \$274 \$   | 293     |
| Natural resource, parks & recreation                                    | \$58    | \$88    | \$86    | \$95    | \$90    | \$76    | \$81    | \$87 \$    | 89      |
| Administration & other  | \$1,392 | \$1,473 | \$1,630 | \$1,755 | \$1,815 | \$1,660 | \$1,690 | \$1,890 \$ | 1,901   |
| Interest on general debt  | \$335   | \$371   | \$418   | \$386   | \$401   | \$435   | \$487   | \$518 \$   | 558     |
| Total   | \$4,643 | \$5,067 | \$5,115 | \$5,095 | \$5,994 | \$5,911 | \$6,198 | \$6,779 \$ | 7,023   |

## Fiscal 2008 Per Capita State Government General Expenditures, by Type (for the U.S. and the New England States)

| General expenditures, by function            | <i>U.S.</i> | CT      | ME      | MA      | NH      | RI      | VT      |
|--|-------------|---------|---------|---------|---------|---------|---------|
| Education                                    | \$1,798     | \$1,671 | \$1,533 | \$1,649 | \$1,535 | \$1,621 | \$3,320 |
| Public welfare                               | \$1,355     | \$1,605 | \$1,894 | \$1,952 | \$1,174 | \$2,123 | \$2,018 |
| Health & hospitals                           | \$377       | \$656   | \$416   | \$236   | \$167   | \$255   | \$301   |
| Highways                                     | \$353       | \$227   | \$364   | \$346   | \$334   | \$192   | \$523   |
| Police & corrections                         | \$209       | \$269   | \$163   | \$293   | \$125   | \$245   | \$318   |
| Natural resource, parks & recreation         | \$95        | \$53    | \$135   | \$89    | \$65    | \$47    | \$141   |
| Administration & other                       | \$1,375     | \$1,878 | \$1,509 | \$1,901 | \$1,327 | \$2,251 | \$1,248 |
| Interest on general debt                     | \$147       | \$362   | \$196   | \$558   | \$290   | \$400   | \$291   |
| Total  | \$5,709     | \$6,720 | \$6,210 | \$7,023 | \$5,017 | \$7,134 | \$8,161 |
| State's rank of total per capita expenditure | s           | 11      | 17      | 9       | 34      | 8       | 4       |

Fiscal 2008 Per Capita State Government General Expenditures, by Type (for the U.S. and the New England States)



EXHIBIT A-62 Quarter 4, FY 2010

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.

|      | Massa  | <i>ichusetts</i> | New     | England | <b>United States</b> |         |
|------|--------|------------------|---------|---------|----------------------|---------|
|      | Total  | Percent          | Total   | Percent | Total                | Percent |
| Year | Units  | Change           | Units   | Change  | Units                | Change  |
| 1969 | 33,572 |                  | 70,539  |         | 1,330,161            |         |
| 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%  |
| 1981 | 15,599 | -2.8%            | 38,067  | -5.3%   | 985,600              | -15.9%  |
| 1982 | 15,958 | 2.3%             | 39,470  | 3.7%    | 1,000,500            | 1.5%    |
| 1983 | 22,950 | 43.8%            | 57,567  | 45.9%   | 1,605,221            | 60.4%   |
| 1984 | 28,471 | 24.1%            | 72,356  | 25.7%   | 1,689,667            | 5.3%    |
| 1985 | 39,360 | 38.2%            | 96,832  | 33.8%   | 1,732,335            | 2.5%    |
| 1986 | 43,877 | 11.5%            | 108,272 | 11.8%   | 1,771,832            | 2.3%    |
| 1987 | 40,018 | -8.8%            | 101,222 | -6.5%   | 1,542,499            | -12.9%  |
| 1988 | 31,766 | -20.6%           | 82,123  | -18.9%  | 1,450,583            | -6.0%   |
| 1989 | 21,634 | -31.9%           | 53,543  | -34.8%  | 1,345,084            | -7.3%   |
| 1990 | 15,276 | -29.4%           | 36,811  | -31.2%  | 1,125,583            | -16.3%  |
| 1991 | 12,624 | -17.4%           | 31,111  | -15.5%  | 953,834              | -15.3%  |
| 1992 | 16,346 | 29.5%            | 36,876  | 18.5%   | 1,105,083            | 15.9%   |
| 1993 | 17,715 | 8.4%             | 39,225  | 6.4%    | 1,210,000            | 9.5%    |
| 1994 | 18,302 | 3.3%             | 40,459  | 3.1%    | 1,366,916            | 13.0%   |
| 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%  |

SOURCES: United States Census Bureau. May 2010.

*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.

# **Existing Home Sales**

(quarterly rates are seasonally adjusted, rates in thousands)

|        | Ma    | ssachusetts | Uni     | ted States |
|--------|-------|-------------|---------|------------|
| Year   | Sales | % Change    | Sales   | % Change   |
| 1981   | 43.0  |             | 2,575.0 |            |
| 1985   | 60.2  | 40.2%       | 3,382.5 | 31.4%      |
| 1990   | 48.6  | -19.4%      | 3,603.5 | 6.5%       |
| 1995   | 69.6  | -2.6%       | 4,342.3 | -1.5%      |
| 1996   | 81.2  | 16.6%       | 4,705.3 | 8.4%       |
| 1997   | 90.1  | 11.0%       | 4,908.8 | 4.3%       |
| 1998   | 99.9  | 10.8%       | 5,585.3 | 13.8%      |
| 1999   | 98.5  | -1.3%       | 5,922.8 | 6.0%       |
| 2000   | 88.7  | -10.0%      | 5,831.8 | -1.5%      |
| 2001   | 87.5  | -1.4%       | 6,026.3 | 3.3%       |
| 2002   | 115.9 | 32.5%       | 5,631.0 | -6.6%      |
| 2003   | 118.3 | 2.1%        | 6,175.0 | 9.7%       |
| 2004   | 141.7 | 19.8%       | 6,778.0 | 9.8%       |
| 2005   | 148.6 | 4.9%        | 7,076.0 | 4.4%       |
| 2006   | 128.1 | -13.8%      | 6,478.0 | -8.5%      |
| 2007   | 122.4 | -4.4%       | 5,652.0 | -12.8%     |
| 2008   | 103.8 | -15.2%      | 4,913.0 | -13.1%     |
| 2009   | 107.9 | 3.9%        | 5,156.0 | 4.9%       |
| 2009.I | 90.4  |             | 4,610.0 |            |
| 2010.I | 110.0 | 21.7%       | 5,137.0 | 11.4%      |

### Change in Existing Home Sales - Annual and Latest Quarter Massachusetts and the United States



EXHIBIT A-Appendix-3 Quarter 4, FY 2010

*Home prices.* Prices have been declining in the Boston metropolitan area but the median is still close to two times the national median.

|         | Median Sales Price for Existing Single-Family Homes<br>(quarterly price not seasonally adjusted, price in thousands)                  |       |        |       |        |  |  |  |  |  |  |
|---------|---|-------|--------|-------|--------|--|--|--|--|--|--|
| Year    | Boston Metro Boston Prices as a Boston Annual U.S. Annual<br>Year Area United States Percent of the U.S. Percent Change Percent Chang |       |        |       |        |  |  |  |  |  |  |
| 1985    | \$131   | \$75  | 173.7% | 33.5% | 4.0%   |  |  |  |  |  |  |
| 1990    | \$174   | \$95  | 182.6% | -4.2% | 2.3%   |  |  |  |  |  |  |
| 1991    | \$169   | \$99  | 169.5% | -3.0% | 4.4%   |  |  |  |  |  |  |
| 1992    | \$171   | \$104 | 164.6% | 1.2%  | 4.2%   |  |  |  |  |  |  |
| 1993    | \$171   | \$107 | 160.9% | 0.5%  | 2.8%   |  |  |  |  |  |  |
| 1994    | \$179   | \$109 | 164.7% | 4.4%  | 2.1%   |  |  |  |  |  |  |
| 1995    | \$179   | \$113 | 158.6% | -0.2% | 3.7%   |  |  |  |  |  |  |
| 1996    | \$189   | \$119 | 158.7% | 5.7%  | 5.6%   |  |  |  |  |  |  |
| 1997    | \$195   | \$124 | 157.1% | 3.0%  | 4.0%   |  |  |  |  |  |  |
| 1998    | \$212   | \$130 | 162.9% | 8.9%  | 5.1%   |  |  |  |  |  |  |
| 1999    | \$261   | \$133 | 196.2% | 23.1% | 2.2%   |  |  |  |  |  |  |
| 2000    | \$330   | \$138 | 238.3% | 26.4% | 4.1%   |  |  |  |  |  |  |
| 2001    | \$355   | \$146 | 242.4% | 7.6%  | 5.8%   |  |  |  |  |  |  |
| 2002    | \$335   | \$158 | 212.1% | -5.5% | 8.0%   |  |  |  |  |  |  |
| 2003    | \$359   | \$180 | 198.9% | 6.9%  | 14.0%  |  |  |  |  |  |  |
| 2004    | \$390   | \$195 | 199.6% | 8.7%  | 8.3%   |  |  |  |  |  |  |
| 2005    | \$413   | \$219 | 188.7% | 6.0%  | 12.2%  |  |  |  |  |  |  |
| 2006    | \$402   | \$222 | 181.3% | -2.7% | 1.3%   |  |  |  |  |  |  |
| 2007    | \$396   | \$218 | 181.6% | -1.6% | -1.8%  |  |  |  |  |  |  |
| 2008    | \$361   | \$197 | 183.7% | -8.7% | -9.8%  |  |  |  |  |  |  |
| 2009r   | \$333   | \$172 | 193.4% | -7.8% | -12.5% |  |  |  |  |  |  |
| 2009.I  | \$291   | \$167 | 173.8% |       |        |  |  |  |  |  |  |
| 2010.Ip | \$322   | \$166 | 193.7% | 10.7% | -0.7%  |  |  |  |  |  |  |



EXHIBIT A-Appendix-4 Quarter 4, FY 2010

*Electricity Prices, Supply and Capacity by Source.* Massachusetts electric utilities generated \$2.63 billion in revenue as of April 2010 (YTD). This was 10.2 percent less than the same period in 2009, while they sold 1.6 percent less electricity. Massachusetts had the fourth highest electric rate in the country in 2008; 16.27 cents per kilowatt hour, while the U.S. average was 9.74. This was an increase of 7.3 percent for Massachusetts and an increase of 6.7 percent for the U.S. from the previous year. The Massachusetts Net Electricity Trade Index, which represents the state's electricity self-sufficiency, was 0.74 in 2008. This means it imported 26 percent of its electricity supply, 16,281 million kilowatt hours, from out-of-state. In 2008, two-thirds of Massachusetts generating capacity was oil and natural gas based.





*Travel and Tourism.* The Massachusetts Office of Travel and Tourism (MOTT) reported a decrease of 6.7 percent in museum and attraction attendance, 638,936 visitors, in March 2010, compared to March 2009. March 2010 year-to-date museum and attraction attendance, 1,841,486 visitors, was up 5.3 percent compared to the same period in 2009.

*Transportation and Warehousing*. Between 2001 and 2008, the transportation and warehousing sector of Massachusetts GDP increased 0.6 percent when measured with year 2000 chained dollars. It contributed 1.6 percent to the total Massachusetts Real GDP in 2008; 0.2 percent less than it did in 2001.

Massachusetts' major air and seaports are managed by the Massachusetts Port Authority (Massport), an independent public authority. According to Massport, Logan had nearly 50 airlines connecting Boston with more than 100 non-stop, domestic and international destinations. Based on total passenger volume in calendar year 2009 data, Logan Airport was the most active airport in New England and remained the 20th most active in the U.S. according to the Federal Aviation Authority and 45th most active in the world according to Airports Council International. Massport reported that as of May, year-to-date 2010, total airport flight operations were up 1.4 percent and total airport passengers were up 6.6 percent from the same period in 2009.

Logan was served by 11 all-cargo and small package/express carriers in 2007. According to the FAA, Logan Airport ranked 29th in the nation in total air cargo volume in calendar year 2009. In 2009, the airport handled 836 million pounds of cargo, a 15.1 percent decrease from 2008. Massport reported that as of May, year-to-date 2010, the combined cargo volume was up 7.5 percent and total express mail was up 1.6 percent from the same period in 2009. Please refer to the Aviation Activity charts on the following page.

At Massport's Port of Boston properties, 2008 total cargo throughput was 14.7 million metric tons, a 5 percent decrease from 2007. Automobile processing increased 166 percent to 26,779 units, and cruise passenger trips increased 15 percent to 269,911. Total containerized cargo at public and private terminals decreased 15 percent to 1.5 million metric tons. The Army Corps of Engineers reported Massachusetts total waterborne cargo shipped or received in 2008 decreased by 7.3 percent to 26.0 million short tons from 2007. Waterborne cargo in New England decreased 7.7 percent while the U.S decreased 3.4 percent. Please refer to the Waterborne Tonnage by State charts on the following page.

# EXHIBIT A-Appendix-6 Quarter 4, FY 2010

| Aviation Activity for Massachusetts' Primary Airports |               |               |               |               |               |               |             |             |
|---|---------------|---------------|---------------|---------------|---------------|---------------|-------------|-------------|
| Passenger Boardings                                   | 2002          | 2003          | 2004          | 2005          | 2006          | 2007          | 2008        | 2009p       |
| General Edward Lawrence Logan International           | 11,077,238    | 11,087,799    | 12,758,020    | 13,214,923    | 13,544,552    | 13,783,297    | 12,820,489  | 12,566,279  |
| Nantucket Memorial                                    | 253,422       | 229,300       | 243,313       | 252,757       | 276,866       | 282,197       | 258,214     | 112,626     |
| Barnstable Municipal-Boardman/Polando Field           | 180,807       | 158,360       | 167,522       | 177,761       | 206,980       | 204,152       | 191,906     | 47,648      |
| Worcester Regional                                    | 37,298        | 2,234         | 1,274         | 2,036         | 14,823        | 460           | 3,182       | NA          |
| Laurence G Hanscom Field                              | 40,419        | 19,375        | 17,049        | 13,887        | 14,560        | 16,568        | 8,385       | NA          |
| Marthas Vineyard                                      | 59,500        | 53,011        | 49,480        | 48,977        | 45,881        | 49,205        | 45,002      | 42,248      |
| New Bedford Regional                                  | 21,667        | 21,097        | 19,686        | 17,960        | 15,211        | 14,567        | 13,908      | 11,680      |
| Provincetown Municipal                                | 10,533        | 11,801        | 11,424        | 10,236        | 11,375        | 12,459        | 11,468      | 10,747      |
| Total   | 11,680,884    | 11,582,977    | 13,267,768    | 13,738,537    | 14,130,248    | 14,362,905    | 13,352,554  | 12,791,228  |
| Cargo - Gross Landed Weight (lbs.)                    | 2002          | 2003          | 2004          | 2005          | 2006          | 2007          | 2008        | 2009        |
| General Edward Lawrence Logan International           | 1,272,185,900 | 1,199,383,800 | 1,172,103,700 | 1,148,881,400 | 1,100,485,850 | 1,059,947,900 | 984,258,400 | 835,954,035 |

### Change in Aviation Activity at Massachusetts' Primary Airports

| Passenger Boardings  | 2001-2002 | 2002-2003 | 2003-2004 | 2004-2005 | 2005-2006 | 2006-2007 | 2007-2008 | 2008-2009p |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| General Edward Lawrence Logan International                      | -5.6%     | 0.1%      | 15.1%     | 3.6%      | 2.5%      | 1.8%      | -7.0%     | -2.0%      |
| Nantucket Memorial   | -7.0%     | -9.5%     | 6.1%      | 3.9%      | 9.5%      | 1.9%      | -8.5%     | -56.4%     |
| Barnstable Municipal-Boardman/Polando Field                      | -8.3%     | -12.4%    | 5.8%      | 6.1%      | 16.4%     | -1.4%     | -6.0%     | -75.2%     |
| Worcester Regional   | -53.2%    | -94.0%    | -43.0%    | 59.8%     | 628.0%    | -96.9%    | 591.7%    | NA         |
| Laurence G Hanscom Field   | -43.4%    | -52.1%    | -12.0%    | -18.5%    | 4.8%      | 13.8%     | -49.4%    | NA         |
| Martha's Vineyard  | -9.0%     | -10.9%    | -6.7%     | -1.0%     | -6.3%     | 7.2%      | -8.5%     | -6.1%      |
| New Bedford Regional   | -0.5%     | -2.6%     | -6.7%     | -8.8%     | -15.3%    | -4.2%     | -4.5%     | -16.0%     |
| Provincetown Municipal   | -18.9%    | 12.0%     | -3.2%     | -10.4%    | 11.1%     | 9.5%      | -8.0%     | -6.3%      |
| Total  | -6.3%     | -0.8%     | 14.5%     | 3.5%      | 2.9%      | 1.6%      | -7.0%     | -4.2%      |
| Cargo  | 2001-2002 | 2002-2003 | 2003-2004 | 2004-2005 | 2005-2006 | 2006-2007 | 2007-2008 | 2008-2009p |
| General Edward Lawrence Logan International                      | -2.3%     | -5.7%     | -2.3%     | -2.0%     | -4.2%     | -3.7%     | -7.1%     | -15.1%     |
| SOURCE: Federal Aviation Administration July 2010. p=preliminary |           |           |           |           |           |           |           |            |

http://www.faa.gov/airports\_airtraffic/airports/planning\_capacitypassenger\_allcargo\_stats/

| Waterborne Tonnage by State (In Units of 1,000 Tons) |           |           |           |           |           |           |           |           |           |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| State  | 2000      | 2001      | 2002      | 2003      | 2004      | 2005      | 2006      | 2007      | 2008      |
| U.S. total   | 2,424,596 | 2,386,558 | 2,340,292 | 2,394,199 | 2,551,939 | 2,527,622 | 2,588,440 | 2,563,972 | 2,477,094 |
| Maine  | 31,769    | 30,586    | 29,140    | 31,698    | 32,447    | 32,353    | 28,103    | 26,839    | 24,747    |
| Massachusetts  | 26,973    | 26,446    | 26,117    | 30,655    | 31,787    | 28,812    | 27,411    | 28,043    | 25,993    |
| Connecticut  | 18,959    | 18,267    | 17,610    | 18,579    | 20,075    | 19,617    | 19,340    | 20,148    | 18,196    |
| Rhode Island   | 9,089     | 9,170     | 8,437     | 9,417     | 9,764     | 10,972    | 11,016    | 11,184    | 10,517    |
| New Hampshire  | 4,462     | 4,447     | 4,108     | 4,971     | 4,795     | 5,254     | 4,823     | 4,026     | 3,833     |
| Vermont  | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| New England  | 91,252    | 88,916    | 85,412    | 95,320    | 98,868    | 97,008    | 90,693    | 90,240    | 83,286    |

| State         | 2000-2001 | 2001-2002 | 2002-2003 | 2003-2004 | 2004-2005 | 2005-2006 | 2006-2007 | 2007-200 |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| U.S. total    | -1.6%     | -1.9%     | 2.3%      | 6.6%      | -1.0%     | 2.4%      | -0.9%     | -3.49    |
| Maine         | -3.7%     | -4.7%     | 8.8%      | 2.4%      | -0.3%     | -13.1%    | -4.5%     | -7.89    |
| Massachusetts | -2.0%     | -1.2%     | 17.4%     | 3.7%      | -9.4%     | -4.9%     | 2.3%      | -7.39    |
| Connecticut   | -3.6%     | -3.6%     | 5.5%      | 8.1%      | -2.3%     | -1.4%     | 4.2%      | -9.79    |
| Rhode Island  | 0.9%      | -8.0%     | 11.6%     | 3.7%      | 12.4%     | 0.4%      | 1.5%      | -6.09    |
| New Hampshire | -0.3%     | -7.6%     | 21.0%     | -3.5%     | 9.6%      | -8.2%     | -16.5%    | -4.89    |
| Vermont       | -         | -         | -         | -         | -         | -         | -         |          |
| New England   | -2.6%     | -3.9%     | 11.6%     | 3.7%      | -1.9%     | -6.5%     | -0.5%     | -7.79    |

SOURCE: Army Core of Engineers, Waterborne Commerce Statistics Center (WCSC) Feb 2010. http://www.iwr.usace.army.mil/ndc/wcsc/wcsc.htm

# Sources

Listed below are the web sites of the original data sources used to compile Exhibit A.

## Introduction American Human Development Project http://www.measureofamerica.org/

**Population Characteristics** U.S. Department of Commerce, Bureau of the Census *http://www.census.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/regional/index.htm 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.iwr.usace.army.mil.ndc/ **Federal Reserve Bank of Boston** http://www.bos.frb.org **U.S. Department of Commerce** http://www/census.gov National Association of Realtors; Federal Reserve **Bank of Boston** http://www.bos.frb.org/economic/neei/neeidata.htm **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