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## **The Increased Presence of Older Workers in the Massachusetts Labor Market**

Implications for Workforce Development  
Policies, Workplace Accommodation,  
and Universal Design

Neeta P. Fogg and Paul E. Harrington,  
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July 2011



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# The Increased Presence of Older Workers in the Massachusetts Labor Market

## Implications for Workforce Development Policies, Workplace Accommodation, and Universal Design

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### EXECUTIVE SUMMARY

The graying of the labor force may result in labor shortages and hamper economic growth.

The leading edge of the baby boom generation, born in 1946, reached the traditional retirement age of 65 in 2011. Going forward, additional waves of baby boomers will cross over the traditional retirement age each year until the year 2029 when the youngest baby boomers, born in 1964, will turn 65 years old. An increase in life expectancy and low fertility rates of the baby boom generation compared to that of their parents is expected to further accelerate the aging of the population. Employers, workforce professionals and older workers themselves must begin now to prepare for these seismic demographic shifts. The graying of the labor force has diminished employment prospects for young people as older worker employment increased over the course of the economic recession. However, over time, when the U.S. and Massachusetts begin to experience improvements in labor market conditions, improved job growth could result in spot labor shortages that could hamper economic growth. Moreover, not having a sufficiently large workforce will mean that there will be fewer workers supporting the growing number of retirees.

The effects of this demographic swell in the older population of the nation have been analyzed for a diverse array of issues such as the adequacy of retirement savings of the older population, the labor market behavior of older workers—whether they will continue to work or retire and the implications of their decisions on the labor markets, the financial sustainability of the social security program and other retirement programs, the rising demand for healthcare and the rising costs to provide healthcare to the aging population.<sup>1</sup>

<sup>1</sup> See: Randall W. Eberts and Richard A. Hobbie, (eds.) *Older and Out of Work: Jobs and Social Insurance for a Changing Economy*, W. E. Upjohn Institute for Employment Research, Kalamazoo, Michigan, 2008; Alicia H. Munnell and Steven A. Sass, *Working Longer: The Solution to the Retirement Income Challenge*, Brookings Institution Press, 2008; Barry P. Bosworth and Gary Burtless, *Recession, Wealth Destruction, and the Timing of Retirement*, Center for Retirement Research at Boston College, Newton Massachusetts, Working Paper 2010-22, December 2010; Maria Heidkamp, Nicole Corre and Carl E. Van Horn, *The “New Unemployables” Older Job Seekers Struggle to Find Work During the Great Recession: Comparing the Job Search, Financial, and Emotional Experiences of Older and Younger Unemployed Americans*, The Sloan Center on Aging and Work at Boston College, Issue Brief 25, November 2010; Janet Novak, “Bad News for Gen Y: Older Workers Clinging to Jobs,” *Forbes*, December 2010 (<http://blogs.forbes.com/janetnovack/2010/12/13/bad-news-for-gen-y-older-workers-clinging-to-jobs>) Peter B. Doeringer, Andrew Sum, and David Terkla, *Older Workers: An Essential Resource for Massachusetts*, Report for the Commonwealth of Massachusetts Blue Ribbon Commission on Older Workers, April 2000; Patrick J. Purcell, “Older Workers: Employment and Retirement Trends,” *Monthly Labor Review*, October 2000; In 1986 the National Bureau of Economic Research established the Aging Program to study economic issues related to aging of the population. A summary of the research studies produced from this effort is summarized in: David A. Wise, “The Economics of Aging,” *NBER Reporter*, 2007 Number 4.



The labor force attachment of older workers declined steadily since the time the Bureau of Labor Statistics began gathering data on the employment status of the population in 1948 all the way to the mid-1990s. However, since the mid-1990s, the labor force attachment of the older population has been increasing. Between 1993 and before the onset of the recession of 2008-09, the rate of labor force participation of older workers (55 years and older) increased by over 9 percentage points. Surprisingly, the labor force participation and employment of the nation's older population continued to increase even during the 2008-09 recession when overall labor force participation and employment declined. While it is important to note that even with this increase, the older worker labor force participation rate in December 2010 was 40.1% as compared to 81.8% for workers between the ages of 25 and 54 and 54.7% for workers between the ages of 16 and 24, older workers were the only age group to experience an increase in labor force attachment during the recession and subsequent jobless recovery

Between December of 2007 and 2010, the number of employed workers *increased* by 2 million or 7.6% among older workers and *decreased* by 2.6 million or 13.2% among 16-24 year olds and by 6.5 million or 6.5% among workers aged 25-54. The declining employment among younger workers and prime aged workers and increasing employment of older workers during the deep economic recession of 2008-09 suggests a substitution in the labor market of younger and prime-aged workers with older workers and an increased presence of older workers in the labor markets of the state and the nation.

Out of necessity and/or choice, older workers today remain in the workforce longer than their parents did. These trends call for a sharper focus of public policy and workforce development strategies to address workforce issues related to an aging workforce. Preparation for this change in the labor force will require employers to consider new policies and practices to hire, train and retain older workers, public policy to support retention of older workers and develop a pipeline of replacement workers, and careful retirement planning by individuals. Since the incidence of disability increases with age, an older labor force will also result in a higher incidence of disability in the labor force, creating a greater need for workplace accommodations for persons with disabilities. Policies and strategies such as universal design should be considered to accommodate the large influx of older workers in the workplace with a higher likelihood of sometimes hidden functional limitations. For the purposes of this paper, we have adopted the definition of universal design provided by the Institute for Human Centered Design: "... a framework for the design of places, things, information, communication and policy to be usable by the widest range of people operating in the widest range of situations without special or separate design." to accommodate persons with a wide range of physical, sensory and cognitive limitations that are frequently not disclosed to the firm or to coworkers, but can inhibit their daily functioning on the job. Finally, some older workers have changed their retirement patterns by leaving their career jobs and moving into bridge jobs outside of their regular industry and occupation rather than just exiting from the labor force. These bridge jobs offer greater flexibility with respect to weeks of work over the year and weekly hours of work. The availability of bridge job opportunities will provide more appropriate employment options to older workers who want to stay in the workforce but may not want to make the time commitment that was required in their career jobs or in full-time and year-round positions. To foster increasingly higher rates of labor force participation of this population, the workforce development system will have to increase its focus on the job training and job

Out of necessity and/or choice, older workers remain in the workforce longer.

placement of older workers and address the unique characteristics of older workers as they seek to extend their participation in the labor market.

### **Labor Market Outcomes of the Nation's Older Population, December 2007 to December 2010**

The labor market outcomes of the nation's older workers improved during the three years since the beginning of the Great Recession of 2008-2009 while the labor market outcomes of the under-55 population declined sharply. The older population continued to enter the workforce in increasing numbers during the recession while younger workers were withdrawing from the workforce.

- Between December of 2007 and 2010, the number of employed older workers *increased* by 2 million or 7.6%, while the number of employed workers *decreased* by 2.6 million or 13.2% among 16-24 year olds and by 6.5 million or 6.5% among workers aged 25-54.
- Between December of 2007 and 2010, the labor force participation rate *fell* by 2.6% among all 16+ year olds, 7.6% among 16-24 year olds, and 1.6% among 25-54 year olds; while the 55-plus population *increased* their labor force participation rate by 3.1%.
- The unemployment rate more than doubled during the recession among older workers and prime aged workers while it increased by nearly 55% among 16-24 year olds. Despite the increase, in December 2010 the unemployment rate was still much lower among older workers than among those under 55; 6.9 percent among older workers versus 8.5 percent among 25-54 year olds, and 18.1 percent among 16-24 year olds.

### **Labor Market Outcomes of the Older Population in Massachusetts, 2003 to 2010**

Between 2003 and 2010, the older population in Massachusetts performed much better than under-55 population on each of the three key measures of labor market outcomes. Within the older population, those who had some college education or a college degree continued to improve their labor market outcomes even during the recessionary years between 2007 and 2010, while high school dropouts and even high school graduates without any postsecondary education lost most of the gains that they had made during the jobs expansion period of 2003-2007.

- The labor force participation of older workers in the state increased from 37.6 percent in 2003 to 40.5 percent in 2007 and up to nearly 43 percent in 2010. Over the same time period the labor force participation of the population under 55 declined from 80 percent in 2003 down to 78 percent in 2007 and dropped another percentage point to 77.2 percent in 2010.
- Between 2003 and 2007 the unemployment rate fell from 6.0 to 4.7 percent among the under-55 age group and from 5 percent to 4.4 percent among older workers. In 2007 the unemployment rate of under-55 labor force was only -0.3 percentage points higher than that of 55-plus labor force. In 2010, the under-55 unemployment rate was nearly 2 percentage points higher than the 55-plus unemployment rate.
- The employment to population ratio of the under-55 population declined during the entire 2003-2010 period with an acceleration of the decline between 2007 and 2010. Over the

entire 2003-2010 period, the employment to population ratio of the under-55 population in Massachusetts declined from nearly 76 percent to 70 percent, while that of the state's older residents increased from under 36 percent to nearly 40 percent, providing clear evidence of a substitution of younger workers and prime-aged workers (16-54 year olds) with older workers in the state's labor markets.

- Employment gains among older workers were not shared equally across all educational levels. During the 2007-2010 recession period, older high school dropouts lost almost all the increase that had occurred in their employment to population ratio between 2003 and 2007. Older workers who had completed high school also experienced a decline in their E/P ratio between 2007 and 2010, but in 2010 their E/P ratio was still slightly above the 2003 level. The E/P ratio of older workers with some college education or a college degree continued to increase even through the recession years.

### **Industry and Occupation Employment of Older Workers in Massachusetts**

Given these changes over the past seven years, the concentration of older workers in the Massachusetts labor market has increased sharply. Between 2003 and 2010, the proportion of 55-plus workers in the state increased from 18 percent to nearly 21 percent; an increase of 5 percentage points or 30%. The share of older workers increased across all major industry sectors and occupational groups in the state, albeit at varying rates.

#### **Industry**

- The largest increase in the older worker share in the state occurred in the construction industry, rising by two-thirds, from 10.3 percent in 2003 and 10.7 percent in 2007 to 17.3 percent in 2010.
- The professional and business services sector also saw a sharp increase (45 percent) in the share of older workers; from 13 percent in 2003 to 16.8 percent in 2007 and nearly 19 percent in 2010.
- Older worker shares increased between 2007 and 2010 by 40% in repair and maintenance services and personal services sector, by 35% in the education and healthcare sector, 30% in the retail and wholesale trade sector, and over one-quarter in the manufacturing sector of the state.
- In 2010 the share of older workers across industry sectors varied from over 28 percent in the repair, maintenance, and personal services sector, nearly one-quarter in the educational services and healthcare and manufacturing sectors, and one-fifth in retail and wholesale trade establishments to 13 percent in the leisure and hospitality sector.

Sharp increases in the concentration of older workers in the shrinking goods-producing sectors of construction and manufacturing places them at increased risk of displacement, especially for those with fewer years of schooling. The workforce development system will need to be prepared to focus on the training and reemployment of these displaced older workers who wish to remain attached to the job market.



### Occupation

- Occupation-based increases in older worker employment in Massachusetts mirrored the state's trends in industry-based increases in older worker employment. In 2010, the concentration of older workers in Massachusetts within major occupational categories reflects their concentration across industries.
- Older workers in the construction and extraction occupations doubled their share from 9.4 in 2003 to nearly 20 percent in 2010. Other blue-collar occupations also saw sharp increases in the share of 55-plus workers with a 68% increase in transportation and material moving and 36% increase in production occupations. Given that physical ability declines with age and that blue-collar occupations are inherently physical, older workers in these positions will have a higher risk of job-related injury and disability.
- The presence of older workers in the state also increased in white collar occupations — by 39% in management and financial services occupations, 31% in professional occupations, and 30% in clerical occupations.
- In 2010, the oldest occupation category in the state was production occupations with one out of every four workers 55 years or older. The 55-plus share was also high in the state's white collar occupations of management, business and financial operations (25 percent), and clerical occupations of office and administrative support (24 percent).

### Population Projections in Massachusetts, 2000-2030

Massachusetts has a somewhat larger and more rapidly growing share of the older population than the nation. The older population is projected to be the source of all of the population growth in the state between 2000 and 2030.

- The proportion of the state's population that is 55 years or older has increased from 20 percent in 1950 to 22 percent in 2000 and one-quarter in 2009 and is projected to increase to 28 percent in 2015 and 32 percent by the year 2030.
- The older population is projected to be the source of all population growth in Massachusetts during the 30 years between 2000 and 2030. The state's total population is projected to increase by 662,900 or 10 percent while the older population is projected to increase by nearly 856,000 or 61 percent and the under-55 population is projected to decline by over 193,000 or 4 percent over the 30 year period between 2000 and 2030. In the absence of the growth of the older population, the state would see a decline in its total population over the 30-year projection period.
- The median age of the state's population is projected to increase to 40.2 years in 2030, from 36.5 years in 2000.

### Labor Force Projections in Massachusetts, 2008-2020

The labor force in Massachusetts is projected to grow at a very modest pace between 2008 and 2020 with all of the increase occurring in the older labor force. The under-55 labor force in the state is projected to decline over this period.

- The Massachusetts labor force is projected to grow at a slow pace between 2008 and 2020 by 106,000 workers or 2.9 percent. While the older labor force is projected to *increase* by

nearly 306,000 workers representing a 44 percent increase over the 2008-2020 period, the labor force under 55 is projected to *decline* by nearly 200,000 persons or 7 percent. In the absence of the rise in the 55 plus labor force, the state would see a decline in its labor force.

- Nationwide, the labor force is projected to increase by 14.8 million persons or 9.6 percent, with 93 percent of this projected increase (13.7 million) attributable to the increase in the 55-plus labor force.
- Between 2008 and 2020, the share of older workers in the labor force is projected to increase from 19 percent to nearly 27 percent in Massachusetts and from 18 percent to 24.6 percent in the nation.
- Under two-thirds (65 percent) of the projected increase in the state's older labor force is attributable to increases in the size of older population in the state and the remaining 35 percent is due to an increase in the projected labor force participation of the older population.

## INTRODUCTION

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An aging population reduces the available labor supply.

The leading edge of the baby boom generation, born in 1946, reached the traditional retirement age of 65 in 2011. Going forward, additional waves of baby boomers will cross over the traditional retirement age each year until the year 2029 when the youngest baby boomers, born in 1964, will turn 65 years old. The aging of this large segment of the population along with an increase in the life expectancy of the population and low fertility rates of the baby boom generation compared to that of their parents is expected to further accelerate the aging of the population.<sup>2</sup> In 2009, the share of the total population consisting of 65 and older individuals stood at 13 percent in the nation and 13.5 percent in Massachusetts. During the same year, one-quarter of the population of Massachusetts and 24 percent of the nation's population was 55 years or older. The median age of the population in Massachusetts was 36.5 years in 2000 and is projected to increase to 40.2 years in the year 2030. Nationwide, the median age of the population is projected to increase from 35 years in 2000 to 38.7 years in 2030.<sup>3</sup>

In the aftermath of the Great Recession and the resulting surpluses in the labor market, the potential labor supply reduction from the weaker labor force attachment of an aging population has not been a concern. However, as the economy recovers and job growth resumes, the effect of an aging population on the labor supply will once again become

<sup>2</sup> Life expectancy at age 65 has increased from 13.8 years in 1949-51 to 18.7 years in 2007; see: National Vital Statistics Reports, Vol. 58, No. 21, June 28, 2010, Table 11; and National Vital Statistics Reports, Vol. 58, No. 19, May 20, 2010, Table 7. The national fertility rate reached a 17-year high in 2007 at 69.5 per 1000 women aged 15-44 and has been declining steadily since then down to 65.5 per 1000 women aged 15-44 in the 12-month period ending June 2010; see: Paul D. Sutton, Recent Trends in Births and Fertility Rates Through June 2010, Division of Vital Statistics, National Center for Health Statistics, December 2010.

<sup>3</sup> The median age for Massachusetts was obtained from: U.S. Census Bureau, Population Division, Interim State Population Projections, 2005, Interim State Projections of Population for Five-Year Age Groups and Selected Age Groups by Sex: July, 1 2004 to 203. The national 2030 median age projections data were obtained from: Ortman J. and Guarneri, C, United States Population Projections: 2000 to 2050, Analytical Document. Table 2, p. 18, 2008, the source of the 2000 median age for the nation: U.S. Census Bureau, 2000 Fact Sheet of the United States, obtained from the American Factfinder (<http://factfinder.census.gov>)

important as a potential constraint on job growth and economic growth. An aging population reduces the available labor supply because of the lower rates of labor force attachment among older individuals. Participation in the labor market changes over the life cycle. For example, teenagers are not as closely tied into the labor market as young adults, who in turn have a lower rate of labor market attachment than individuals in the prime working years – typically between the ages of 25 and 54. After the prime working age, the labor market attachment typically declines. The period between the ages of 55 and 64 years is often called the pre-retirement period and is characterized by a reduction in labor market participation. The age of 65 is generally associated with retirement since many private and public pension plans including social security begin paying full benefits at that age.

The increase in life expectancy is expected to add an average of 3 years of retirement per person.

The labor force attachment of individuals over their lifetimes has an inverted-U shape; increasing until they reach prime working age and declining thereafter as they approach and move beyond the “retirement” age. Among workers who do not retire in the traditional sense and continue to mix work while receiving retirement income, a decline in the labor force attachment could begin with a reduction in the work intensity by working part time or for part of the year, and end with a withdrawal from the labor force. However, among many older workers, retirement still occurs as an abrupt shift from working in their full-time career jobs to a clean exit from the labor force — typically when retirement income becomes available. Thus, as the population grows older and the number of labor market withdrawals increase, the labor supply is expected to decline.

Unless the aging population is replaced by increasing numbers of younger workers and/or the labor force attachment of older workers increases sharply through a postponement of retirement combined with a more gradual labor market withdrawal, the graying of the labor force may result in spot labor shortages and hamper economic growth when the U.S. and Massachusetts labor markets begin to climb out of the trough of the Great Recession. Moreover, not having a sufficiently large workforce will mean that there will be fewer workers supporting the growing number of retirees.

The Social Security Administration has estimated that the number of Social Security beneficiaries will rise rapidly between 2009 and 2030 when the youngest baby boomer reaches traditional retirement age and will continue to remain high because of the high life expectancy and resulting longevity of this population. In the 2010 Annual Report, the Board of Trustees of Social Security reported that the number of beneficiaries per 100 workers was 33 in 2009, up from 30 in 2007, and that by 2030 when the youngest members of the baby boom generation turn 65 years old, the number of beneficiaries per 100 workers is projected to increase sharply to between 43 and 50.<sup>4</sup> Moreover, the number of years spent in retirement will increase as the life expectancy increases. Over the 50 years between 2010 and 2060, the number of additional years of life expectancy is expected to increase from 17.3 years to 20.5 years for 65-year old males and 19.7 years to 22.6 years for their female counterparts.<sup>5</sup>

4 The 2010 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, Social Security Administration, August 2010.

5 Ibid.

Without a change in the employment and retirement behavior of older workers, the increase in life expectancy is expected to add an average of 3 years of retirement per person over the next 50 years. The dire predictions about the solvency of the social security and other pension systems as well as the Medicare health insurance system, and the labor supply challenges after the large cohort of baby boomers retire can be partially mitigated if the labor force attachment and annual earnings among older workers can be raised. Increasing the labor force attachment and employment of the older population is also important to ensure adequate post-retirement incomes among the older population, especially with the shift from defined benefits to defined contribution pension plans.<sup>6</sup> A defined benefit pension plan promises workers a specific monthly payment at retirement that is typically calculated from a formula based upon duration of employment and salary history. A defined contribution pension plan places most of the responsibility for postretirement income on the worker. It provides participants with individual accounts in which workers make contributions that are often matched at varying rates by employer contributions. The participant makes investment decisions for the account. The benefits are based upon the amount of the contributions, and investment gains and losses. Defined contribution retirement plans are therefore more susceptible to fluctuations in the financial markets and can entail considerable assumption of risk by the individual investor. For example, the plunge in stock market values that began in September of 2008 and bottomed out in the spring of 2009 resulted in sharp declines in the values of retirement assets of many workers. Even as these values rebounded the heightened uncertainty and risk about these asset values seems to have prompted many older workers to stay in the labor market or re-enter the labor market despite a sharp reduction in employment opportunities during the recession.

### Organization of this Paper

Based on an examination of historical trends in the labor force attachment of the older population, more recent trends in their labor market outcomes, and future projections of the older population and labor force, this paper presents the changes that have occurred, and are projected to occur in the future, in the labor force participation and retirement patterns among older residents of Massachusetts and the nation. It also identifies the projected impact of these changes on the size and composition of the workforce.

The paper begins with an overview of the historical trends in the labor force attachment of the nation's older population. After providing a discussion on the historical trends in labor market behavior of older workers, it presents more recent labor market outcomes of older workers in the nation and in Massachusetts. The paper provides a national context with an examination of the labor market behavior and outcomes of the older population during past three years since the beginning of the recession in December 2007. Among the labor market outcomes analyzed are the labor force participation rate, the unemployment rate, and the employment to population ratio. The labor market outcomes of older workers in the nation are compared with those of the nation's younger workers (16-24 years old) and prime-aged

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<sup>6</sup> Participation in defined contribution plans has been growing in the private sector from 36 percent in 1999 to 43 percent in 2008. Participation in defined benefit plans has remained almost constant in the 20 percent range. See: Bureau of Labor Statistics, Program Perspectives on Retirement Benefits, National Compensation Survey Benefits Series, Issue 3, March 2009 (<http://www.bls.gov/opub/perspectives/issue3.pdf>)



workers (25-54 years old) to illustrate the divergent trends in the employment of older workers and their younger counterparts during the Great Recession, indicating a labor market substitution of younger workers with older workers.

The paper then presents analyses of the labor market behavior and outcomes of the older residents of Massachusetts in the recent past, between 2003 and 2007 and between 2007 and 2010. The three key labor market outcomes — labor force participation rate, unemployment rate, and employment to population ratio — of older workers are compared to those of their younger counterparts. The paper also examines the industries and occupations in which older workers in Massachusetts are employed and the change in the concentration of older workers across the different industries and occupations in the state.

The final section of this paper contains population projections and labor force projections for Massachusetts. The population projections for Massachusetts are based on the state population projections produced by the U.S. Census Bureau. The labor force projections for Massachusetts are produced by the authors utilizing the projected changes in the labor force participation rates of different age-gender subgroups of the nation's population between 2008 and 2020 and the projected growth of the state's population in the same age-gender groups over the same period. A comparison is presented between the projected growth of the older (55-plus) and the younger (under 55) labor force and the implications of these changes on the continuation and acceleration of the aging of the population and the labor force of the state and the nation.

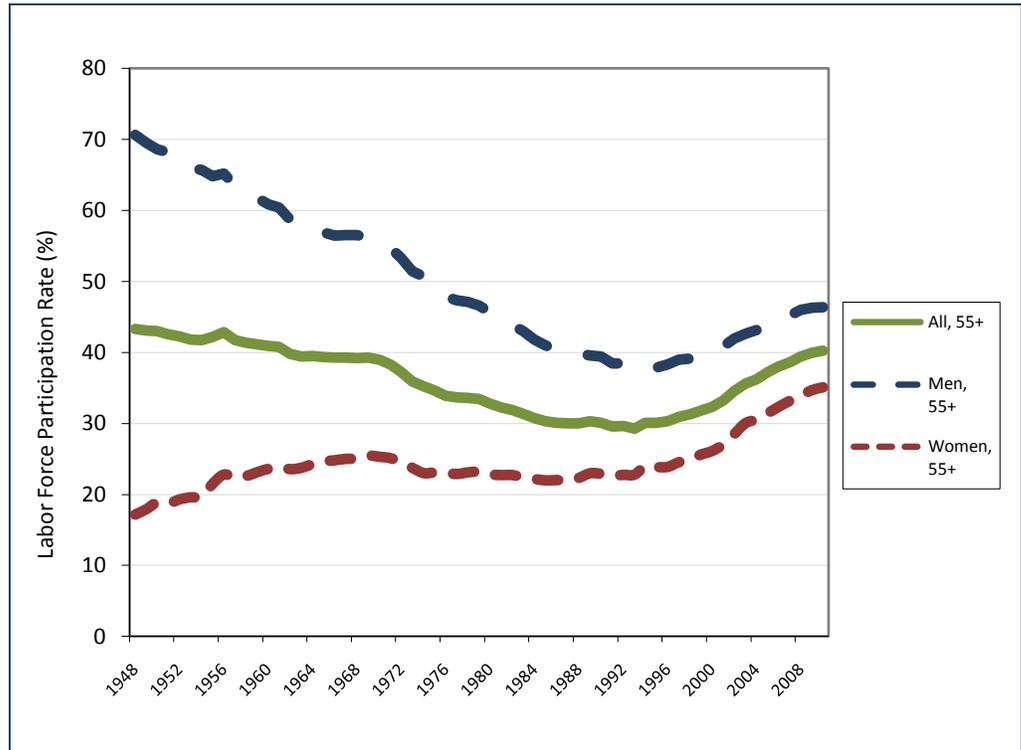
A careful focus of public policy and the workforce development system is needed to prepare for the aging workforce.

The paper ends with a call for a careful focus of public policy and the workforce development system to the labor market needs and labor market problems of older workers, for employers to prepare for the continued and accelerating increase in the aging of their workforce, and for older workers themselves to be better equipped to remain in the labor market past the traditional retirement age.

## LABOR MARKET OUTCOMES OF THE NATION'S OLDER POPULATION, DECEMBER 2007 TO DECEMBER 2010

The increased labor force participation of older workers is not a new phenomenon. The labor force attachment of older workers declined steadily since the time the BLS began gathering data on the employment status of the population in 1948 all the way to the mid-1990s when the trend reversed and the labor force participation of the older population began to increase. The entire decline in the labor force participation of the older population between 1948 and the mid-1990s is attributable to older men. The labor force participation of older women rose steadily until the mid-1970s after which it stayed relatively flat until the mid-1990s, when it started to rise again.

**Chart I**  
 The Labor Force Participation Rate of the Older Population (55 years and older) in the U.S., 1948-2010



Source: U.S. Department of Labor, Bureau of Labor Statistics, Labor Force Statistics from the Current Population Survey, <http://www.bls.gov/cps/home.htm>, tabulations by authors.

Since the mid-1990s, the labor force attachment of the older population has been increasing. Between 1993 and before the onset of the recession of 2008-09, the rate of labor force participation of older workers (55 years and older) increased by over 9 percentage points. Researchers have attributed the reversal to many factors including a shift of many pension plans from defined benefit to defined contribution plans which are much more age neutral<sup>7</sup>, and the efforts of some employers faced with potential labor shortages (prior to the Great Recession) to retain older workers by providing flexible work arrangements, rehiring retired workers, and providing phased retirement options to workers. Prior to the recent recession, many public schools faced a shortage of qualified teachers and responded by providing teachers with the option to defer retirement without financial losses in the

<sup>7</sup> A defined benefit pension plan promises workers a specific monthly payment at retirement that is typically calculated from a formula based upon duration of employment and salary history. Although the monthly benefit in these pension plans typically increases with years of service, the plans penalize workers if they remain employed after the retirement age since workers who work beyond the retirement age lose pension payments. The loss of pension benefit payments while working beyond retirement age are larger than the increase in benefits from additional years of service after the retirement age, providing strong incentives to retire at the retirement age. A defined contribution plan provides participants with individual accounts in which workers make contributions that are often matched at varying rates by employer contributions. The participant makes investment decisions for the account. The benefits are based upon the amount of the contributions, and investment gains and losses. Unlike defined benefit plans, participants in defined contribution plans are not penalized if they defer retirement. To the contrary, a decision to defer retirement typically results in higher monthly payments when participants retire. The additional income and contributions build more wealth in the accounts and in personal savings and the time period over which the pension and savings are “consumed” in the form of retirement income is shortened.

form of reduced pension benefit payments over their retirement by making the defined benefit pension plans more age-neutral.

Even during the Great Recession of 2008-2009 when the labor force participation rate of the nation's population declined, the nation's older residents continued to join the labor force in increasing numbers. Between December of 2007 when the recession began and three years later in December of 2010, the rate of labor force participation in the nation fell by nearly 2 percentage points from 66.0 percent to 64.3 percent, representing a relative decline of 2.6 percent. In sharp contrast, over the same time period the rate of labor force participation among older workers increased from 38.9 percent in December 2007 to 40.1 percent in December 2010, a relative increase of over 3 percent. In previous recessions, older workers have responded to a weak labor market by withdrawing from the workforce rather than becoming unemployed. This recession has brought additional older workers into the workforce despite rising unemployment problems among them.<sup>8</sup>

Nationally, older workers were much more successful in finding employment than their younger counterparts.

A comparison of the labor market outcomes in the nation over the December 2007 and December 2010 period indicates that older workers were also much more successful in finding employment than their younger counterparts. Although their increased entry into a very weak labor market resulted in a doubling of their unemployment rate, older workers' employment to population ratio remained almost unchanged. Their employment to population ratio declined by only 3/10ths of one percentage point, representing a relative decline of less than 1 percent. Between December of 2007 and 2010, the number of employed workers *increased* by 2 million or 7.6% among older workers and *decreased* by 2.6 million or 13.2% among 16-24 year olds and by 6.5 million or 6.5% among workers aged 25-54.

In stark contrast to older workers, younger residents of the nation responded to a slack labor market with large scale withdrawals from the labor market. Between December 2007 and December 2010, the labor force participation rate of 16- to 24-year olds declined by 4.5-percentage points representing a relative decline of 7.6 percent. The unemployment rate of younger workers (which was already quite high at 11.7 percent) increased by 6.4 percentage points to 18.1 percent, representing a relative increase of 55 percent. The rate of increase in the unemployment rate of younger workers was not as high as that of older workers because many **younger workers withdrew** from the labor market whereas **older workers entered** the labor market during the recession. If they could not find a job, older workers were more likely than younger workers to stay in the labor market, continue seeking work and continue to be counted as unemployed. As a consequence of their large labor force withdrawals and increased rate of unemployment, the employment to population ratio of younger workers in the nation declined sharply from 55.2 percent in December 2007 to 44.8 percent in December 2010, a decline of 7.4 percentage points or 14 percent in just three years.

<sup>8</sup> Emy Sok, Record unemployment among older workers does not keep them out of the job market, U.S. Bureau of Labor Statistics, Issues in Labor Statistics, Summary 10-04, March 2010 ([http://www.bls.gov/opub/ils/summary\\_10\\_04/older\\_workers.htm](http://www.bls.gov/opub/ils/summary_10_04/older_workers.htm)); Emily Garr, Older American in the recession: More are staying in the workforce, more are losing their jobs, Employment Policy Institute, Research Issue Brief #251, Feb 4, 2009 (<http://www.epi.org/publications/entry/ib251/>); Alicia H. Munnell, Dan Muldoon, and Steven A. Sass, Recessions and Older Workers, Center for Retirement Research at Boston College, Issue Brief Number 9-2, January 2009 ([http://crr.bc.edu/images/stories/Briefs/ib\\_9-2.pdf](http://crr.bc.edu/images/stories/Briefs/ib_9-2.pdf)).

**Table 1**  
 The Civilian Labor Force Participation Rate, Unemployment Rate and Employment to Population Ratio in the U.S., by Age December 2007 and December 2010 (seasonally adjusted)

	Dec. 2007	Dec. 2010	Absolute Change (Percentage points)	Relative Change (%)
<b>Labor force participation rate</b>				
<b>Total, 16+</b>	<b>66.0%</b>	<b>64.3%</b>	<b>-1.7%</b>	<b>-2.6%</b>
16-24	59.2	54.7	-4.5	-7.6%
25-54	83.1	81.8	-1.3	-1.6%
55 and over	38.9	40.1	1.2	3.1%
<b>Unemployment rate</b>				
<b>Total, 16+</b>	<b>5.0%</b>	<b>9.4%</b>	<b>4.4%</b>	<b>88.0%</b>
16-24	11.7	18.1	6.4	54.7%
25-54	4.1	8.5	4.4	107.3%
55 and over	3.2	6.9	3.7	115.6%
<b>Employment to population ratio</b>				
<b>Total, 16+</b>	<b>62.7%</b>	<b>58.3%</b>	<b>-4.4%</b>	<b>-7.0%</b>
16-24	52.2	44.8	-7.4	-14.2%
25-54	79.7	74.9	-4.8	-6.0%
55 and over	37.7	37.4	-0.3	-0.8%
<b>Employment (Thousands) (Number)</b>				
<b>Total, 16+</b>	<b>146,272</b>	<b>139,206</b>	<b>-7,066</b>	<b>-4.8%</b>
16-24	19,596	17,011	-2,585	-13.2%
25-54	100,465	93,962	-6,503	-6.5%
55 and over	26,240	28,234	1,994	7.6%

Source: Labor Force Statistics from the Current Population Survey, U.S. Bureau of Labor Statistics, tabulations by authors. Available at: <http://data.bls.gov/pdq/querytool.jsp?survey=ln>

Labor force withdrawals also occurred among the nation’s prime-working age population, 25-54, albeit not as sharply as the rate of withdrawal that occurred among the 16- to 24-year old population. The labor force participation rate of 25- to 54-year olds in the nation declined from 83.1 percent in December 2007 to 81.8 percent in December 2010. But a large number remained in the labor market even though they faced long durations of unemployment. The unemployment rate of this age group more than doubled from 4.1 percent in December 2007 to 8.5 percent in December 2010. The combination of labor market withdrawals and rising unemployment of 25-54 year olds in the nation resulted in a sharp decline in their employment to population ratio, from 79.7 percent in December 2007 to 74.9 percent in December 2010, a decline of 4.8 percentage points or 6 percent.

Comparisons of the labor market outcomes of different age groups in the nation presented in Table 1 imply a substitution in the labor market of older workers for younger workers and prime-aged workers.



Among the reasons cited for the increased labor force participation among older workers during this recession are shrinking social security benefits, traditional pension plans and balances in defined contribution retirement accounts that have been depleted in the stock market and rising healthcare costs partly in the form of rising Medicare premiums and partly in the continued reduction in retiree health benefits by private employers. Also, collection of social security benefits before the normal retirement age results in a steep reduction of monthly benefits. This creates a strong disincentive for early retirement especially given a decline in other sources of retirement income.<sup>9</sup> Finally, the declining employment among younger workers and prime aged workers and increasing employment of older workers during the deep economic recession of 2008-09 suggests a substitution in the labor market of younger and prime-aged workers with older workers.

## LABOR MARKET OUTCOMES OF THE OLDER POPULATION IN MASSACHUSETTS, 2003 TO 2010

This section examines the labor market outcomes of all workers and older workers in Massachusetts between 2003 and 2010. We have combined the monthly Current Population Survey (CPS) micro data files for years 2003, 2007, and 2010 to create annual data files for those years. At the time of the writing of this paper, the monthly CPS data for December 2010 were not available. Therefore the 2010 data represent combined monthly CPS data from eleven months (January to November) in 2010.

We have presented the annual labor market outcomes of Massachusetts workers for three years: 2003 which corresponds with the beginning of the slow recovery after the 2001 recession, 2007 which corresponds with the economic peak before the 2008-2009 recession, and 2010 representing the most recent time period. We have presented trends in the same three key measures of labor market outcomes: the labor force participation rate, the unemployment rate and the employment to population ratio.

Between 2003 and 2010, the labor force participation rate of the older residents of Massachusetts increased. The trend of increased labor force participation among older workers in the nation that began in the mid-1990s and continued on through the Great Recession is mirrored in Massachusetts. Older workers in Massachusetts have continued to increase their labor force participation over the entire 2003-2010 period. The labor force participation of older workers in the state increased from 37.6 percent in 2003 to 40.5 percent in 2007 and up to nearly 43 percent in 2010. Over the same period the labor force participation of the under-55 population declined from 80 percent in 2003 down to 78 percent in 2007 and dropped another percentage point to 77.2 percent in 2010.

The unemployment rate captures the extent to which those who choose to participate in the labor market are unable to find employment. It measures the proportion of the labor force that is unemployed. In each of the three years, 2003, 2007 and 2010, the unemployment rate of older workers in Massachusetts was lower than that of workers under age 55.

9 Richard W Johnson, "Older Workers and the Recession," Urban Institute, commentary appeared in the San Diego Union-Tribune, December 8, 2008 ([http://www.urban.org/retirement\\_policy/url.cfm?ID=901205](http://www.urban.org/retirement_policy/url.cfm?ID=901205)); "Still Good News for a Few More Years: Smaller Nest-Eggs Enhance a Long-Term Trend to Later Retirement," The Economist, September 10, 2009;



**Table 2**  
The Labor Force Participation Rate, Unemployment Rate, and Employment to Population Ratio in Massachusetts by Age, 2003, 2007, and 2010

	2003	2007	2010
<b>Labor Force Participation Rate</b>			
<b>Total, 16+</b>	<b>68.2%</b>	<b>66.9%</b>	<b>66.3%</b>
Under 55	80.6	78.2	77.2
55 and over	37.6	40.5	42.9
<b>Unemployment Rate</b>			
<b>Total, 16+</b>	<b>5.8%</b>	<b>4.7%</b>	<b>8.5%</b>
Under 55	6.0	4.7	8.9
55 and over	5.0	4.4	7.0
<b>Employment to Population Ratio</b>			
<b>Total, 16+</b>	<b>64.2%</b>	<b>63.8%</b>	<b>60.6%</b>
Under 55	75.8	74.5	70.3
55 and over	35.8	38.7	39.9

Source: Monthly Current Population Survey Public Use Micro Data files, 2003 (January through December), 2007 (January through December), and 2010 (January through November); tabulations by authors.

Between 2003 and 2007 as the state’s economy was recovering from the 2001 recession, the unemployment rate fell from 6.0 to 4.7 percent among the under-55 age group and from 5 percent to 4.4 percent among older workers.

The onset of the Great Recession of 2008-09 resulted in a sharp increase in the state’s unemployment rate. The unemployment rate continues to remain high in 2010 despite the official end of the recession in June 2009.<sup>10</sup> The overall unemployment rate jumped from 4.7 percent in 2007 to a high of 8.8 percent in 2009. Since then it has begun to decrease, reaching a post-recession low of 7.8 percent in May 2011. Although there were increases in the unemployment rate across all age groups, the unemployment rate of older workers stood at 7 percent in 2010, nearly 2 percentage points lower than the 8.9 percent unemployment rate of workers under 55. The seniority of older workers might have provided them with some protection from layoffs and resulting unemployment.<sup>11</sup>

The higher rates of participation in the labor force and lower rates of unemployment resulted in higher employment to population ratios of older workers in each of the three time periods. At the same time as the employment to population ratio of the under-55 population in Massachusetts declined from nearly 75 percent in 2007 to 70 percent in 2010,

<sup>10</sup> The National Bureau of Economic Research is charged with determining the start and end of a recession. The business cycle dating committee of the NBER determined that the recession ended in June 2009; see: <http://www.nber.org/cycles/sept2010.html>

<sup>11</sup> Richard W. Johnson and Corina Mommaerts, Age Difference in Job Loss, Job Search, and Reemployment, Discussion Paper 11-01, The Program on Retirement Policy, The Urban Institute, Washington, D.C., January 2011. <http://www.urban.org/uploadedpdf/412284-Age-Differences.pdf>



the share of all older residents of the state that were employed increased from 38.7 percent in 2007 to 39.9 percent in 2010. The findings in Table 2 provide evidence of a substitution of younger workers and prime-aged workers (16-54 year olds) with older workers in the state's labor markets, similar to what has been occurring in the national labor market.

Not only are older workers in Massachusetts continuing to stay in the labor market, but they are more successful at finding employment than their younger counterparts, evident in their lower unemployment rates and rising employment. However, labor market outcomes are not uniformly better among all older workers. There are sharp variations in labor market outcomes of older workers in Massachusetts by their educational attainment.

Table 3 contains the labor market outcomes for older workers under 75 (55-74) by their educational attainment. The labor force participation of older workers increased sharply with education. In 2003, only one-quarter of older residents of the state who were high school dropouts were participating in the labor market, compared to 43 percent of high school graduates, and nearly 70 percent of college graduates with a bachelor's or higher degree. A labor market recovery after the 2001 recession resulted in an increase in the labor force participation of older high school dropouts. The labor force participation for this group increased from 26 percent in 2003 to 34 percent by 2007.

These gains among older dropouts were lost with the onset of the 2008-09 recession. The downturn led to a sharp reduction in the labor market attachment of older high school dropouts. Indeed, high school dropouts of all ages bore a disproportionate share of the job losses of this recession. The 2008-09 recession hit high school dropouts particularly hard because of the sharp job losses in the construction and manufacturing sectors. Nearly one-half of the jobs lost during the recession of 2008-09 were in these two sectors. These industries have heavy concentrations of blue-collar jobs that provide employment opportunities to workers with limited education, including high school dropouts. Older high school dropouts have suffered the same fate — a sharp increase in their unemployment rate and labor force withdrawal. As a result, only one out of four older high school dropouts (24 percent) was employed in 2010.

Better-educated older workers were in a much better position to weather the recession.

Better-educated older workers, particularly those with postsecondary credentials, like better-educated younger workers, were in a much better position to weather the recession than their less-educated counterparts. The labor force participation among older high school graduates and those older individuals who had completed some college below the bachelor's degree level continued to increase even during the recessionary period. Among older residents of Massachusetts with a bachelor's degree or a higher level of education, two-thirds were participating in the labor market in 2007 and 2010. Their rate of labor force participation remained unchanged over the three-year period between 2007 and 2010.



**Table 3**  
 The Labor Force Participation Rate, Unemployment Rate, and Employment to Population Ratio of Older Residents (55-74) in Massachusetts by Educational Attainment, 2003, 2007, and 2010

	2003	2007	2010
<b>Labor Force Participation Rate</b>			
<b>All, 55-74</b>	<b>50.5%</b>	<b>54.0%</b>	<b>55.9%</b>
High school dropout	25.5	34.0	27.4
High school graduate or GED	43.0	48.1	50.5
Some college or Associate's degree	53.7	50.5	59.2
Bachelor's degree or higher	69.6	66.8	66.0
<b>Unemployment Rate</b>			
<b>All, 55-74</b>	<b>5.1%</b>	<b>4.3%</b>	<b>6.8%</b>
High school dropout	9.2	3.6	12.0
High school graduate or GED	3.7	2.9	10.2
Some college or Associate's degree	5.9	7.5	8.3
Bachelor's degree or higher	4.8	4.1	3.5
<b>Employment to Population Ratio</b>			
<b>All, 55-74</b>	<b>47.9%</b>	<b>51.7%</b>	<b>52.0%</b>
High school dropout	23.1	32.7	24.1
High school graduate or GED	41.4	46.7	45.4
Some college or Associate's degree	50.5	46.7	54.3
Bachelor's degree or higher	66.2	64.1	63.7

Source: Monthly Current Population Survey Public Use Micro Datafiles, 2003 (January through December), 2007 (January through December), and 2010 (January through November); tabulations by authors.

The unemployment rate also was lower among better-educated older workers in 2010. Finally, higher rates of labor force participation and lower unemployment rates among these better-educated older residents of the state resulted in higher employment to population ratios among them. After going through the 2008-09 recession, which has been characterized as the worst recession since the Great Depression, in 2010 only one-quarter of high school dropouts aged 55 and older were employed compared to 45 percent of older high school graduates, 54 percent of their counterparts with some postsecondary education below a bachelor's degree, and nearly 64 percent of those with a college degree at the bachelor's or higher level.



## INDUSTRY AND OCCUPATION EMPLOYMENT OF OLDER WORKERS IN MASSACHUSETTS

In 2010, nearly 21 percent of all workers in Massachusetts were 55 years or older.

In this section we have examined the share of all employed Massachusetts residents that were 55 years or older during 2003, 2007 and 2010. We have also examined the share of 55-plus workers in each major industry sector and occupational group in the state. Beginning in January 2003, the classification system of industries and occupations on the CPS was changed. The new classification was derived from the 2002 North American Industrial Classification System (NAICS) and the 2000 Standard Occupational Classification (SOC). Industry and occupation data on the CPS prior to 2003 are not comparable. Therefore our analysis of older worker employment across industries and occupations spans the period between 2003 and 2010.

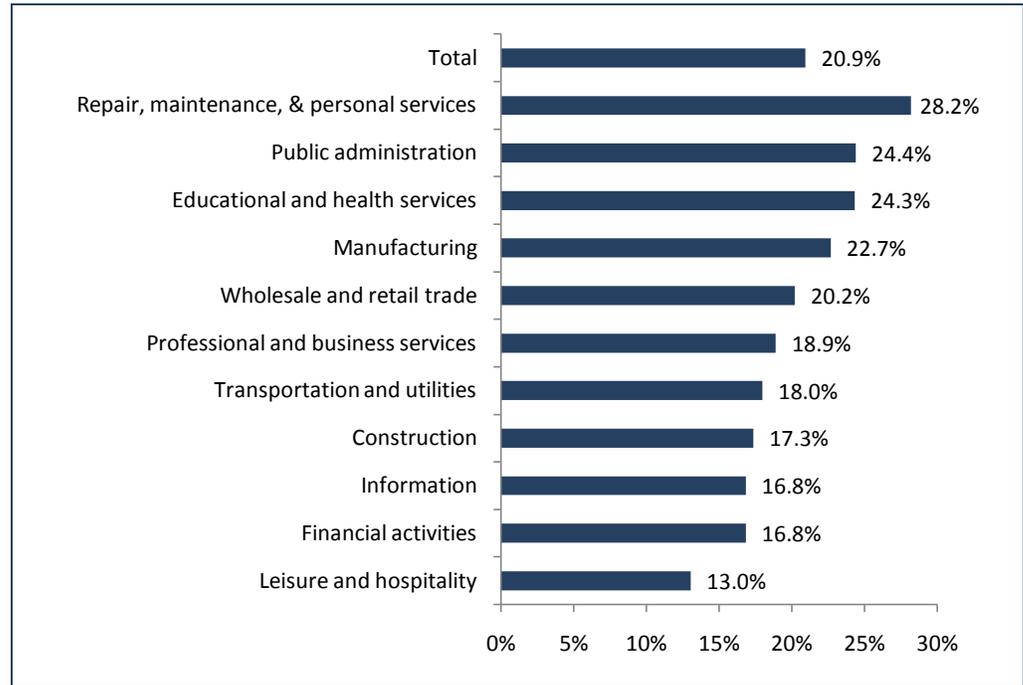
Our findings from our analysis of the shares of 55-plus workers in each major industry sector and occupational group are presented in Tables 4 and 5. In 2003, older workers comprised 16.1 percent of all employed residents of Massachusetts. In 2007, over 18 percent of the state's employed residents were 55 years or older. The less adverse effects of the recession on the state's older workers led to another jump in their share among employed residents of Massachusetts. In 2010, nearly 21 percent of all workers in the state were 55 years or older.

**Table 4**  
The Proportion of Massachusetts Employed Residents Aged 55 Years or Older, by Major Industry Sector, 2003, 2007, and 2010

Industry Sector	2003	2007	2010	Absolute Change 2007-2010 (percentage points)	Relative Change, 2003-2010 %
<b>Total</b>	<b>16.1%</b>	<b>18.2%</b>	<b>20.9%</b>	<b>4.9%</b>	<b>30.3%</b>
Construction	10.3	10.7	17.3	7.0	67.6
Manufacturing	18.0	21.6	22.7	4.7	26.1
Wholesale and retail trade	15.6	17.1	20.2	4.6	29.7
Transportation and utilities	16.7	23.5	18.0	1.3	7.5
Information	11.6	18.4	16.8	5.2	44.7
Financial activities	18.1	15.8	16.8	-1.3	-7.0
Professional and business management services	13.0	16.8	18.9	5.9	45.3
Educational and health services	18.0	21.2	24.3	6.4	35.3
Leisure and hospitality	10.9	11.6	13.0	2.2	20.2
Repair, maintenance, and personal services	20.1	16.5	28.2	8.1	40.4
Public administration	23.9	25.7	24.4	0.5	2.0

Source: Monthly Current Population Survey Public Use Micro Datafiles, 2003 (January through December), 2007 (January through December), and 2010 (January through November); tabulations by authors.

**Chart 2**  
 The 2010 Proportions  
 of Older Workers  
 (55 and older) Among  
 All Employed  
 Massachusetts  
 Residents in Major  
 Industry Sectors



Source: Monthly Current Population Survey Public Use Micro Datafiles, 2010 (January through November); tabulations by authors.

Over just seven years between 2003 and 2010, the share of older workers among all employed Massachusetts residents increased by nearly 5 percentage points representing a relative increase of 30 percent.

An examination of the change in the share of older workers across industries reveals a sharp increase in the concentration of older workers in the *construction* sector. The sharp overall decline in *construction* sector employment appears to have affected younger workers disproportionately, resulting in a two-thirds increase in the share of older workers in this sector, from 10.3 percent in 2003 and 10.7 percent in 2007 to 17.3 percent in 2010. The *professional and business services* sector also saw a sharp increase (45 percent) in the share of older workers, from 13 percent in 2003 to 16.8 percent in 2007 and nearly 19 percent in 2010.

The *information* sector, which accounts for a very small share of total employment, saw a 45 percent increase in the share of older workers. The share of older workers increased by 40 percent or 8 percentage points in the *other services* sector which includes industries such as *automotive or electronic equipment repair and maintenance firms and personal care services*. The concentration of older workers also increased in the *education and healthcare* sector (35 percent increase), *trade* sector (30 percent increase) and the *manufacturing* sector (26 percent increase). The *transportation and utilities* sector saw a sharp increase in their share of older workers between 2003 and 2007 followed by a sharp decline between 2007 and 2010 reflecting overall employment trends in this sector. The net effect was a small increase in the share of older workers in this industry between 2003 and 2010.

**Table 5**  
The Proportion of All Employed Residents in Massachusetts Consisting of Workers Aged 55 Years or Older, by Major Occupation, 2003, 2007, and 2010

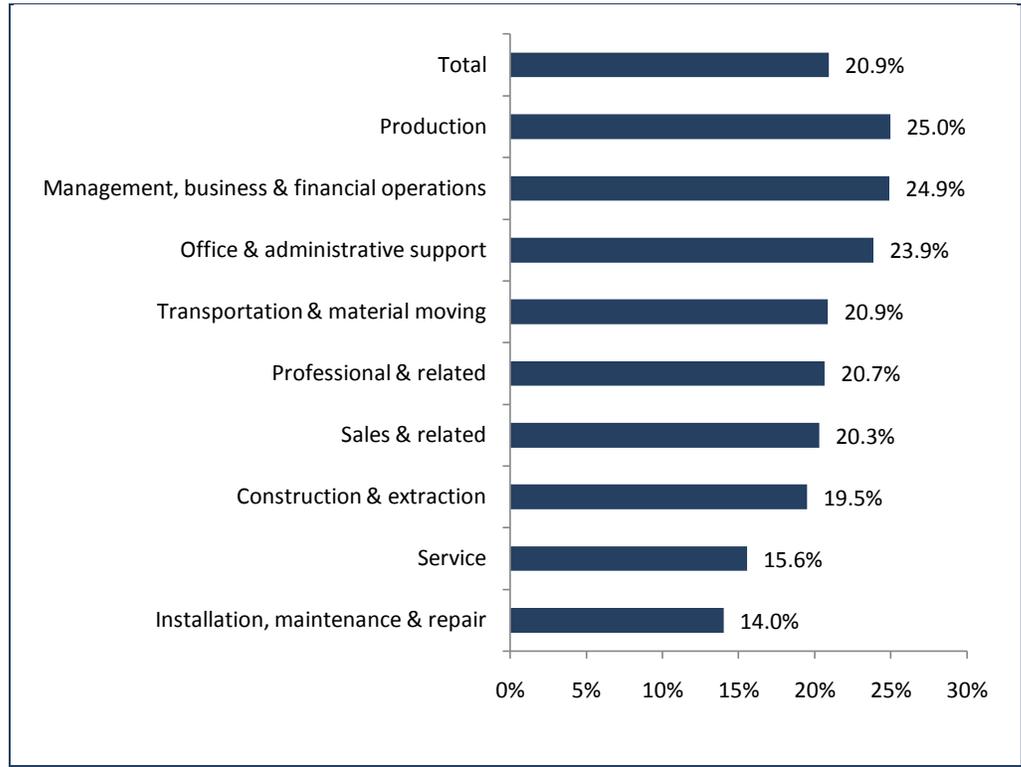
Occupation	2003	2007	2010	Absolute Change, 2003-2010 (percentage points)	Relative Change, 2003-2010 %
<b>Total</b>	<b>16.1%</b>	<b>18.2%</b>	<b>20.9%</b>	<b>4.9%</b>	<b>30.3%</b>
Management, business & financial operations	18.0	19.2	24.9	7.0	38.7%
Professional and related	15.8	19.2	20.7	4.9	31.0%
Service	14.3	16.6	15.6	1.2	8.6%
Sales and related	17.7	15.5	20.3	2.6	14.6%
Office and administrative support	18.3	20.5	23.9	5.5	30.2%
Construction and extraction	9.4	9.5	19.5	10.1	106.6%
Installation, maintenance & repair	13.9	11.9	14.0	0.1	0.6%
Production	18.3	21.2	25.0	6.7	36.4%
Transportation and material moving	12.4	24.4	20.9	8.5	68.1%

Source: Monthly Current Population Survey Public Use Micro Datafiles, 2003 (January through December), 2007 (January through December), and 2010 (January through November); tabulations by authors.

In 2010, one in five employed residents of Massachusetts (21 percent) was 55 years or older. The share of older workers across industry sectors varies from over 28 percent in the *repair, maintenance, and personal services* sector to 13 percent in the *leisure and hospitality* sector. Nearly a quarter of workers in the *public* sector and the *educational services and healthcare* sector in the state had already celebrated their 55<sup>th</sup> birthday. The *manufacturing* sector is also a large employer of older workers in the state, employing older workers to fulfill nearly 23 percent of its workforce needs. Due to the continuing decline in the *manufacturing* sector employment, which began before the recession, older workers who work in this sector are at a higher risk of being displaced and will therefore be more likely to require training and job placement assistance to secure employment in other growing sectors of the state's economy. Nationwide, the biggest percentage point increase in the unemployment rate of older workers occurred in the *manufacturing* and *construction* sectors. Moreover, although the seniority of older workers provides some protection from layoffs, when they do become unemployed, older workers are much less successful in their reemployment efforts.<sup>12</sup>

12 Richard W. Johnson and Corina Mommaerts, How Did Older Workers Fare in 2009? The Urban Institute, Washington D.C., March 2010. [http://www.urban.org/UploadedPDF/412039\\_older\\_workers.pdf](http://www.urban.org/UploadedPDF/412039_older_workers.pdf); Richard W. Johnson and Corina Mommaerts, Age Difference in Job Loss, Job Search, and Reemployment, Discussion Paper 11-01, The Program on Retirement Policy, The Urban Institute, Washington, D.C., January 2011. <http://www.urban.org/uploadedpdf/412284-Age-Differences.pdf>

**Chart 3**  
 The 2010 Proportions  
 of Older Workers  
 (55 and older) Among  
 All Employed  
 Massachusetts  
 Residents in Major  
 Occupations



Source: Monthly Current Population Survey Public Use Micro Datafiles 2010 (January through November); tabulations by authors.

Over one in five workers employed in the *retail and wholesale trade establishments* and *professional and business services* sectors were 55 years or older. The remaining industries had slightly lower concentrations of older workers — 18 percent in *transportation and utilities*, 17 percent in *construction* and one out of six in the *information* and *financial* sectors of the state.

An examination of the trends in the concentration of older workers in Massachusetts within major occupational categories (see Table 5) reflects their employment concentration in industries. Older workers in the *construction and extraction* occupations doubled their share from 9.4 and 9.5 percent in 2003 and 2007 to nearly 20 percent in 2010. Given the sharp overall decline in construction sector employment due to the collapse in the housing market that began before and accelerated during this recession, and the continued slack and excess capacity in the housing market, this large increase in the concentration of older workers in *construction* occupations places them at an increased risk of losing their jobs and staying unemployed. This is due both to their lower prospects of reemployment and to the lower likelihood of a quick turnaround in construction sector employment.<sup>13</sup> Other blue-collar occupations in the state also saw large increases in the share of older workers. *Transportation and material moving* occupations saw an increase of over two-thirds in the

<sup>13</sup> Richard W. Johnson and Corina Mommaerts, March 2010, Op. cit.



proportion of employees that were 55-plus (from 12 percent in 2003 to 21 percent in 2010). In 2003, 18 percent of *production* occupations in Massachusetts employed older workers. In 2010, one-quarter of *production* occupation workers had already celebrated their 55<sup>th</sup> birthday.

The share of older workers increased by 30 percent in *clerical* occupations and by 39% and 31% respectively in the higher level occupations of *management, business and financial operations* and in *professional* occupations. The share of older workers increased more modestly in *sales* and *service* occupations, 15 percent and 9 percent, respectively.

Older workers increased their share across all occupations in Massachusetts, albeit at different rates. In 2010, the oldest occupation category in the state was *production* occupations with one 55-plus worker out of every four workers in these blue-collar occupations. Similarly large shares of older workers were employed in the state's white collar occupations of *management, business and financial operations* (25 percent), and clerical occupations of *office and administrative support* (24 percent). One in every five workers in *the transportation and material moving* occupations, *professional* occupations, *sales* occupations, and *construction and extraction* occupations was 55 or older.

The examination above of the presence of older worker across industries and occupations in Massachusetts reveals large substitutions of younger workers with older workers in many industries and occupations in the state. The incidence of such substitution has increased sharply across all industries and occupations, with particularly sharp increases in such substitution in the state's *construction* industry. Disproportionate increases in the share of older workers also occurred across diverse sets of industries including the *professional and business services, information, education and healthcare*, and *other services* including *personal services* and *automotive and electronic repair and maintenance*. In 2010, 21 percent of all employed residents of Massachusetts were 55 and older. The share of older workers exceeded this total and was disproportionately high in four industries: *other services* including *personal and repair/maintenance services, public administration, education and health services*, and *manufacturing*.

Industries with high concentrations of older workers may need to make changes to accommodate their current older workforce who are expected to continue to remain in the labor market past the traditional retirement age. High concentrations of older workers in high-end industries and white collar occupations also pose important questions about workplace accommodation of various limitations associated with older workers as well as very complex knowledge transfer and succession issues.

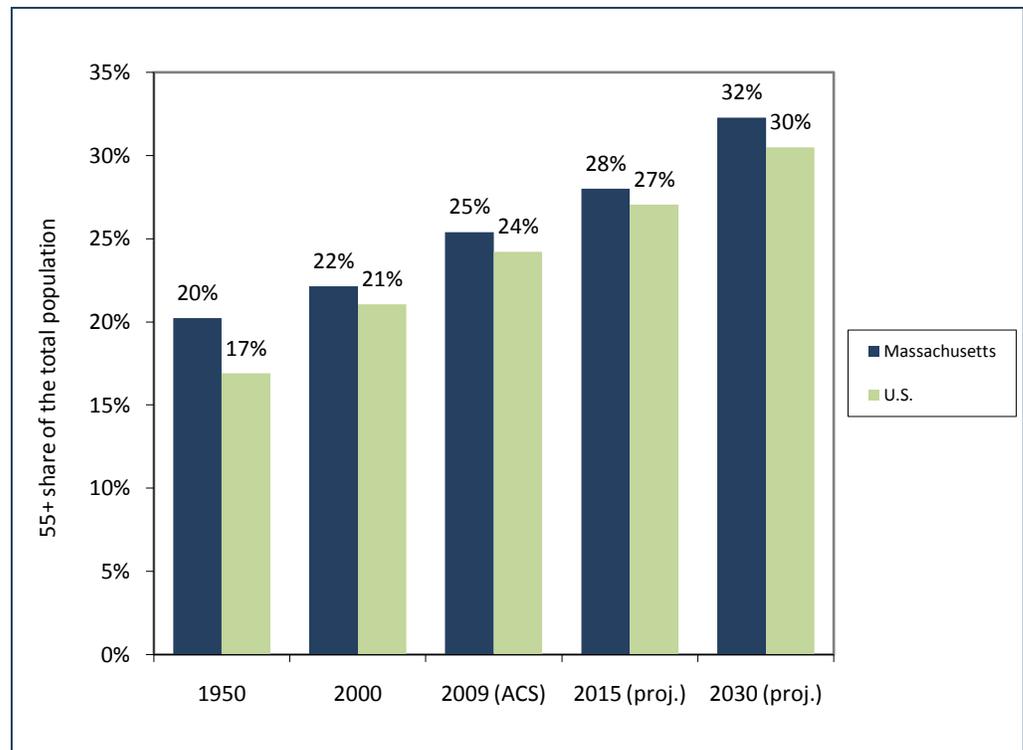
Sharp increases in the concentration of older workers in the shrinking goods-producing sectors of construction and manufacturing places these workers at increased risk of displacement. The workforce development system must be prepared to focus on the training and reemployment of these displaced older workers. Furthermore, employment in blue-collar occupations typically requires better physical abilities, making it likely that older workers in these occupations will have increased difficulty functioning in their jobs as their physical ability declines with age. Also, because of the more physical nature of these occupations, employment in these occupations places older workers at a higher risk of job-related injury and illness.

## POPULATION PROJECTIONS IN MASSACHUSETTS: THE AGING OF THE MASSACHUSETTS POPULATION

As increasing numbers of baby boomers crossed over the age threshold that defines old age, combined with the smaller size of subsequent generations, the resulting slower population growth, and increases in life expectancy, the nation has seen an increasing rate of the graying of the population. Nationwide, the share of the population that is 55 years or older has increased from 17 percent in 1950, to 21 percent in 2000, to 24 percent in 2009. Population projections reveal further increases in the share of the older population to 27 percent in 2015 and nearly 31 percent in the year 2030.

Massachusetts has a somewhat larger and more rapidly growing share of the older population than the nation. The proportion of the state's population that is 55 years or older has increased from 20 percent in 1950 to 22 percent in 2000 and one-quarter in 2009. Population projections for the state indicate further increases in the share of the state's older population. The share of the 55 plus population in Massachusetts is projected to increase to 28 percent in 2015. By the year 2030, the 55 years and older population will account for nearly 1 out of 3 Massachusetts residents (32 percent).

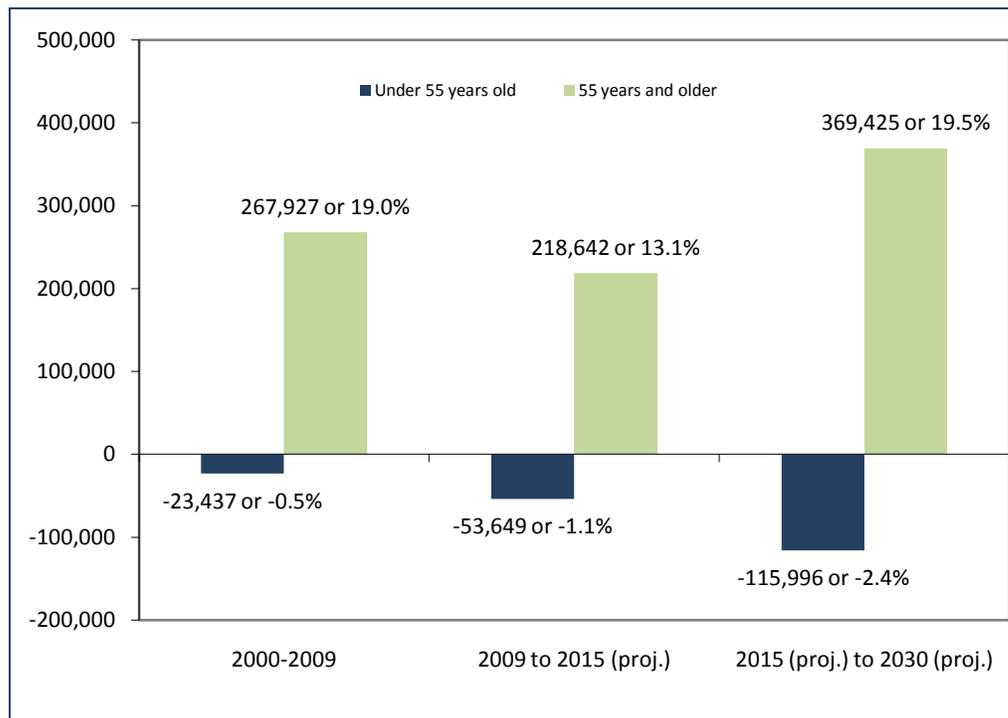
**Chart 4**  
The Share of the Total Resident Population in the U.S. and Massachusetts that is 55 Years or Older, 1950-2030



Sources: U.S. Census Bureau, Population Division, *Interim State Population Projections, 2005, Interim State Projections of Population for Five-Year Age Groups and Selected Age Groups by Sex: July, 1 2004 to 2030, 1950 Census of Population, Volume II, Detailed Characteristics of the Population, Massachusetts, Table 53. Tabulations created by authors.*



**Chart 5**  
 A Comparison of the Change in the 55 Years and Older and the Under 55 Years Old Population in Massachusetts, 2000-2030



Sources: U.S. Census Bureau, Population Division, Interim State Population Projections, 2005, Interim State Projections of Population for Five-Year Age Groups and Selected Age Groups by Sex: July, 1 2004 to 2030, tabulations by authors.

The older population is projected to be the source of all population growth in Massachusetts during the 30 years between 2000 and 2030. The state’s total population is projected to increase by 662,900 or 10 percent over the 30-year time period. The older population is projected to increase by nearly 856,000 or 61 percent over the same time period. The growth in the older population is expected to be 129 percent of the size of the growth of the state’s total population between 2000 and 2030. In the absence of the growth of the older population, the state would see a decline in its total population over the 30-year projection period.

Findings from an examination of population developments in Massachusetts in selected time periods during the 30 year period (2000-2009, 2009-2015, and 2015-2030) are presented in Chart 5. These finding reveal that between 2000 and 2009, the state’s older population increased by nearly 268,000 or 19 percent whereas the population under 55 years old declined by 23,000 or 0.5 percent. Over the next six years (2009-2015), the state is projected to have nearly 219,000 or 13 percent additional residents who are 55 years or older, while the population under 55 years old is projected to decline by nearly 54,000 or 1 percent. Extending the projections period to 2030 reveals that over the 15 years between 2015 and 2030, the rate of growth of the state’s older population will slow down somewhat to 20 percent (representing an addition of 369,400 older persons) whereas the under 55 population will decline by 116,000 persons, representing a relative decline of 2.4 percent.

**Table 6**  
Trends in the Median Age of the Population in Massachusetts and the U.S., 2000-2030

Year	Massachusetts	U.S.
2000 (census)	36.5	35.3
2009 (ACS)	39.0	36.0
2020 (projected)	39.5	37.7
2030 (projected)	40.2	38.7

Sources: U.S. Census Bureau, Population Division, *State Interim Population Projections by Age and Sex: 2004-2030, tabulations by authors*; 2008 National Population Projections, Table 12: *Projections of the Population by Age and Sex for the United States: 2010 to 2050, Resident Population as of July 1*; American Community Survey, 2009 Public Use Micro Data Files, tabulations by authors.

The age distribution of Massachusetts residents is considerably higher than that of their national counterparts. We have used the median age to represent the most simple measure of age distribution of the population. The median age represents the mid-point of the distribution of the population by age. One half of the population is older than the median age and the remaining half is younger than the median. At the time of the 2000 decennial census, the median age in Massachusetts was 37 years compared to 35 years in the nation. In the year 2009, the median age of Massachusetts residents was 39 years or 3 years older than the median age in the nation — 36 years. The median age of the population in Massachusetts is projected to be 39.5 years in 2015 and over 40 years in the year 2030. The graying of the population is evident in the national age projections as well. An average American is projected to be 37.7 years old in the year 2015 and nearly 39 years old in 2030.

## LABOR FORCE PROJECTIONS IN MASSACHUSETTS: THE AGING OF THE MASSACHUSETTS LABOR FORCE

The Bureau of Labor Statistics produces projections of the labor force and the labor force participation rate for the nation but not for individual states. We have developed a projection methodology to produce labor force projections at the state level that are closely tied to the national model. We use the national projections of the labor force participation rates between 2008 and 2020 for 16 age-gender subgroups and compute the rate of change in the projected labor force participation rates for each of the 16 groups. We then apply this rate of change to the 2008 (ACS) labor force participation rate of the 16 age-gender groups in Massachusetts to generate the projected 2020 labor force participation rates for the 16 age-gender subgroups in Massachusetts. These 2020 projected labor force participation rates for Massachusetts are used with the 2020 population projections for the same 16 groups to produce the projected labor force for each of the 16 age-gender subgroups and the sum of the 2020 projected labor force of these 16 groups measures the total projected labor force for Massachusetts in the year 2020.



**Table 7**  
The Civilian Labor  
Force in  
Massachusetts  
and the U.S.  
by Age, 2008-2020

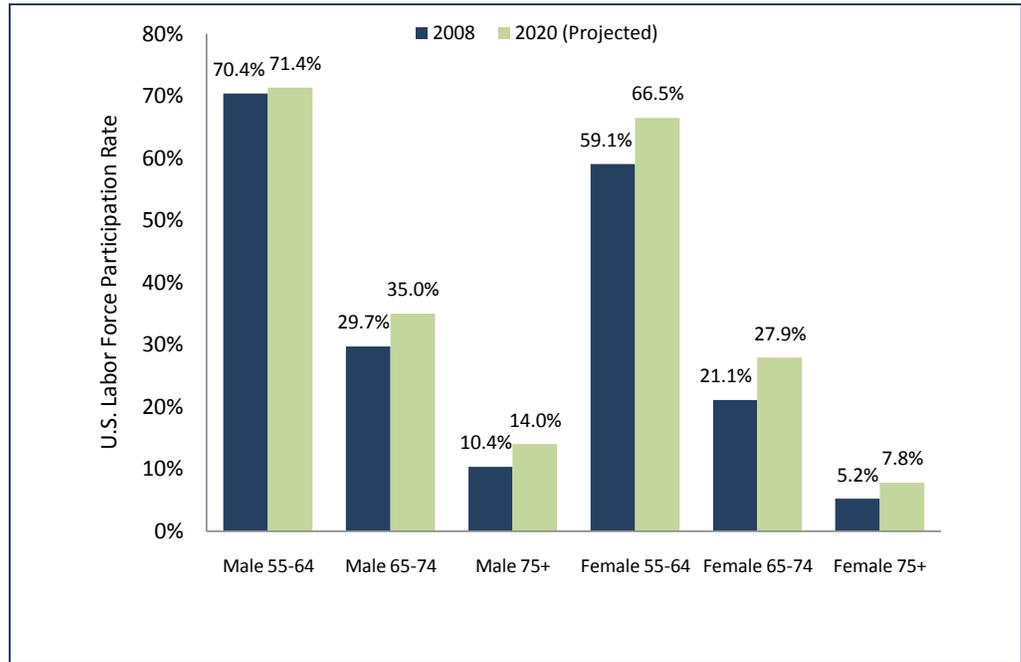
	2008	2020 (Projected)	Absolute Change	Relative Change
<b>Massachusetts</b>				
<b>Total</b>	<b>3,598,723</b>	<b>3,704,873</b>	<b>106,150</b>	<b>2.9%</b>
Under 55	2,909,220	2,709,557	-199,663	-6.9%
55 and over	689,503	995,316	305,813	44.4%
Share of 55+	19.2%	26.9%	288.1%	---
<b>U.S.</b>				
<b>Total</b>	<b>154,287,000</b>	<b>169,088,000</b>	<b>14,801,000</b>	<b>9.6%</b>
Under 55	126,428,000	127,502,000	1,074,000	0.8%
55 and over	27,858,000	41,587,000	13,729,000	49.3%
Share of 55+	18.1%	24.6%	92.8%	---

Sources: U.S. Bureau of Labor Statistics, *Projected Labor Force Data, Long-term projections to 2050*; U.S. Census Bureau, Population Division, *State Interim Population Projections by Age and Sex: 2004-2030*; U.S. Bureau of the Census, *American Community Survey, 2008 Public Use Micro Datafiles, estimation and tabulation by authors.*

Findings from our estimates of the projected labor force in Massachusetts are presented in Table 7. The Massachusetts labor force is projected to grow at a very slow pace of just 2.9 percent between 2008 and 2020. A look at the labor force trends by age reveals that while the older labor force is projected to increase by nearly 306,000 workers representing a 44 percent increase, the labor force under age 55 is projected to decline by nearly 200,000 persons or 7 percent. Therefore the net increase in the size of the state's labor force will be just 106,000 workers, representing very slow net gains in the state's labor supply and thus its net job generating potential. All of the labor force increase in Massachusetts is projected to occur among the 55-plus population. In the absence of the rise in the 55 plus labor force, the state would see a decline in its labor force. The share of older workers in the labor force is expected to increase from under one-fifth (19 percent) in 2008 to nearly 27 percent in 2020.

The projected increase in the state's labor force is not simply attributable to increases in the size of older population in the state. Some of the increase is also attributable to the continued increase in the labor force participation rate of older workers. The U.S. Bureau of Labor Statistics has projected sizable increases in the labor force participation rates of the older population (Chart 6). Between 2008-2020, the BLS projects that the labor force participation rate of males will increase by 1 percentage point among those in the pre-retirement ages of 55-64; over 5 percentage points among 65-74 year olds, and 3.6 percentage points among older males aged 75 and above. Older females are projected to increase their labor force participation more rapidly. Nationally, the labor force participation rate of pre-retirement age (55-64) women is projected to increase by nearly 7.5 percentage points, from 59 percent in 2008 to 66.5 percent in 2020. Women aged 65 to 74 are projected to increase their labor force participation by nearly 7 percentage points. Even women aged 75 and older are projected to increase their labor force attachment, albeit not as rapidly as those who are 55-64 and 65-74 years old.

**Chart 6**  
 Labor Force Participation Rates of Older Residents of the U.S. by Age and Gender, 2008-2020 (Projected)



Sources: 2008 American Community Survey Public Use Micro Datafiles, tabulations by authors; U.S. Bureau of Labor Statistics, Employment Projections, Projected labor force data, Labor force participation rates, to 2050 ([http://www.bls.gov/emp/ep\\_data\\_labor\\_force.htm](http://www.bls.gov/emp/ep_data_labor_force.htm)), tabulations by authors.

As noted in a previous section, the labor force projections for Massachusetts were based upon 2020 Massachusetts population projections for 16 age-gender groups and the projected 2020 labor force participation rates in Massachusetts for the same 16 groups. Since the BLS does not produce projections of labor force participation rates for states, we have converted the 2008 labor force participation rates for the 16 groups in Massachusetts to 2020 projected labor force participation rates by using the projected rate of change in the labor force participation rate of the 16 age-gender groups in the nation. Therefore our labor force projections include the effects of increases in the older population as well as increases in the labor force participation rates (LFPR) of the older population. In order to separate the population effect from the LFPR effect we have produced two estimates of the labor force projections among older workers in Massachusetts. One uses our methodology that measures the population effect and the LFPR effect, and the second uses an alternative methodology that measures just the population effect.

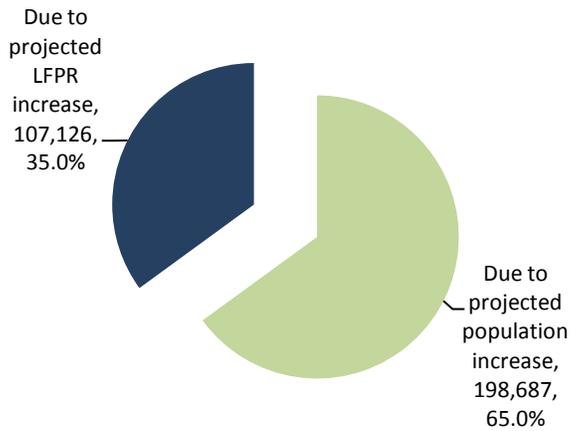
Findings presented in Table 8 reveal that based on our methodology we have estimated that the older workforce in the state will increase by 305,813 between 2008 and 2020. Using the alternative projection method that incorporates only the increase in the older population but not the increase in their labor force participation rate, we estimate the state's older labor force will increase between 2008 and 2020 by 198,687. The alternative projection assumes that the labor force participation behavior of older persons will not change between 2008 and 2020 and uses the 2008 participation rates along with 2020 population projections to estimate the projected labor force of older workers in Massachusetts.



**Table 8**  
 Labor Force Projections among Older Residents of Massachusetts, 2008-2020, Using Our Methodology (2020 Population and 2020 LFPR) and an Alternative Methodology (2020 Population and 2008 LFPR)

Change in the 55-Plus Labor Force of Massachusetts, 2008-2020			
	2008	2020	Absolute Change
2020 Pop and 2020 LFPR	689,503	995,316	305,813
2020 Pop and 2008 constant LFPR	689,503	888,190	198,687
Difference in the absolute change represents change due to LFPR* increase			107,126

**A Distribution of the Projected Increase in the Massachusetts Older Labor Force Due to Increased Population and Increased LFPR\***



\* LFPR= Labor Force Participation Rate

Sources: U.S. Bureau of Labor Statistics, *Projected Labor Force Data, Long-term projections to 2050*; U.S. Census Bureau, Population Division, *State Interim Population Projections by Age and Sex: 2004-2030*; U.S. Bureau of the Census, *American Community Survey, 2008 Public Use Micro Datafiles, estimation and tabulation by authors.*

In 2020, older workers are projected to account for nearly 27 percent of the workforce in Massachusetts.

The difference between the two estimates of projected change in the state’s older labor force (107,126) represents the proportion of the total change in the state’s older labor force that is attributable to a change in the labor force attachment of the older population. According to these estimates 35 percent of the projected increase in the older workforce of Massachusetts is attributable to an increase in the labor force participation rate of older workers between 2008 and 2020. The remaining 65 percent of the increase in the older workforce of the state can be attributed to an increase in the number of older residents in the state.

The nation’s labor force growth follows the same patterns as Massachusetts. Projected to increase at a higher rate than Massachusetts, by about 10 percent between 2008 and 2020, almost all of the increase in the workforce is attributable to older workers. The projected increase in the 55-plus labor force (13.7 million) accounts for 93 percent of the projected increase in the total labor force (14.8 million). The rate of change in the number of

participants in the labor force between 2008 and 2020 is projected to be under 1 percent among those younger than 55 and nearly 50 percent among those 55 years and older.

Older workers have begun to realize the need to continue to work into their mid-60s and beyond. Postponing labor market withdrawal and spending additional years in the labor market increases postretirement income through an actual increase in current income from earnings in the labor market, avoiding lifetime reduction in social security benefits by deferring retirement to a later age, increasing contributions to 401(k) and other defined contribution plans, allowing invested retirement savings to grow, and through a shortened duration of retirement.

Preparation for this change will require employers to consider new policies and practices to hire, train and retain older workers.

In 2020, older workers are projected to account for nearly 27 percent of the workforce in Massachusetts and a little under a quarter of the nation's labor force. This projection period ends 9 years before the youngest baby boomers turn 65 in 2029. The share of older workers in the nation's and the state's workforce is most likely to increase far beyond this projection period. Since the incidence of disability increases with age, an older labor force would also result in a higher incidence of disability in the labor force, creating a greater need for workplace accommodations for persons with disabilities. In addition to staying in the workforce longer, many older workers have changed their retirement patterns by leaving their career jobs and moving into bridge jobs rather than just exiting from the labor force.<sup>14</sup> Availability of these bridge job opportunities will provide more appropriate employment options to older workers who want to stay in the workforce but may not want the time commitment that was required in their career jobs or in full-time and year-round positions.

Out of necessity and/or choice, older workers today remain in the workforce longer than their parents did. Preparation for this change in the future labor force will require employers to consider new policies and practices to hire, train and retain older workers, public policy to support retention of older workers and develop a pipeline of replacement workers and careful retirement planning by individuals. These changes call for a better preparation of the workplace to accommodate older workers and a serious consideration of strategies such as universal design, including work schedule flexibility, to accommodate the increasing numbers of older population who are choosing to stay in the workforce past the traditional retirement age. The workforce development system will also have to increase its focus on the job training and job placement of older workers and address the unique labor market problems of older workers. This paper and the accompanying paper *Retaining Older Workers, Practical Strategies for Workforce Development Leaders*, are intended to support workforce professionals in planning for the changing demographics of the workforce.

<sup>14</sup> Cahill Kevin, Giandrea Michael, and Quinn Joseph, "Are Traditional Retirements a Thing of the Past? New Evidence on Retirement Patterns and Bridge Jobs," BLS Working Paper 384, Bureau of Labor Statistics, U.S. Department of Labor, September 2006.



## **THE CENTER FOR LABOR MARKETS AND POLICY, DREXEL UNIVERSITY (CLMP)**

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The Center for Labor Markets and Policy, Drexel University (CLMP) conducts applied research and provides education and technical assistance on human resource development issues and their connections to the labor market. CLMP uses its expertise in human resource development economics and labor market analysis to support policy makers and practitioners in developing improved human resource development planning, programming, evaluation and finance at local, regional and state levels. CLMP staff work with national, state and local governments, workforce development organizations, the business community, organized labor, the non-profit community and others engaged in building the nation's human resource development system.

