THE STATE OF WORKING MASSACHUSETTS 2011

Introduction

For workers in Massachusetts—as across the country—2011 was yet another year of economic struggle. The lingering effects of the Great Recession have continued to hamper job growth, depress wages, and deepen poverty.

Overall, Massachusetts has fared somewhat better than the nation as a whole. At 7%, our unemployment rate is lower than it has been since December of 2008. And even when the recession was at its most severe, our economy outperformed most other states. Unemployment was consistently lower, wages and incomes higher, and poverty less widespread.

There are many reasons that Massachusetts was spared the worst of this recession, and some of them have very deep roots. We benefited from deliberate choices made over the last few decades to develop a highly-skilled and highly-educated workforce. Today, we have the best-educated workers in the country—over 43 percent with a bachelor's degree or higher. And having a well-educated work force has helped Massachusetts to build a relatively strong, high wage economy.

Unfortunately, the past few decades have also produced some fundamental changes in the U. S. economy. The “Occupy” movement which erupted across the country last fall brought attention to the issue of inequality, and our analysis shows that inequality is also a serious problem in Massachusetts. While incomes for people at the top have risen significantly over the last 30 years, those in the middle and the bottom have seen little or no improvement.

Ultimately, inequality is a national issue, and it requires national solutions. But there are things the state can do to mitigate it.

One option is to update the minimum wage. In the past, when the state has raised the minimum wage, we have seen modest increases in the wages of low wage workers—followed by declines when the minimum wage isn’t adjusted to account for inflation. Consistently updating the minimum wage could help ensure that our lowest-wage workers earn enough to support themselves and their families.

We also know that wages are significantly higher—and rising somewhat faster—for workers with more education. Expanding access to high-quality education would therefore help more of our people move up the income ladder.

How we respond to economic challenges like these depends on how we understand them. The goal of this paper is not just to describe the economic situation in Massachusetts at the close of 2011, but to provide information to help us build a stronger, more equitable economy in 2012, and beyond.
JOBS

The most recent recession is the worst on record for the U.S. since the Great Depression in terms of the peak share of jobs lost. By this measure, the depth of the recession in terms of share of jobs lost was reached in February of 2010, with the US having shed 6.1 percent of the jobs it had in December 2007, the official start of the recession.

The 2007 Recession Is The Worst Since The Great Depression for Peak Percent of US Jobs Lost

Source: EPI analysis of BLS Current Establishment Survey data and NBER recession data
At the same time, it is taking much longer for the U.S. to regain these lost jobs than in past recessions. As of November 2011, forty-seven months from the official start of the Great Recession, the U.S. continues to have 4.6 percent fewer jobs than were available at recession’s start. Historically, this many months after the onset of a recession, the US has regained all the jobs lost during the recession and in most cases added substantially to the number of jobs available in the economy.

The 2007 Recession and Its Aftermath Have Been The Worst Since The Great Depression for Duration of Deep Job Losses

Percentage of US jobs gained/lost at 47 months from start of recession, as a share of total US jobs available at start of recession

Source: EPI analysis of BLS Current Establishment Survey data and NBER recession data
Massachusetts, however, has lost a far smaller share of its jobs (1.4 percent) than most other states have (US average = 4.5 percent).

MA Has Lost A Smaller Percentage of Its Total Jobs During The Current Downturn Than Most States (Dec. 2007 - Nov. 2011)

Percentage of jobs lost/gained, Dec. 2007 - Nov. 2011

The jobs that have been lost in Massachusetts to date—a net loss of some 46,000 jobs since the start of the recession in December 2007—have not been spread evenly across all employment sectors. Both Construction and Manufacturing jobs have been hard hit, while the Education and Health sector and the Leisure and Hospitality sector both have seen modest growth in the number of jobs available in Massachusetts. With few exceptions, a similar pattern of sectoral job losses/gains has been true for the US as a whole as well.


Percentage of jobs lost/gained, by employment sector, Dec.2007 - Nov. 2011

At the same time that the nation has lost a record share of its jobs during the Great Recession, it also has failed to produce many jobs since the recovery officially began. Simultaneously, the population of working age adults has grown throughout this period. The result is a combined shortfall of 11.5 million jobs needed in order to restore the US economy to rates of employment in effect prior to the recession’s onset.

From Start of Great Recession to Present, Total US Job Shortfall Is Over 11 Million (Dec. ’07 - Nov. ’11)

US payroll employment and number of jobs needed to keep up with growth in working-age population (in thousands)

UNEMPLOYMENT

Forty-seven months after the start of the Great Recession, Massachusetts has lower levels of unemployment than most other states. With the Massachusetts unemployment rate at 7.0 percent, however, this still means that 244,000 workers are actively seeking work but remain without jobs, while thousands of others have given up the search entirely. For those Bay Staters experiencing the income loss and uncertainty that accompanies short or long-term unemployment, the impact of the current downturn is both very real and deeply problematic.

Massachusetts Has Lower Levels of Unemployment Than Most States

Unemployment Rate, Nov. 2011

Massachusetts has maintained lower unemployment rates than the US throughout the duration of the Great Recession and its aftermath.

Throughout the Great Recession and Its Aftermath, Massachusetts Has Maintained a Lower Unemployment Rate Than the US

Unemployment Rate

Official Period of US Recession:

U.S. = 8.6%

MA = 7.0%

The overall lower rate of general unemployment that Massachusetts has maintained relative to other states, however, conceals the large disparities in unemployment rates experienced by different groups of workers within the Massachusetts economy. Massachusetts workers with lower levels of education have experienced much higher levels of both regular unemployment (unemployed for 26 weeks or less) and long-term unemployment (unemployed for more than 26 weeks) than have Massachusetts workers with less education.

Because educational attainment is closely correlated with annual earnings,¹ these less educated workers are very likely to be among the portion of the Massachusetts workforce with low incomes. They are also likely to have experienced little or no growth in earning power in recent decades (see discussion below). As a result, the burdens of unemployment experienced by workers in the Bay State during this historic downturn have been borne disproportionately by those residents with the fewest personal financial resources upon which to draw.

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¹ State of Working Massachusetts 2010: [http://www.massbudget.org/769](http://www.massbudget.org/769)

This pattern also holds true for workers experiencing a period of unemployment lasting for more than one year. Again, Massachusetts workers with lower levels of education (and therefore, in general, lower wage and earnings levels) have experienced much higher rates of unemployment lasting over a year than have workers with college degrees or higher.

During Current Downturn, Workers with Less Education Have Significantly Higher Rates of Unemployment Lasting More Than One Year

Source: Economic Policy Institute analysis of CPS 2-year pooled data, 2009Q3 - 2011Q3
* Note: Figure for MA advanced degree holders is unknown due to limitations in sample size for this population. As MA rates appear to track national rates fairly closely for other categories of workers, one might reasonably expect this pattern to continue with adv. degree holders as well.
Looking at a broader measure of workers whose employment status has been negatively affected during the current downturn—a measure termed “underemployment”—it is similarly clear that rates among Massachusetts workers vary greatly by educational attainment. Once again, workers with low levels of education (and therefore, in general, low wage and earning levels) have been affected disproportionately, with underemployment rates almost four times higher than workers with college degrees or higher. The underemployment category includes: 1) unemployed workers, 2) workers who are working part time because full time opportunities are not available, and 3) workers defined as only “marginally attached” to the labor force.2

MA Workers with Higher Levels of Education Have Much Lower Levels of Underemployment* in the Current Recovery


* The category “underemployed” includes unemployed workers, marginally attached workers, and workers working part time for economic reasons. It does not include people who have quit seeking work altogether.

2 The definition for “underemployed” used by the U.S. Census bureau includes all three of these groups of workers. The figures presented in this chart for Massachusetts, however, do NOT include those workers defined as “marginally attached”. The sample size in Massachusetts was too small for the Census to provide accurate estimates of the number of workers in the marginally attached group and hence this group is omitted from the totals.
WAGES

Wages account for the majority of income received by most workers—on average, about two-thirds of income is derived from wages, but this proportion is generally much higher for middle- and low-wage earners who do not receive income from capital gains or other investments. Because of the importance of wages to working families, looking at wage levels and growth in real wages (i.e., wages that have been adjusted for inflation) over time is one way to measure the well-being of workers in Massachusetts. What we see when we do so is a picture similar to that of other aspects of the state’s economy—that is, while Massachusetts is generally doing better than the rest of the country, not all residents of the state have shared equally in the gains of recent decades. Lack of substantial real growth among lower-wage workers, along with more rapid growth at the high end, has widened the wage gap in Massachusetts.

In 2010, the average median hourly wage in Massachusetts was $19.83 per hour, among the highest in the country, and 24 percent higher than the U.S. average median wage of $16.00 per hour.

Massachusetts Had the Second Highest Median Wage in 2010

For a breakdown of sources of income for different income groups, see Mishel, Lawrence et al, The State of Working America 2008-2009 (Cornell University, 2009), p. 82.
The relatively high median wage level in Massachusetts follows three decades during which the median wage grew faster in this state than in the country as a whole. In 1979 the median hourly wage in the state was $15.50 per hour in inflation-adjusted (2010) dollars ($5.16 in nominal dollars), slightly lower than the U.S. average of $15.83 per hour ($5.27 nominal). By 2010 the Massachusetts median hourly wage had risen to 19.83 per hour, almost a quarter higher than the U.S. median wage.

Since the 1980s Median Wages Have Grown Faster in Massachusetts than in Other States

Real Value of Median Hourly Wage, 1979-2010 (2010 dollars)

But while median wage earners may be better off in Massachusetts compared to other parts of the country, the experience among workers within Massachusetts has varied in recent years. During the 1980s, real hourly wages grew at roughly the same rate (about 1.8 percent a year) for workers at the 20th, 50th, and 80th percentiles. In the 1990s, however, real wages began to grow at very different rates for these groups. Growth in real wages for the top 20 percent of workers was robust, especially in the 2000s. Meanwhile, wages for the middle group grew at less than half the rate the higher earners experienced, and wage earners at the 20th percentile saw a decline in real wages during most of the last two decades.

Real Wages Have Grown Faster for Higher Wage Earners in Recent Decades

Average Annual Change in Real Hourly Wages for Wage-Earning Groups in Massachusetts Over Recent Business Cycles

- 20th percentile
- 50th percentile (median)
- 80th percentile

The recent recession led to a drop in wages for all earning groups in Massachusetts, but the gap between hourly wages for high and low-income workers remains wide. Between 1981 and 2010 (each a year following the official end of a recession), this gap grew by nearly $10.00, adjusted for inflation. If the trend of unequal wage growth resumes as the economy begins to grow again, this gap will widen further.

**The Gap Between High and Low Wage Earners Has Grown in Recent Decades**

Real Hourly Wage for 20th and 80th Percentile of MA Wage Earners in Year Following End of Recession

In fact, while inequality in wages and income has increased across the U.S., the gap between high and low earners appears to have widened more in Massachusetts than in the rest of the country. The figure below shows the average hourly wage for earners at the 20th percentile as a percentage of the average hourly wage for earners at the 80th percentile. In 1992, that percentage was higher in Massachusetts than the U.S. average—40.0 percent compared to 36.6 percent—meaning that the gap between these two groups was actually smaller in Massachusetts. By 2007, at the start of the recession, the Massachusetts ratio had dropped nearly ten percentage points, to 30.4 percent, while the U.S. ratio had fallen by less than a percentage point, to 36.0 percent. The Massachusetts gap narrowed somewhat during the recession, but remains wider than the U.S. average.

### The Gap Between High and Low Wage Earners Has Grown More in Massachusetts than in the U.S. as a Whole

Average Hourly Wage for 20th Percentile of Wage Earners as a Percentage of Hourly Wage for the 80th Percentile, 1992-2010

The Wage-Education Link

While a variety of factors affect wage levels, one likely explanation for Massachusetts’ relatively higher median wage and stronger growth in recent decades is the higher level of education among the state’s workforce. Recent academic work has pointed to a connection between education and income and suggested that a state’s high school and college attainment rates is an important factor in explaining its per capita income growth relative to other states over time.4

This work is consistent with a change in the correlation between state median wage and educational attainment levels that can be seen between the years 1979 and 2010. As the next two figures show, there was a much weaker correlation between these two variables in 1979, while in 2010 higher educational attainment is more strongly linked to higher wages on the state level. The change is likely part of larger structural changes in the labor market—thirty years ago it was easier to find manufacturing jobs that paid relatively well even for people with lower levels of education; today many of these jobs have disappeared and higher-paying jobs tend to require a college degree.

The charts below illustrate the changing relation between education and wages. Each diamond refers to a single state, and the slope of the trend line shows how strongly workforce education is correlated with median wages across states.

Weaker Correlation Between Education and Wages in 1979

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Stronger Correlation Between Education and Wages in 2010

Median Hourly Wage and Percentage of Workforce with Bachelor's Degree by State, 2010

In Massachusetts, the share of workers with a Bachelor’s degree or higher has more than doubled over the past thirty years (see first figure, below). In fact, as the second figure below shows, Massachusetts now has the highest proportion of workers with a Bachelor’s degree or higher of all U.S. states. Given the correlation between a state’s educational attainment level and its median wage, it is not surprising that Massachusetts has high wage and income levels compared to many other states (see separate discussion of Massachusetts income in the following section).

The Proportion of Workers with a College Education Has Grown Since 1979

Share of Labor Force by Education in Massachusetts, 1979 and 2010

<table>
<thead>
<tr>
<th>Education Level</th>
<th>1979</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school</td>
<td>21.6%</td>
<td>7.0%</td>
</tr>
<tr>
<td>High school</td>
<td>37.5%</td>
<td>25.1%</td>
</tr>
<tr>
<td>Some college</td>
<td>21.1%</td>
<td>24.0%</td>
</tr>
<tr>
<td>Bachelor’s or higher</td>
<td>19.8%</td>
<td>43.9%</td>
</tr>
</tbody>
</table>


Massachusetts Has the Largest Proportion of Workers with a Bachelor’s Degree or Higher

Share of Labor Force with a Bachelor’s Degree or Higher, by State

MA = 43.9%

In 2010, the median hourly wage for a Massachusetts worker with a Bachelor’s degree or higher was nearly twice as much as that for a worker with a high school degree (see first figure, below). This higher level follows three decades during which real hourly wages for college-educated workers grew at a fairly robust rate, while wages for those with some college education grew slightly and those with a high school degree saw a slight drop in real median wages (see second figure, below).

**Median Wages for Those with a Bachelor's Degree or Higher Are Greater than Wages for Less-Educated Workers**

Median Hourly Wage in Massachusetts by Educational Level, 2010

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Median Hourly Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school</td>
<td>$14.81</td>
</tr>
<tr>
<td>Some college</td>
<td>$15.86</td>
</tr>
<tr>
<td>Bachelor's or higher</td>
<td>$27.16</td>
</tr>
</tbody>
</table>


**Real Wages Grew Faster for Workers with Higher Levels of Education**

Real Median Hourly Wage in Massachusetts by Educational Level, 1979-2010 (2010 $)

- High school
- Some college
- Bachelor's or higher

The Minimum Wage

The preceding discussion suggests that a high-quality educational system that ensures broad access to college and university training is an important tool for helping workers move to higher-paying jobs. Indeed, it is likely that our highly educated workforce helps attract high-wage employers to Massachusetts. It is also the case, however, that some jobs do not require a higher degree. In the past, federal and state requirements for a minimum wage have helped ensure adequate salaries for such jobs. In Massachusetts about 130,000 workers earn hourly wages that are at or near the minimum wage of $8.00 (this total includes workers earning up to $8.25 per hour).

A majority of workers earning at or near the minimum wage—66 percent—are 20 years or older and already have a high school degree. Nearly two-thirds work at least 20 hours per week, and a quarter work full time. Minimum wage workers are concentrated in a few industries—in fact over half work in either the Retail or Leisure and Hospitality industries.

Minimum Wage Earners Are Heavily Concentrated in the Retail and Leisure & Hospitality Industries

Number of MA workers earning at or near the Massachusetts minimum wage in 2010, selected industries

Minimum wage standards also tend to benefit other low-income workers who earn wages above the minimum wage. This is so because labor contracts may tie wages to the value of the minimum wage or the overall wage structure of an employer may shift upward when the minimum wage increases. This phenomenon can be seen in the last decade in Massachusetts. Increases in the required state minimum wage from $5.25 per hour to $6.00 per hour in 2000 and $6.75 in 2001 ($7.60 and $8.31 in real 2010 dollars) were followed by increases in the average real hourly wage for workers at the 20th percentile in subsequent years (from $10.98 to $11.21 in 2001 and to $11.70 in 2002); a similar pattern followed statutory increases in 2007 and 2008.

**Minimum Wage Increases in the 2000s Were Followed by Wage Increases for Other Low-Wage Workers**

![Graph showing real value of minimum wage and hourly wage for 20th percentile of Massachusetts wage earners, 1999-2010 (2010 $).](source)

Source: U.S. Department of Labor; Economic Policy Institute analysis of Current Population Survey data; values deflated using CPI-U
Over the past forty years the value of the minimum wage has been eroded by inflation. A minimum wage earner working full time in Massachusetts will earn about $16,000 this year, higher than the poverty threshold for an individual ($11,344 for an individual under 65 years), but lower than the threshold for a family of three, which is about $17,500. That same worker would have earned about $20,650 back in 1968 (measured in real, inflation-adjusted dollars).

**The Real Value of the Massachusetts Minimum Wage Has Declined 23 Percent Since 1968**

![Graph showing the real value of the Massachusetts minimum wage from 1968 to 2020, projected to 2020. The graph illustrates a decline in the real value of the minimum wage since 1968.](source: United States Department of Labor; minimum wage deflated using CPI-U; 2011-2020 projections based on CBO inflation projections)
Income

As noted in the preceding discussion of wages, for the majority of lower and middle income workers, hourly wages are the principal source of these workers’ annual household income. While wage data allows us to gauge how well workers are being compensated on an hourly basis, we must turn to data on income in order to understand how workers are faring in terms of changes in their total annual purchasing power. At both the national and state levels, the data show that incomes for average working households have not fared well during the current economic downturn and weak recovery.

Data from the U.S. Census Bureau’s annual American Community Survey (ACS) show that median household income in Massachusetts fell to $62,072 in 2010. This is a statistically significant decline of $3,067 or 4.7 percent from the 2009 level of $65,139 (adjusted to 2010 dollars). For the U.S. as a whole, the ACS data show median household income stood at $50,046 in 2010, a statistically significant decline of $1,000 or 2.0 percent from the 2009 level. Since 2007 (in the final month of which, the nation officially fell into recession), median household income in Massachusetts dropped an inflation-adjusted $3,509 or 5.4 percent. During the same period, U.S. median household income fell $3,310 or 6.2 percent. [For a discussion of the differences between the American Community Survey and the Current Population Survey, please see the “Methodological Notes” section at the end of this report.]

**Median Household Income Fell in Massachusetts and in The U.S, 2009-2010**

![Graph showing median household income from 2000 to 2010 for Massachusetts and the United States](source: U.S. Census, American Community Survey)
Despite the drop, Massachusetts’s 2010 median household income continued to compare favorably to those of other states, remaining among the highest in the nation. As discussed elsewhere in this report, hourly wages (and therefore the resulting annual incomes which we are discussing here) are directly linked to educational attainment, an area in which the Massachusetts labor force has a substantial advantage over other states. The comparative strength of Massachusetts’ median incomes (relative to median incomes in other states) is closely related to the high levels of education seen in Massachusetts’ workforce.
Not only is median household income higher in Massachusetts than in most other states, over the past three decades, Massachusetts has seen among the highest percent increases in median household income in the nation. Between 1980 and 2010, median household income in Massachusetts increased by more than 26 percent (adjusted for inflation). By comparison, the national median household income increased 11 percent during this period.

**Massachusetts’ Change in Median Household Income Among Top Ten in Nation, 1980-2010**

Sources: Economic Policy Institute analysis of CPS data. Adjusted for inflation using CPI-U-RS.
As is true of hourly wages (discussed earlier in this report), median household annual income for Massachusetts began to diverge markedly from the U.S. average back in the late 1970s and early 1980s. In 1980, the Massachusetts median household income was $48,800, which was modestly higher than the national median household income of $44,500 (1980 figures are adjusted for inflation to 2010 dollars). Since then, median income in Massachusetts has grown at an average annual rate of close to 0.8 percent, while for the U.S. median income has grown less than half as quickly, at a rate slightly below 0.4 percent. As a result, by 2010 the Massachusetts median household income of $61,300 was $11,800 (or nearly 25 percent) higher than the national median household income of $49,500.5

Growth in Massachusetts Median Household Income Exceeds U.S., 1980-2010


5 The median household income figures presented here are derived from U.S. Census Current Population Survey data and therefore differ somewhat from the median household income figures provided in the preceding discussion, which drew upon American Community Survey data. For a more detailed discussion of the differences between these two data sets, please see the “Methodological Notes” section at the end of this report.
The data showing an increase in median household income in Massachusetts over the last three decades, however, do not reveal important differences among households at different income levels. In 1980, the difference in income between Massachusetts households with high incomes (families in the 90th percentile of all incomes) and those with lower incomes was much smaller than it is today. Thirty years ago, households in the 90th percentile (i.e., those families whose incomes were higher than 89 percent of other Massachusetts families) had median incomes about five times larger than the median incomes of households in the 20th percentile (i.e., those families whose incomes were lower than 80 percent of other Massachusetts families). By 2010, these higher income households had median incomes that were eight times higher than the median incomes of households in the 20th percentile.\(^6\)

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\(^6\) Ibid

Source: EPI Analysis of March CPS, 1980-2011
Looking at the differences in the rate of growth of median household incomes tells the same story in clearer terms. From 1980-2010, low-income Massachusetts households (those in the 20th percentile) saw an average income gain of just 0.3 percent each year over that full thirty-year span, adjusted for inflation. Households in the 50th percentile (i.e., those households in the very middle of the income distribution, with half of all households making more and half making less than they do) saw their incomes rise by 0.8 percent each year over the same period. By contrast, households in the 90th percentile saw their inflation-adjusted incomes grow by 1.7 percent each year, or nearly six times faster than the rate of income growth experienced by low-income Massachusetts households.

Annual Growth in Incomes of Low and Moderate-Income MA Households Has Been Slower than That of Higher-Income Households, 1980-2010

Compound annual growth rate in inflation-adjusted MA household income, by income group, 1980-2010


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7 Specifically, this statistic compares the incomes of those households that were in the 20th percentile in 1980 with the incomes of those households that were in the 20th percentile in 2010 (adjusted for inflation). It does not track the same set of households over that 30-year period. It therefore is not necessarily the case that the same households were included in that 20th percentile in both years.

8 The median household income figures under analysis here are derived from U.S. Census Current Population Survey data and therefore differ somewhat from the median household income figures provided in the earlier income discussion, which drew upon American Community Survey data. For a more detailed discussion of the differences between these two data sets, please see the “Methodological Notes” section at the end of this report.
POVERTY

The poverty rate measures the percentage of people who live in households with cash income below a certain level, known as the poverty threshold (cash income includes wages, social security, and unemployment benefits, but excludes non-cash benefits, such as food stamps, and the effect of tax payments and credits received.) For 2010, the poverty threshold was about $11,300 for a single person under the age of 65 and a little over $22,000 for a family of four (thresholds for individuals and couples over the age of 65 are somewhat lower).

In 2010, Massachusetts was one of ten states with the lowest poverty rates in the country. The rate was 11.4 percent, almost four percentage points lower than the U.S. average of 15.3 percent (for a discussion of how this would change under the census bureau’s new supplemental poverty measure, see Appendix A).

Massachusetts Ranks Among the 10 States with the Lowest Poverty Rates in the U.S.

Source: U.S. Census Bureau, 2010 American Community Survey

*Due to size of the margin of error for some state poverty rates, precise ranking is not possible; however Massachusetts falls among the ten lowest states.
While Massachusetts compares favorably with much of the rest of the U.S., we saw in preceding sections that wages and income have either stagnated or dropped at the lower end of the economic spectrum and thus it is not surprising that poverty has increased here. After remaining relatively stable for four years, the poverty rate in Massachusetts showed a statistically significant increase last year, growing from 10.3 percent in 2009 to 11.4 percent in 2010. This means that between 700,000 and 750,000 people had incomes below the official poverty threshold in Massachusetts in 2010. Around 38 percent of people in poverty who are 16 years or older worked either full or part time in 2010.

The Massachusetts and U.S. Poverty Rates Rose in 2010

Source: U.S. Census, 2010 American Community Survey
The poverty rate among children also showed a statistically significant increase in 2010, rising to 14.3 percent from 13.1 percent in 2009. This means that in 2010 a little more than 200,000 Massachusetts children lived in families with incomes below the poverty line. The childhood poverty rate in Massachusetts has risen by nearly two percentage points from its pre-recession level of 12.4 percent in 2006.

Poverty Among Children is Rising in Massachusetts and the U.S.

Percent of People Under 18 Years of Age Below the Poverty Threshold

Source: U.S. Census, 2010 American Community Survey
Nationally, the rate of deep poverty (defined as people with incomes at or below 50 percent of the poverty line) is at its highest point since the Census Bureau began to measure it. In Massachusetts the rate of deep poverty has also risen, from 4.0 percent in 2000 to 5.3 percent in 2010. This translates into some 325,000 to 350,000 Massachusetts residents living on incomes of less than about $5,600 for a single non-elderly person or about $11,000 for a family of four.

**Deep Poverty is at a 10-Year Highpoint in Both Massachusetts and the U.S.**

Source: U.S. Census Bureau, American Community Survey; Current Population Survey
Appendix A: Poverty and the Role of Social Programs

The Supplemental Poverty Measure
The analysis of poverty above is based on the official poverty measure that is used by the U.S. Census Bureau. Because it counts only cash income and does not take into account the effect of income transfer programs, such as the Supplemental Nutrition Assistance Program (SNAP, formerly known as Food Stamps), the official poverty measure may overstate the level of poverty by counting people who would fall into poverty without these programs. At the same time, the official poverty measure may also understate poverty levels because it uses a threshold that is based on the cost of food in 1963 (multiplied by three) and does not account for housing or other costs. It also does not take into account geographical variation in expenses, and does reflect costs related to employment, such as child care or transportation costs, or out-of-pocket expenses for medical care. Likewise, the official poverty measure does not include the effect of income, payroll, and other tax payments or the effect of tax credits, such as the Earned Income Tax Credit (EITC) received by families.9

Recently the Census Bureau has begun to publish a Supplemental Poverty Measure (SPM) based on a set of calculations that incorporates the elements discussed above. The SPM calculates income using a wider definition of resources that includes the EITC and SNAP, as well as other resources such as housing subsidies, reflects tax payments and credits, and subtracts out-of-pocket medical and other costs. It measures income against a threshold that uses current data on consumer expenditures on food, clothing, shelter and utilities, and varies depending on a household’s housing status. Under this measure, the U.S. poverty rate is somewhat higher than under the official measure, 16.0 percent compared to 15.3 percent. The demographic composition of those in poverty also shifts—the number of children in poverty drops from 21.6 percent to 18.2 percent, while poverty rates among adults and the elderly rise.

The Role of Social Programs
The Census bureau has provided some data showing how the poverty rate changes when certain components of the SPM calculation are excluded. This information allows us to see more clearly the role of social programs in reducing poverty. The table below shows the number of people in poverty throughout the U.S., as calculated using the SPM, and then shows how these numbers would change if EITC and SNAP benefits were not included in the calculation (as is the case with the official poverty measure). As the table shows, when the EITC is excluded around 6 million additional people, just over half of them children, are in poverty; similarly about 5 million people, just under half of them children, are in poverty if SNAP benefits are excluded. To put it another way, the EITC lifts 6 million people out of poverty, and SNAP raises 5 million people above the poverty threshold. As the table also shows, counting payroll taxes and medical expenses adds to the number of people counted as being in poverty.

9 For a description of the official poverty measure and a description of differences between it and the new Supplemental Poverty Measure, see “The Research Supplemental Poverty Measure: 2010 (U.S. Census Bureau, November 2011).
<table>
<thead>
<tr>
<th>Supplemental Poverty Measure With and Without Adjustments</th>
<th>All People</th>
<th>Under 18 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Number in U.S. Below Poverty</td>
<td>49,094,000</td>
<td>13,622,000</td>
</tr>
<tr>
<td><strong>Additional Number in Poverty:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- If no EITC</td>
<td>6,006,800</td>
<td>3,159,184</td>
</tr>
<tr>
<td>- If no SNAP</td>
<td>5,087,470</td>
<td>2,260,192</td>
</tr>
<tr>
<td><strong>Number in Poverty Due to:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Payroll taxes (FICA)</td>
<td>4,401,940</td>
<td>1,410,690</td>
</tr>
<tr>
<td>- Medical Out-of-Pocket Expenses</td>
<td>10,218,030</td>
<td>2,084,940</td>
</tr>
</tbody>
</table>


The Census Bureau has not calculated the SPM on a state-by-state level, so we do not know exactly how using this measure would change the official estimate of the Massachusetts poverty rate described above. To the extent that Massachusetts has higher costs, especially high housing costs, the SPM calculation would likely yield a higher poverty rate, while the existence of relatively strong safety net programs in Massachusetts would tend to lower it. We do know that nearly 378,000 taxpayers claimed the federal EITC credit last year. If the ratio of people lifted out of poverty by the EITC to the number of EITC filers on the national level (about 23 percent) holds in Massachusetts, close to 90,000 people in Massachusetts would have avoided poverty thanks to the EITC. Accounting for additional benefits from the Massachusetts State EITC would likely raise this number further. Likewise, Census data show that between 281,000 and 296,000 households received SNAP benefits in 2010; again if the federal ratio between households receiving SNAP benefits and people raised above poverty level held, then SNAP benefits help move 107,000 people out of poverty.
Appendix B: Methodological Notes

CPS vs. ACS Data

Data on income, wages and poverty (among other information) are collected by the U.S. Census Bureau using two different annual surveys, the Current Population Survey (CPS) and the American Community Survey. Due to the large number of households that are surveyed annually by the U.S. Census Bureau for the ACS, the ACS is understood to provide the most accurate data on state-level measures such as median household income. The Census Bureau, however, first began collecting data using the ACS in 2000, meaning that ACS data exist only for the last ten years. To examine changes over longer periods of time, the best data available come from the Census Bureau’s Current Population Survey (CPS) which provides data running back to the 1940s.

Because the data from the ACS and the CPS are collected using different methodologies, there are differences in the results from the two surveys; estimates of various measures (such as median household income or poverty rate, for example) may not agree perfectly between the two surveys. These discrepancies can be observed in some of the charts and discussion presented in this report.

Like most researchers, for recent state-level data we rely on the ACS, while for analyses of historical trends, we rely on data from the CPS.

Statistical Significance

Because the CPS and ACS data are based on surveys of a random sample of individuals in the population being measured, one cannot be certain that the estimate produced by the sample reflects the actual rate for the entire population. For each number it publishes, the Census Bureau therefore provides a margin of error using a 90 percent confidence level that defines the range within which its estimate falls. A 90 percent confidence level means that there is a 90 percent likelihood that the true population measure falls within the margin of error or range established around the estimate.

When two estimates (for example, a single measure taken in two different years) are compared, the margin of error can be used to calculate whether the two measurements reflect a real change in the population rather than a difference occurring by chance because of variation in the samples. When we say that two estimates are not statistically significant we mean that we cannot be certain that the estimates—even though numerically different—provide an accurate measure of a real difference in the true population. In most cases, larger sample sizes allow for greater certainty concerning estimates even for relatively small year-to-year changes.