

THE COMMONWEALTH OF MASSACHUSETTS'

JOBS CREATION COMMISSION

FINAL REPORT

January 2011 -
September 2012

Prepared by the Jobs Creation Commission pursuant to Chapter 7 of the Acts of 2008 as amended by Section 127 of Chapter 359 of the Acts of 2010.

September 2012



COMMONWEALTH OF MASSACHUSETTS
THE GENERAL COURT
STATE HOUSE, BOSTON 02133-1053

September 2012

We are pleased to present the 2012 Jobs Creation Commission report for your consideration. The Jobs Creation Commission convened January 26, 2011 and undertook the sweeping mission of its legislative resolve: “making an investigation and study relative to the economy in order to create and maintain quality jobs in the Commonwealth.” We are thrilled and thankful that so many Commissioners and members of the public collaborated in the creation of this report.

In gathering information for the report, the Commissioners strove to be as inclusive and thorough as possible. We committed to include the public in the process from the beginning. To that end, we conducted a regional hearing tour across the Commonwealth to hear from job seekers and businesses. In addition, the Commission met in monthly, public meetings where we heard presentations, discussed regional hearings, and deliberated on the final report. Finally, we formed Inventory, Supply and Demand subcommittees to inform the final report and capitalize on Commissioner expertise.

As a worldwide leader in research, innovation, and education, the Massachusetts economy is certainly unique. The Massachusetts economic base is concentrated in information technology, life sciences and health care, higher education, finance, and defense technology, among others. The Commonwealth also boasts high educational attainment – 39 percent of the population 25 years or older holds a bachelor’s degree or higher level of educational attainment, a level only exceeded by the District of Columbia. Simply put, our advantage is our highly-skilled labor force.

Although there is still work to be done, the Commonwealth has seen its unemployment rate fall significantly from its recession peak of 8.7 percent in December 2009. Since then, the unemployment rate has dropped to 6.0 percent in May 2012 – more than halfway back to its pre-recession level and significantly below the 8.2 percent level that prevailed in the U.S. as a whole in May. This quantitative improvement in the Massachusetts economy was reflected in the testimony the Commission heard during the regional hearings tour, which became increasingly positive over time. We are also pleased to hear that the New England Economic Partnership outlook for Massachusetts forecasts the unemployment rate to continue to fall steadily to just over 5 percent by the end of 2016. This report is intended to inform decision makers as we continue to build on these improvements.

We want to thank our fellow Commissioners for their exceptional expertise and commitment to producing this comprehensive report. We also want to thank the designees and staff for their contributions as well as Laurie Taymor-Berry. Further, we want to thank Senate President Therese Murray, Speaker of the House of Representatives Robert DeLeo, and Governor Deval Patrick for their strong and committed leadership on these issues. Finally and most importantly, we want to thank the members of the public who contributed their experiences and ideas throughout the regional hearings tour. We have listened to stories of personal strife and courage, and impressive acts of innovation. Jobs creation is an issue that affects everyone in Massachusetts. It is our hope that the report’s recommendations will aid in Massachusetts’ continuing economic recovery.

Respectfully Submitted,

Handwritten signature of Karen E. Spilka in blue ink.

Senator Karen E. Spilka
2nd Middlesex and Norfolk

Handwritten signature of Joseph F. Wagner in black ink.

Representative Joseph F. Wagner
8th Hampden

JOBS CREATION COMMISSION REPORT

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JOBS CREATION COMMISSION REPORT EXECUTIVE SUMMARY

Overview

The Jobs Creation Commission was created by Chapter 7 of the Acts of 2008 as amended by section 127 of Chapter 359 of the Acts of 2010. The Commission consists of 17 Commissioners including 4 legislators, representatives of 9 cabinet secretaries, a business representative, a labor representative, an advocate for the unemployed and an academic economist. The Commission's only charge was to create a report "making an investigation and study relative to the economy in order to create and maintain quality jobs in the Commonwealth."

The Commission's Approach

To address its very broad mission, the Commissioners held monthly meetings, conducted a regional hearing tour, and formed three subcommittees. Monthly meetings (from 01/26/11 to 07/25/12) included presentations on a variety of topics as well as discussions of the regional hearing tour and the final report.

The seven-month regional tour included eight hearings across the Commonwealth: Holyoke, Worcester, Lynn, Plymouth, Lowell, New Bedford, Framingham, and Boston. The tour's purpose was to gather general and regionally-specific information and to hear directly from local job seekers and businesses. With assistance from local Workforce Investment Boards, the Commission heard testimony from three panels at each hearing: job seekers and worker organizations, business owners and CEOs, and human resources professionals. The Commission encouraged public testimony at all hearings.

The Commissioners formed the Inventory, Supply, and Demand subcommittees to assist the full Commission in gathering information. The subcommittees' capitalized on each commissioner's expertise and addressed major topic areas within the Commission's very broad mission.

Study of the Massachusetts Economy

During the last several decades following World War II, the Massachusetts economy transformed itself from a declining traditional manufacturing economy to a leading high technology economy. This economic transformation was accomplished in part by the legacy of a workforce with manufacturing skills and highly-regarded institutions of higher education and hospitals, in part by the luck of having the right mix of skills and industries for the time, and in part by public policy initiatives such as increased education funding for elementary and secondary schools, and investment and policy support for research and development activities.

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Massachusetts's economic prosperity is due to its prominence in key technology, science, and knowledge-based industry sectors. Massachusetts's advantage relative to other states in these sectors can be measured by examining the proportion of sector employment relative to the nation as a whole. Using these metrics, the state is particularly prominent in a number of industry sectors, especially in the fields of technology (computers, semiconductors, software, and computer system services), life sciences (medical equipment, manufacturing of pharmaceuticals and medicines, research and development, hospital employment), higher education, finance (financial investment), and defense technology (various).

The state's labor force is highly educated. A 2010 Census Bureau study found that 39% of the state's population 25 years and older has a bachelor's degree or higher, which is greater than all other 50 states. A side effect of this educational attainment is high wages and incomes relative to other states.

Global economic forces and demographic trends have affected the state's economic development path over the past several decades, and pose both promising opportunities and difficult challenges in future decades. Chief among these challenges has been the out-migration of much of the state's enormous manufacturing activity, first to other states in the decades following World War II, and subsequently to other countries in recent decades.

One result of these trends that is shared by the nation as a whole is an increasing degree of wage and income inequality, which is closely tied to educational attainment, the achievement gap, and the need for middle skills jobs training. This trend also occurs regionally with a larger number of persons having lower levels of educational attainment and skills living in the state's metropolitan and non-metropolitan areas outside of Greater Boston. In a similar way, Massachusetts also faces a future challenge of reproducing a skilled workforce as baby boomers retire. Future economic success will require producing not only a highly educated workforce but a comparatively large one to continue to attract and retain employers.

The globalization trend also provides a promising opportunity. The world economy is expanding and emerging economies are supplying quantities of unskilled labor. This means that skilled labor and financial capital are in short supply – precisely the characteristics for which the Commonwealth has a comparative advantage in supplying. The demographic trends might also be mitigated by increased migration into the state and efforts to encourage baby boomers to delay retirement.

Observations

Based on testimony and information it received, the Commission observed many strengths

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of the Massachusetts economy and the many challenges the state faces to create and maintain quality jobs. In examining strengths, the Commissioners identified the concept of innovation as a consistently recurring element in the state's ability to create new businesses. This spirit of innovation is equally apparent in the list of industries for which Massachusetts has a competitive advantage over other states, including information technology, life sciences (including biotechnology, health care, pharmaceuticals, and medical devices), higher education, defense, clean energy, advanced manufacturing and other knowledge-based sectors including professional and financial services.

Although many areas were observed to be strengths, there were a few where Massachusetts has a significant advantage over other states. Chief among these is the state's educated labor force, its best "natural resource". In addition, the other strengths noted were the state's higher education research institutions, public infrastructure investments, efficient and stable government in core areas, and high quality of life.

Despite these strengths, the Commissioners noted that significant challenges that hinder job retention and creation efforts. The state's biggest challenge moving forward is to continue to spur expansion of jobs. Related challenges were the mismatch of jobs to candidates (especially in the area of STEM and middle-skill jobs), overcoming barriers to employment for disadvantaged populations, continuing to support education and workforce development programs, further investment in infrastructure, and better marketing of Massachusetts as a great place to do business. Finally, the Commissioners noted that there were significant disparities among regions of the state. The major characteristics of regions with higher unemployment than the state as a whole include lack of infrastructure investment, fewer higher education institutions, and slow development of a new industrial base.

Commission Recommendations

With the overarching goal of creating more jobs, the Commissioners outlined four main strategies to reach this goal. To implement these strategies, the Commission report recommends a variety of tactics. The first strategy is to increase demand for goods and services produced throughout the Commonwealth. Among the tactics recommended to reach this strategy is continuing current reforms to lower business costs and the regulatory burden, creating a preference in government purchasing for goods produced in Massachusetts, marketing Massachusetts aggressively to businesses as a business friendly state, encouraging increased exports, and addressing regional disparities in employment.

The second strategy is to increase state investment in infrastructure. Included in the suggested tactics were making further capital investments in new and existing

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infrastructure, making direct state investment to support job growth, prioritizing state infrastructure spending for priorities identified by local, regional and state entities in state-sponsored regional plans, increased capital investment in building rehabilitation, and promoting additional investments in energy efficiency improvements.

The third strategy is to support public educational institutions and better align education and training to job demand in order to ensure an appropriately skilled workforce. Some of the tactics recommended to support public education included continuing to support pre-K to 12 and higher education, improving counseling for college enrollment, increasing the number of appropriately credentialed teachers, further increasing the focus on science, technology, engineering and math (STEM) education careers, ensuring public education has up-to-date tools and facilities, and continuing to support research and technology transfer at higher education institutions. In addition, among the tactics proposed to support improved alignment included supporting and funding internship programs for high school and college students, externship programs for teachers, providing additional skill specific training for middle and high skill jobs, continuing to facilitate collaboration among industry groups to create valuable certifications, increasing collaboration among business, education, and Workforce Investment Boards (WIBs) to ensure alignment and rapid response, and conducting the state job vacancy survey annually to provide data to educational and workforce training institutions.

The fourth strategy is to ensure a robust and coordinated system of workforce training programs and job search resources. Among the tactics suggested were increasing funding of One-Stop Career Centers, creating new programs to help veterans transfer skills acquired in the military, using a more robust assessment of clients and evaluation of the job market to guide training decisions, continuing to use employer driven models and best practices for training, expanding and better marketing the Workforce Training Fund, and creating supported internship programs specifically for unemployed job seekers. In addition, other tactics suggested to address this strategy included addressing potential barriers to employment among certain job seekers (including, but not limited to, those experiencing bias or barriers related to age, disability, criminal or court activity record, military experience), recapitalizing the Workforce Competitiveness Trust Fund, using resources at the Massachusetts Growth Capital Corporation to encourage entrepreneurship, and increasing public awareness of the value of worker cooperatives.

JOBS CREATION COMMISSION REPORT

COMMISSIONERS

- State Senator Karen E. Spilka, Co-Chair
- State Representative Joseph F. Wagner, Co-Chair
- State Senator Richard Ross
- State Representative Paul Frost
- Secretary Joanne Goldstein, Executive Office of Labor and Workforce Development
 - Designee: Jennifer James Price, Undersecretary of Workforce Development, Executive Office of Labor and Workforce Development
 - Designee: George Moriarty, Director, Division of Career Services, Executive Office of Labor and Workforce Development
- Secretary Richard Sullivan, Executive Office of Energy and Environmental Affairs
 - Designee: Philip Griffiths, Undersecretary for Environment, Executive Office of Energy and Environmental Affairs
 - Designee: David Cash, Executive Office of Energy and Environmental Affairs
- Secretary Richard Davey, Secretary & CEO, Massachusetts Department of Transportation
 - Designee: Jefferson Smith, Legislative Director, Massachusetts Department of Transportation
- Secretary Ann Hartstein, Executive Office of Elder Affairs
 - Designee: Mary Kay Browne, Senior Project Director, Executive Office of Elder Affairs
- Secretary Coleman Nee, Department of Veterans' Services
 - Designee: Cheryl Lussier Poppe, Director, Veterans' Programs & Services, Department of Veterans' Services
- Secretary Mary Beth Heffernan, Executive Office of Public Safety and Security
 - Designee: Michael Christopher, Manager of Public Policy and Public Affairs, Executive Office of Public Safety and Security
 - Designee: Nurys Camargo, Policy Analyst & Advisor, Executive Office of Public Safety and Security
- Secretary JudyAnn Bigby, MD, Executive Office of Health and Human Services

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COMMISSIONERS

- Designee: Charles Carr, Commissioner, Massachusetts Rehabilitation Commission
- Secretary Greg Bialecki, Executive Office of Housing and Economic Development
 - Designee: April Anderson Lamoureux, Assistant Secretary for Economic Development, Executive Office of Housing and Economic Development
 - Designee: Justin Sterritt, Project Manager, Executive Office of Housing and Economic Development
- Secretary Paul Reville, Executive Office of Education
 - Designee: Marissa Cole, Deputy Chief of Staff, Executive Office of Education
 - Designee: Marybeth Campbell, Director of Education and Workforce Development, Executive Office of Education
- Timothy Sullivan, Legislative & Communications Director, Massachusetts AFL-CIO
- Eileen McAnneny, Director of Public Policy, Fidelity Investments (on behalf of the Associated Industries of Massachusetts)
- Aaron Tanaka, Executive Director, Boston Workers Alliance
- Dr. Alan Clayton-Matthews, Professor and Director of Quantitative Methods, Northeastern University. School of Public Policy and Urban Affairs

Commission Staff

- Mary Anne J. Padien, Office of Senator Karen E. Spilka
- Michael H. Wright, Office of Senator Karen E. Spilka
- Emily M. Fitzmaurice, Office of Senator Karen E. Spilka
- Marianne N. Conboy, Office of Senator Karen E. Spilka
- Andrew Keegan, Office of Representative Joseph F. Wagner
- Ryan Coyne, Office of Representative Joseph F. Wagner
- Tyler Hardman, legal intern, Office of Senator Karen E. Spilka
- Jessica Wall, legal intern, Office of Senator Karen E. Spilka
- Ken Wiczerza, legal intern, Office of Senator Karen E. Spilka
- Ryan Gelman, legal intern, Office of Senator Karen E. Spilka

SECTION ONE: INTRODUCTION AND PROCESS



A meeting of the Jobs Creation Commission at the Massachusetts State House

The Jobs Creation Commission was created by Chapter 7 of the Acts of 2008 as amended by Section 127 of Chapter 359 of the Acts of 2010, (Appendix A) which established a special commission consisting of the following members:

- 2 members of the Senate, one appointment by the Senate President who shall serve as co-chairperson, one appointment by the minority leader
- 2 members of the House, one appointment by the Speaker who shall serve as co-chairperson, one appointment by the minority leader
- Secretary of Labor and Workforce Development or designee
- Secretary of Energy and Environmental Affairs or designee

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SECTION ONE: INTRODUCTION AND PROCESS

- Secretary of Transportation or designee
- Secretary of Elder Affairs or designee
- Secretary of Veterans' Services or designee
- Secretary of Public Safety or designee
- Secretary of Health and Human Services or designee
- Secretary of Housing and Economic Development or designee
- Secretary of Education or designee
- 4 persons to be appointed by Governor
 - o 1 of whom shall be a representative of a labor organization from a list of 3 nominees provided by the Massachusetts AFL-CIO who shall be experienced in small business, the health care industry, education or workforce development
 - o 1 of whom shall be a representative of business from a list of 3 nominees provided by the Associated Industries of Massachusetts who shall be experienced in renewable energy, small business, the health care industry, veterans affairs, immigration, workforce development or self-employed.
 - o 1 of whom shall be a representative of the unemployed from 3 nominees provided by Boston Connects, Inc.
 - o 1 of whom shall be an expert in labor economics from a state college or university

This resolve charged the Commission with “making an investigation and study relative to the economy in order to create and maintain quality jobs in the Commonwealth”. The Jobs Creation Commission convened on January 26, 2011 after all Commissioners were appointed.

Given the broad mission of the resolve, the initial Commission meetings focused on interpreting this mission. After much discussion and debate, the Commissioners agreed to interpret this charge as posing the following questions:

SECTION ONE: INTRODUCTION AND PROCESS

1. What is the current state of the economy?
2. What are we currently doing to create jobs?
3. What do we need to do to increase job creation?

The Commissioners initially determined that the mission statement required them to: identify advantages to job creation and leverage them; identify barriers to job creation and mitigate them; identify how to train job seekers effectively; and communicate existing and future job creation programs effectively.

Based on these early discussions, the Commissioners decided it would hold monthly meetings, conduct a regional hearing tour with hearings around the state, and form three subcommittees.

The Commission's monthly meetings were held from January 26, 2011 to July 25, 2012. Commissioners invited individuals and organizations to present information and enter into a discussion with the Commission on a variety of topics (Appendix C). In addition to presentations, the monthly meetings included discussion of the information gathered at regional hearings and the final report's content.

To gather information from a wide range of individuals, the Commissioners conducted a regional hearing tour across the Commonwealth (Appendix D). The tour's purpose was to gather more regionally-specific information and to hear directly from job seekers and businesses in the regions. The Commission partnered with the Workforce Investment Boards ("WIBs") and the Workforce Board Association to hold eight hearings throughout Massachusetts. At each location, the local WIBs were the Commission's liaison to find a venue and identify presenters.

Finally, the Commissioners formed three subcommittees to assist the full Commission in gathering and interpreting information. The subcommittee structure enabled the Commission to capitalize on each Commissioner's expertise and to explore in detail some of the major topic areas within the Commission's very broad mission. Three subcommittees were created: Inventory, Supply and Demand. The Commissioners agreed to the following framework and the Commissioners listed below volunteered to serve as subcommittee co-chairs:

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SECTION ONE: INTRODUCTION AND PROCESS

Inventory *Co-chaired by Dr. Alan Clayton-Matthews (Northeastern University) and Jennifer James Price (EOLWD)*

- Catalogue past and existing job creation activities and evaluate for best practices and effectiveness
- Catalogue best practices from other states

Demand *Co-chaired by Eileen McAnney (on behalf of Associated Industries of Massachusetts) and April Anderson Lamoureux (EOHED)*

- Focus on job creation programs in both the public and private sectors
- Look at the challenges and opportunities available to both small businesses and large businesses

Supply *Co-chaired by Tim Sullivan (AFL-CIO) and Aaron Tanaka (Boston Worker's Alliance)*

- Focus on employment needs within various populations
- Examine the barriers to employment and the education and training needed to fill available jobs

The subcommittees' work was conducted separately from the full Commission and was at the discretion of the co-chairs. Each subcommittee held its own public meetings to discuss its' work. Each subcommittee also produced a subcommittee report (Appendix E).

The final Commission report utilizes the information gathered at monthly meetings and regional hearings, the subcommittee reports, and the expertise of the Commissioners. The following items should be noted in considering this final Commission report:

- The appendix contains the summaries of the meetings and hearings of the Commission and the subcommittee reports as well as information and testimony submitted. It is the record of the Commission's activity. It is not considered part of the final report. The Commission voted to adopt Sections 1 to 6, inclusive, as its final report.

SECTION ONE: INTRODUCTION AND PROCESS

- In order to understand labor market information, Commissioner Dr. Clayton-Matthews, the sole economist on the Commission, provided an analysis, which was discussed by the Commission and adopted as Section 4 of this report.
- In deciding upon the scope of the Commission's work, the Commissioners determined that some issues affecting job creation in Massachusetts are either currently being reviewed by others or are impacted by recent legislative changes that are still in the early stages of implementation. In addition, even in the short time the Commission met there was significant progress in many policy areas that will positively impact the Massachusetts economy but (given the timing of this report) cannot be truly reflected in the final report. Among recent policy activity was first-in-the-nation health care cost control legislation passed in July 2012 as part of on-going legislative/administration efforts to control business health care costs and a significant economic development law that included policies and investments to spur job creation. The Commission decided not to focus on the following matters: health care cost control efforts; community college governance reform efforts; energy cost control efforts; tax expenditure review; changes to the criminal record statutes; reorganization of Labor and Workforce Development agencies; road and bridge infrastructure investments; and expanded gambling. Summaries of recent activity on these and additional topics are included in appendix B.

SECTION TWO: THE INVENTORY, DEMAND, AND SUPPLY SUBCOMMITTEES

The Inventory Subcommittee:

The Inventory subcommittee determined that its mission was to identify the major job creation (demand-side) or workforce development programs (supply side) programs supported by government that could assist the Commonwealth in creating jobs.

The subcommittee focused on identifying existing, high-quality evaluations of these programs to outline those that prove to be most effective. Specifically, the subcommittee sought to catalogue past and existing job creation activities and evaluate for best practices and effectiveness and to catalogue best practices from other states if available.

The Inventory subcommittee conducted its work through a 12 month literature review and monthly discussions of the findings from various evaluations of job creation and workforce development programs. The subcommittee co-chairs completed an extensive literature review of professional research in these areas. In addition, it has reviewed or created the following inventories and tools specific to Massachusetts programs: the Workforce Investment Profiles (“Money Map”), the Annual Performance Report of the Massachusetts Workforce Development Services & Programs (“Performance Map”), an inventory of existing job creation programs, and a matrix of existing evaluations to highlight most significant research studies and findings.

In addition to the documents mentioned above, the Inventory subcommittee also addressed the additional topics in their final report, including: state and local-based tax incentives, pre-K education policies, elementary and secondary education policies, One-Stop Career Centers; employee-based training internship programs; sector and employer designed training initiatives; and Massachusetts’ challenges and opportunities in the future.

The Demand Subcommittee:

The Demand subcommittee determined that its mission was to understand the factors that influence Massachusetts businesses and their growth and siting decisions, which are essential to long-term, high-quality and sustainable job creation. It determined that identifying and addressing the advantages, challenges and opportunities of doing business in the state are vital for public policy makers in Massachusetts if they are to set the conditions that are most promising for long term economic prosperity.

SECTION TWO: THE INVENTORY, DEMAND, AND SUPPLY SUBCOMMITTEE

The subcommittee explored conditions that influence businesses and their decisions regarding job creation in Massachusetts. It heard from established industry leaders, emerging small businesses in new markets, and economic development experts about the prospect for job growth in Massachusetts, and ways that government can best support a prosperous and productive business climate in Massachusetts.

The Demand subcommittee considered information received through the full Jobs Creation Commission meetings and regional hearings and collected additional input during two subcommittee meetings. This process involved businesses, consultants, business organizations, and other economic development experts who described the strengths, challenges and opportunities of operating a business in Massachusetts.

Among the topics that the Demand subcommittee addressed in their final report include: education, infrastructure investment, marketing Massachusetts, energy, regulation and permitting, health insurance and unemployment insurance.

The Supply Subcommittee:

The Supply subcommittee determined that its mission was to identify specific strategies for job creation and retention from the position of the workers within the Massachusetts labor force. This included consideration for the needs of disadvantaged sectors of the workforce that face barriers to employment.

The Supply subcommittee focused on testimony and research from a broad range of stakeholders who are invested in the creation of meaningful work for all sectors of the Massachusetts workforce. Topics considered include employee corporate ownership, publicly funded jobs programs, workforce development, education and training, and certification reform, state purchasing and sourcing.

The Supply subcommittee heard testimony through the Commission hearings, regional hearings and subcommittee meetings. Testimony included perspectives from under-employed and unemployed workers, business owners, workforce development experts and advocates, higher education specialists, human resource managers and community leaders. The subcommittee also conducted a voluntary survey of key state agencies and relevant non-profits to add important data to its research.

SECTION TWO: THE INVENTORY, DEMAND, AND SUPPLY SUBCOMMITTEES

Topics that the Supply subcommittee addressed in their final report include: training, certification and workforce development programs, publicly funded jobs and job training, employee ownership and worker cooperatives, review of public purchasing and state vendors, health/unemployment insurance, CORI reform enforcement and “Green Jobs” growth.

SECTION THREE: THE REGIONAL HEARING TOUR

Regional Hearings

Overview:

The Commission conducted a statewide hearing tour in order to investigate the economic characteristics and job creation potential of the Commonwealth's different regions. Beginning in October 2011, eight hearings were held monthly in regions across Massachusetts including: Holyoke, Worcester, Lynn, Plymouth, Lowell, New Bedford, Framingham and Boston.



The business owner and CEO panel addressing the Commission at the Framingham regional hearing.

The Commission partnered with the Workforce Board Association and the sixteen regional Workforce Investment Boards (“WIBs”) it represents to assist in organizing the hearings. In order to achieve maximum participation and attendance, the Commission, with the help of the local WIBs, invited the public, regional press, state and federal legislators, and local public officials the hearings.

Each hearing's panels presented information regarding the region's current employment environment. The first panel consisted of individuals actively looking for work and local organizations that represent workers. The second panel included business owners and CEOs. The third panel was comprised of human resource professionals.

The Commission also created a set of uniform questions for each of the panels, which the Commission asked the panelists to address in their oral testimony. After the three panels testified, the Commission provided a time for public participation and welcomed public testimony on job creation.

SECTION THREE: THE REGIONAL HEARING TOUR

Questions presented to panelists:

Panel 1 – *Individuals looking for work & organizations representing workers*

- What services are job seekers utilizing in their search? Which services are most effective? What necessary or useful services are missing?
- What is preventing the individual testifying from being employed?
- What are the barriers that the organization sees for people at various skill levels in this region for finding jobs? What is needed for progress?

Panel 2 – *Business owners & CEOs*

- If there is increased demand for your services/products will you hire more employees? Do you expect this to happen?
- What are the significant costs to doing business that you can attribute to having chosen to do business in this region? Do these costs affect your ability to expand operations and create jobs?
- Have you experienced productivity advances in the last 5 years? How has that affected hiring for your business?

Panel 3 – *Human resource professionals*

- Under what circumstances would you increase your workforce?
- Who would you hire if you were adding jobs now, i.e. what skills, experience, education do you need?
- If you cannot find the exact match for your needs what do you do? Would you train in house? Would you turn to some other resources to train employees? Do you work with applicants that do not meet all the criteria you hope for in an employee?

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SECTION THREE: THE REGIONAL HEARING TOUR

The following table lists the dates, locations, and presenters at each regional hearing:



The site of the first regional hearing, the Holyoke Transportation Center.

Date	Location	Panel	Panelists
October 13, 2011	Holyoke Holyoke Transportation Center 206 Maple Street, Holyoke, MA 01040	Job Seekers & Organizations Representing Workers	<ul style="list-style-type: none"> • David Gadaire, Executive Director, CareerPoint • Chantele Armata, unemployed worker who recently completed a training program with CareerPoint • Mike Florio, Western Massachusetts Coalition for Occupational Safety and Health (COSH) • Brenda Huerta, recently employed union worker • Frank Liberti, Franklin-Hampshire area job seeker
		Business Owners & CEOs	<ul style="list-style-type: none"> • Larry Maier, President, Peerless Precision, Inc. • Paul Keyes, Owner, Victory Energy Solutions • Greg Garrison, CFO, Northeast Solar Design Associates
		Human Resource Representatives	<ul style="list-style-type: none"> • Jean Jackson, Vice President of Workforce Planning, Baystate Health Systems • Meredith Wise, President, Employers Association of the Northeast • Jason Chateaufneuf, Director of Corporate Staffing & Administrative Services, The Yankee Candle Group, Inc.

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SECTION THREE: THE REGIONAL HEARING TOUR

Date	Location	Panel	Panelists
November 18, 2011	Worcester Teamsters Hall 330 Southwest Cutoff, Worcester, MA 01604	Job Seekers & Organizations Representing Workers	<ul style="list-style-type: none"> • Ken Butterfield, Worcester-area job seeker • Jack Donahue, Business Manager, Carpenter's Local 107 • Don Anderson, Director, Workforce Central Career Center • Magdalene Tiapula, Worcester-area job seeker
		Business Owners & CEOs	<ul style="list-style-type: none"> • Donna Tomasetti, Co-Owner, Advanced Cable Ties • Edward Moore, President & CEO, Harrington Memorial Hospital of Southbridge • Richard B. Kennedy, President & CEO, Worcester Regional Chamber of Commerce • Steve and Cathy Philips, Owners, Phillips Precision
		Human Resource Representatives	<ul style="list-style-type: none"> • Annemarie Abdo, Human Resources Manager, Vitasoy • Jackie McGravey, Workforce Development Manager, UMass Memorial Medical Center • Marcy L. Merzigian, District Human Resources Manager, The Home Depot – New England Region

Worcester's Teamsters Hall was the location of the second regional hearing.



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SECTION THREE: THE REGIONAL HEARING TOUR

Date	Location	Panel	Panelists
December 12, 2011	Lynn North Shore Career Center 181 Union Street, Lynn, MA 01901	Job Seekers & Organizations Representing Workers	<ul style="list-style-type: none"> • Marilyn Foster, Manager, North Shore Career Center of Lynn • Steve Falvey, New England Regional Council of Carpenters • Christine Dwan, job seeker from Lynn • Diane O’Huggin, job seeker from Lynn
		Business Owners & CEOs	<ul style="list-style-type: none"> • Jon Geurster, CEO, Groom Energy • Bill Tinti, President, Tinti, Quinn, Grover & Frey, P.C and Chair, North Shore WIB
		Human Resource Representatives	<ul style="list-style-type: none"> • Douglas Rosenfeld, Vice President of Global Human Resources and Administration, Analogic • Arthur Bowes, Senior Vice President of Human Resources, North Shore Medical Center • Nancy Stager, Executive Vice President of Human Resources, Eastern Bank

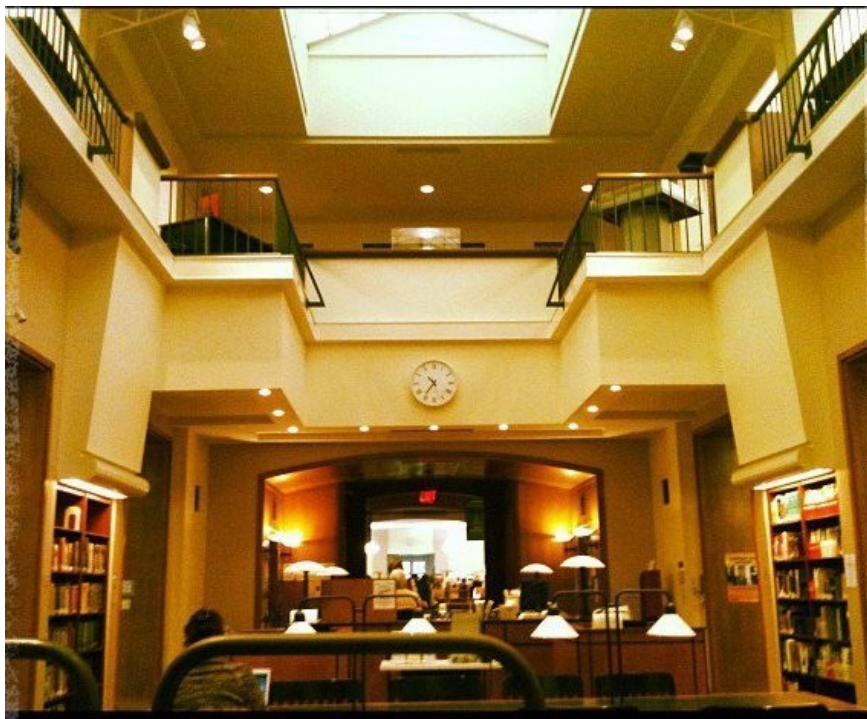


CREDIT: Chris Stevens/The Lynn Daily Item

Steve Falvey of New England Regional Council of Carpenters addresses the Commission at the Lynn regional hearing.

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SECTION THREE: THE REGIONAL HEARING TOUR



A look inside the Plymouth Public Library where the Commission held it's regional hearing in the library's Otto Fehlow Room.

Date	Location	Panel	Panelists
January 18, 2012	Plymouth Plymouth Public Library 132 South Street, Plymouth, MA 02360	Job Seekers & Organizations Representing Workers	<ul style="list-style-type: none"> • Harry Brett, Business Agent, Plumbers & Gasfitters Local Union 12 • Kevin Parham, Director, Plymouth Career Center • Laurie Damon, job seeker from Marshfield • Sherry Tucker Brown, Founder & Principal, The Tucker Brown Group
		Business Owners & CEOs	<ul style="list-style-type: none"> • Olive Chase, Owner, The Casual Gourmet • Christa Hagearty, President, Dependable Cleaners • Randy Kupferberg, COO, Mass Tank Sales Corporation • Denis Hanks, Executive Director, Plymouth Area Chamber of Commerce
		Human Resource Representatives	<ul style="list-style-type: none"> • Laurie Fadden, Manager of Employee Development, Sullivan Tire Corporate Office • Mary Lou Regan, Human Resources Manager, Hydroid, Inc. • Shari Goscinak, Senior Human Resources Generalist, LITECONTROL

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SECTION THREE: THE REGIONAL HEARING TOUR



Panelists addressing the Commission at the Lowell regional hearing at Saints Medical Center.

Date	Location	Panel	Panelists
February 10, 2012	Lowell Saints Medical Center 1 Hospital Drive, Lowell, MA 01852	Job Seekers & Organizations Representing Workers	<ul style="list-style-type: none"> • Linda Sullivan, job seeker from Lowell • John Shanahan, job seeker from Tyngsborough • Mike McQuaid, Director, Career Center of Lowell
		Business Owners & CEOs	<ul style="list-style-type: none"> • Art Hennessey, CFO, American Capital Energy • Jack Clancy, CEO, Enterprise Bank • Robert Siemering, Executive Chairman, John Galt Companies
		Human Resource Representatives	<ul style="list-style-type: none"> • Maureen Fitzpatrick, Human Resource Specialist, Lowell General Hospital • Bonnie Posnak, VP of HR, Ideal Tape, Inc. • Lisa Dowling, Dist. HR Manager, Home Depot, North Shore MA and NH

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Date	Location	Panel	Panelists
March 9, 2012	<u>New Bedford</u> New Bedford Whaling Museum 18 Johnny Cake Hill New Bedford, MA 02740	Job Seekers & Organizations Representing Workers	<ul style="list-style-type: none"> Brenda Francis, Greater New Bedford Career Center Joseph Kaufman, recent job seeker, recently employed Anne Marie Hanf, recent job seeker, now employed Joan Berndt, job seeker from New Bedford-area Kim McLaughlin, Director of Brockton CareerWorks
		Business Owners & CEOs	<ul style="list-style-type: none"> George Matouk, President/CEO, John Matouk & Company David Slutz, President & CEO, Precix, Inc. David DeJesus, Jr., Senior Vice President of Human Resources, Southcoast Hospitals Group
		Human Resource Representatives	<ul style="list-style-type: none"> Maria Prado, Vice President of Human Resources, Rex-Cut Abrasives Timothy Burkhardt, Vice President of Hotel Operations, LaFrance Hospitality Companies Don Zimmerman, Vice President of Human Resources, Brockton Area Multi-Services, Inc.

Panelist Joseph Kaufman addresses the Commission at the New Bedford Whaling Museum.



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Senator Karen Spilka asking a question of a panel at the Framingham Regional Hearing.



Date	Location	Panel	Panelists
April 13, 2012	Framingham Framingham Public Library 49 Lexington Street, Framing- ham, MA 01702	Job Seekers & Organizations Representing Workers	<ul style="list-style-type: none"> • Ellie Rose, Career Center Director, Employment and Training Resources • Arthur Strafuss, job seeker from Wayland • Deborah Nowlin, job seeker from Mansfield • Sue Parsons, job seeker from Newton
		Business Owners & CEOs	<ul style="list-style-type: none"> • Andrei Soren, CEO, MetroWest Medical Center • Donna Kelleher, President, Next Generation Children's Center • Phillip Holman, President and Owner, Fourstar Connections, Inc.
		Human Resource Representatives	<ul style="list-style-type: none"> • Laura Edwards, Human Resource Manager, Nuance Communications, Inc. • Mary Jane Baer, Director of US Recruiting and I&D, National Grid • Maureen Huffam, Senior Vice President of Human Resources, Conservation Services Group • Naomi Covino, Vice President of Human Resources, MathWorks

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Date	Location	Panel	Panelists
May 4, 2012	Boston 1199 SEIU 150 Mount Vernon Street, Suite 300, Boston, MA 02108	Job Seekers & Organizations Representing Workers	<ul style="list-style-type: none"> • Angela McCabe, Director, The Work Place • Josue Morales, Bunker Hill Community College student and job seeker from East Boston • Hakim Cunningham, Lead Organizer, Boston Workers Alliance • Radolpho Fernandez, job seeker • Antonio De La Serna, President of the Society of Latino Engineers and Scientists and Vice Chair of the Metro North Regional Employment Board
		Business Owners & CEOs	<ul style="list-style-type: none"> • Jamie Beard, Counsel & Director of Operations, FastCAP Systems Corporation • Joanna Dowling, President, The Custom Group Center for manufacturing Technology
		Human Resource Representatives	<ul style="list-style-type: none"> • Joanne Pokaski, Director of Workforce Development, Beth Israel Deaconess Medical Center • Mirembe Asamoah, Director, Boston Staffing Alliance



The Boston regional hearing at Boston's SEIU 1199.

SECTION FOUR: A STUDY OF THE MASSACHUSETTS ECONOMY

Summary:

The Massachusetts economy's economic base, upon which it sells goods and services to other states and countries, and upon which it attracts domestic and foreign investment, is concentrated in technology and knowledge-based sectors, including information technology, life sciences, higher education, finance, and defense technology. These are the sectors for which Massachusetts has a relative advantage, and which have played an important role in the success of the state's economy.

The state's labor force is highly educated, with a higher proportion of its population with a bachelor's degree or higher than any other state (only the District of Columbia, which is not a state is higher). The Commonwealth's labor force is its chief economic resource, as the state is not rich in mineral or other natural resources. Indeed, the state's economic base reflects its richly endowed labor force.

Global economic forces and demographic trends have affected the path of the state's economic development over the past several decades, and pose both promising opportunities and difficult challenges in future decades. Chief among these challenges has been the out-migration of much of the state's enormous manufacturing activity, first to other states in the decades following World War II, and subsequently to other countries in recent decades. This has resulted in a long-term decline over time in the economic base of most of the large urban areas outside of metropolitan Boston, and the loss of a substantial portion of "middle-skilled" good-paying jobs, particularly in manufacturing. (For the purpose of this section, "Middle-skilled" jobs refers to those jobs that typically require some higher education or training beyond high school, but less than a bachelor's degree.) Computers and information technology have led to the loss of middle-skilled clerical jobs, and, combined with the state's high cost of living, has led to the migration of back office jobs to other states and countries.

One result of these trends has been an increasing degree of wage and income inequality (a trend which is shared by the nation as a whole). This inequality is closely tied to the distribution of educational attainment. Despite the relatively high proportion of highly-educated, there are several educational challenges that need to be addressed to mitigate this education-related inequality:

- Fewer than 40% of adults have a four-year college degree.

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- The state needs to do better in training middle-level skills.
- There remains an “achievement gap” which results in some school districts with too high a proportion of youth who have not completed high school or obtained the skills needed to secure good jobs.

The inequality also manifests itself geographically, with the highly educated labor force residing predominately in the greater Boston area, and those with lower levels of educational attainment and skills living in the state’s other metropolitan and non-metropolitan areas. The distribution of available jobs, job growth, and unemployment rates follows these same geographic patterns, as do other measures of socio-economic outcomes, such as secondary school attainment and achievement, housing prices and foreclosures, and incomes.

By the end of this decade, the Commonwealth faces the daunting workforce challenge of reproducing the skilled workforce as baby-boomers retire in increasing numbers. This is compounded by the expectation that future workforce will need a higher proportion of workers with science, technology, engineering and mathematics (STEM) skills than presently. This is a critical challenge that must be met because the state’s success requires not simply a highly educated workforce but a large highly educated workforce. Size is important. Employers will choose to locate here only if they feel confident they can get the employees they need. According to projections of population and labor force from the Census Bureau and the Bureau of Labor Statistics, the size of the state’s labor force will peak late in this decade, and then will begin to decline in size. It is therefore imperative that the labor force we do have is well-suited for the jobs of the future, so the Commonwealth can retain employers who pay high wages.

The globalization trend also provides a promising opportunity. Producing the world economic output is like baking a pie. The ingredients must be combined in certain proportions. These ingredients are (relatively) unskilled labor, skilled labor, and financial capital. As the world economy expands and the pie becomes larger, emerging economies in Asia, South America, and Africa are supplying huge quantities of unskilled labor, which means that skilled labor and financial capital are in short supply – precisely those ingredients for which the Commonwealth has a comparative advantage in supplying.

SECTION FOUR: A STUDY OF THE MASSACHUSETTS ECONOMY

Characteristics of the Massachusetts Economy:

Prominent Sectors

Note: The “prominent sectors” referred to in this section are conceptual and each includes several industry sectors of the North American Industrial Classification System (NAICS). These sectors are not the same as the “super sectors” referred to in other sections of this report.

The prosperity of the Massachusetts economy is due to its prominence in key technology, science, and knowledge-based sectors. These “prominent” sectors include information technology, life sciences, higher education, and finance. One measure of a region’s prominence in a sector is its proportion of employment in that sector relative to the nation as a whole. This relative proportion is called the “location coefficient” (Table 1).

In information technology, the state’s prominence is reflected in high location coefficients in computers, semiconductors, software, and computer system services.

- The location coefficient for computer and peripheral equipment manufacturing of 2.99 indicates that nearly three times as many persons (or 199% more persons) work in this industry than would be expected if it employed the same proportion of the workforce as in the country as a whole.
- The proportion of the workforce in semiconductors is nearly 80% higher than in the U.S. as a whole (location coefficient of 1.79).
- The proportion of the workforce in software is 250% higher than in the U.S. as a whole (location coefficient of 3.50).
- The proportion of employment in computer systems design and related services is 48% higher than in the U.S. (location coefficient of 1.48).

The state’s presence in life sciences is reflected in several sectors:

- The proportion of the workforce engaged in the production of medical equipment and supplies is 38% higher than in the U.S. as a whole (location coefficient of 1.38).
- The proportion of employment in manufacturing of pharmaceuticals and medicines is 32% higher than in the U.S. as a whole (location coefficient of 1.32).

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Table 1
Key Massachusetts Industries

Industry Sector	Private Em- ployment, 2010	Location Coefficient
Total, All Private Employment	2,733,361	1.00
Manufacturing		
NAICS 3118 Bakeries and tortilla manufacturing	9,357	1.31
NAICS 3254 Pharmaceutical and medicine manufacturing	9,500	1.32
NAICS 3327 Machine shops and threaded product manufacturing	9,953	1.24
NAICS 334 Computer and electronic product manufacturing	60,802	2.15
NAICS 3341 Computer and peripheral equipment mfg.	12,222	2.99
NAICS 3344 Semiconductor and electronic component mfg.	17,049	1.79
NAICS 3345 Electronic instrument manufacturing	26,075	2.49
NAICS 339 Miscellaneous manufacturing	19,640	1.35
NAICS 3391 Medical equipment and supplies manufacturing	10,759	1.38
NAICS 3399 Other miscellaneous manufacturing	8,881	1.31
NAICS 33992 Sporting and athletic goods manufacturing	2,674	2.51
Nonmanufacturing		
NAICS 445 Food and beverage stores	94,100	1.30
NAICS 511 Publishing industries, except Internet	40,445	2.08
NAICS 5111 Newspaper, book, and directory publishers	17,128	1.34
NAICS 5112 Software publishers	23,317	3.50
NAICS 523 Securities, commodity contracts, investments	44,459	2.16
NAICS 541 Professional and technical services	248,546	1.29
NAICS 5415 Computer systems design and related services	55,206	1.48
NAICS 5416 Management and technical consulting services	36,907	1.41
NAICS 5417 Scientific research and development services	47,657	2.98
NAICS 611 Educational services	125,446	1.98
NAICS 6111 Elementary and secondary schools	21,558	1.26
NAICS 6112 Junior colleges	1,874	1.44
NAICS 6113 Colleges and universities	83,864	2.88
NAICS 622 Hospitals	182,536	1.53
NAICS 814 Private households	34,489	2.11

Note: The list of industries includes: For manufacturing industries, those 3- and 4-digit NAICS sectors that employed at least 5,000 persons, and which had location coefficients of 1.24 or more; For nonmanufacturing industries, those 3-digit NAICS sectors that employed at least 1 percent of private employment and had location coefficients of 1.25 or more. In some sectors, information is supplied for some subsectors.

The location coefficient for a NAICS sector is the proportion of private employment in that sector in Massachusetts to all private employment in Massachusetts, divided by the proportion of private employment in that sector in the U.S. to all private employment in the U.S.

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- The proportion of employment in scientific research and development is 198% higher than in the U.S. as a whole (the overwhelming majority of these jobs are in the life sciences) (location coefficient of 2.98).
- The proportion of employment in hospitals is 53% higher than in the U.S. as a whole (location coefficient of 1.53). Hospitals are included here because the state is a center of medical research, much of which takes place in large hospitals in Boston and Worcester.

In higher education, the proportion of employment in private colleges and universities is 188% higher than in the U.S. as a whole (location coefficient of 2.88), while the proportion of employment in the much smaller private junior college sector is 44% higher than in the U.S. as a whole (location coefficient of 1.44).

The state's predominance in finance is in the financial investment sector. The proportion of employment in the securities, commodity contracts, and investments sector is 116% higher than in the U.S. as a whole (location coefficient of 2.16).

The state's predominance in defense technology is spread throughout many industrial sectors in manufacturing and services and is not easily summarized by location coefficients. However, the state's relative advantage in defense technology involves aircraft engines, missiles, nano technology and other materials, and specialized engineering and software development.

Educational Attainment, Earnings, and Income

Underlying the state's prominence in these sectors, and its success in general, is the high educational attainment of the state's population. According to the Census Bureau's American Community Survey, in 2010, 39.0% of the state's population 25 years old or older has a bachelor's degree or higher level of educational attainment, greater than all the other 50 states, and only exceeded by the District of Columbia. This Massachusetts advantage is even more pronounced for younger adult age cohorts. Among residents aged 25-34 in 2010, 48.0% had attained a bachelor's degree or higher, and among those aged 35-44 in 2010, 44.8% had attained a bachelor's degree or higher. For both age groups, this placed them first among the states. Massachusetts falls out of first place among the states only for those 65 or older in 2010, and this probably reflects retirement-related migration of those with higher wealth.

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High educational attainment has resulted in high wages and high incomes relative to other states. In 2011, average wage and salary earnings per payroll worker were \$61,500, 21% higher than the U.S. average of \$50,900. The advantage in income was even greater. Per capita income in Massachusetts was \$53,600 in Massachusetts, 29% higher than in the U.S. as a whole, and second among the states (to Connecticut).

How We Got Here

During the last several decades following World War II, the Massachusetts economy transformed itself from a declining traditional manufacturing economy to a leading high-technology economy. In 1960, the state's educational attainment was better than average, but not much better. It ranked 14th among states in the proportion of its adult population with a bachelor's degree. Even as late as the early 1980's, the state had a workforce that was paid less, on average, than in the U.S. as a whole.

This economic transformation was accomplished in part by legacy, in part by luck, and in part by good public policy. The legacy included the state's manufacturing capacity and workers' skills, particularly in machinery manufacturing. These skills were critical in the transformation of manufacturing from producing textiles and shoes and building textile and shoe machinery, to producing, computers, aircraft, semiconductors, and medical devices and the machinery to make these products. The state also had a legacy of well-known and highly regarded universities, particularly Harvard and MIT, and hospitals. Along with manufacturing, the universities provided the key to the development of the state's defense and technology sectors; and, with hospitals, the state's life sciences sector.

The luck involved having these legacy advantages at the right time. World War II was the impetus for the development of the state's technology sector, beginning with radar at MIT. Draper labs, Lincoln labs, and private businesses doing work for the Defense Department and NASA, particularly in aerospace and information technologies, helped spur the computer and instrument manufacturing sectors.

Perhaps most importantly, the Vietnam War and the student deferment that came along with the military draft, led to a surge in college enrollment, particularly of young men. Boston benefitted from this more than most other places, perhaps because it had renowned educational institutions in the middle of a large labor market. This led to an in-migration of college students into Massachusetts, first from other states and later from other countries. Many of these graduates stayed in Massachusetts. Over the course of a few decades, the educational attainment of the state's workforce rose from the 14th highest to highest among

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the 50 states.

Good public policy nurtured the state's advantages, helping secure the economy's transformation from a declining traditional manufacturing economy to a leading-edge technology economy. Of particular note was the priority on funding K-12 education that began in the 1990's and continues today, with the fiscal year 2013 budget representing the highest ever level of state support for K-12 public education, business tax policies that supported investment, research and development, and production in-state (e.g. the single-sales factor and investment tax credit), and, more recently, public support for the life sciences sector.

Inequality

The success of the state's economy has been due to the high skills of the labor force that in turn are related to its high educational attainment. The highly-skilled labor force has attracted firms needing this resource into the state and has enabled firms already here to expand. This is part of a globalization trend in the world's economy in which firms – or divisions of firms – needing highly-skilled labor locate in regions with an abundance of high-skilled labor and firms only needing low-skilled labor locate in regions with an abundance of low-skilled labor. This trend has benefitted Massachusetts residents with college degrees but has hurt those with only high-school diplomas (and those with less than a high-school diploma). In the post-WWII era, the state's manufacturing sector lost over two-thirds of its jobs. Employment in manufacturing was 800,000 in 1943, and now stands at 254,600 in May 2012. During this time, innovation has eliminated a large proportion of middle-skilled jobs in the service sector as well. Changing demand and supply conditions for highly-educated versus less educated workers has also raised the return on a college education, and conversely the consequences of lacking a higher education.

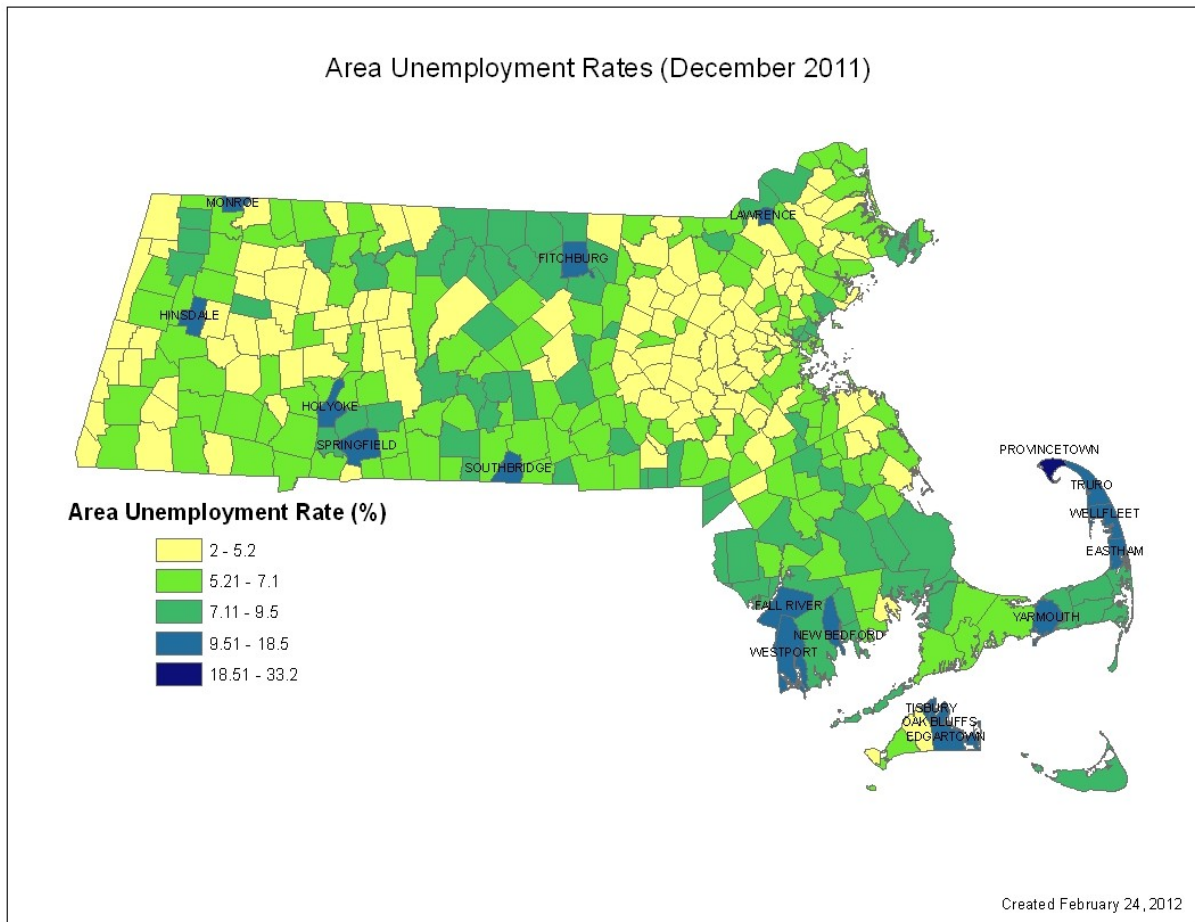
The result has been rising income inequality, a trend that is not unique to Massachusetts. One measure of this rising inequality is the ratio of median family incomes of the highest family income quintile to the lowest family income quintile. Among Massachusetts families, this has risen from 6.06 in 1979 to 8.59 in 2008 (Goodman and Nakosteen, 2011). Several studies have noted that real income growth has been robust for high-income households but stagnant for households in the middle or below.

Rising income inequality has also manifested itself regionally, largely due to the location of jobs in growing and declining sectors, which is also related to regional differences in educational attainment. Most of the state's urban centers had been thriving manufacturing

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centers in the early- and mid-twentieth century, but since then have struggled to overcome the effects of the decline of traditional manufacturing, particularly in sectors such as textiles, shoes, and paper. This pattern of geographic inequality in job prospects was exacerbated in the last recession and recovery, as tech- and knowledge-based sectors fared better than others. This can be seen in terms of the unemployment rate (Figure 1) and also in the relation between cities' unemployment rates and educational attainment (Figure 2).

FIGURE 1

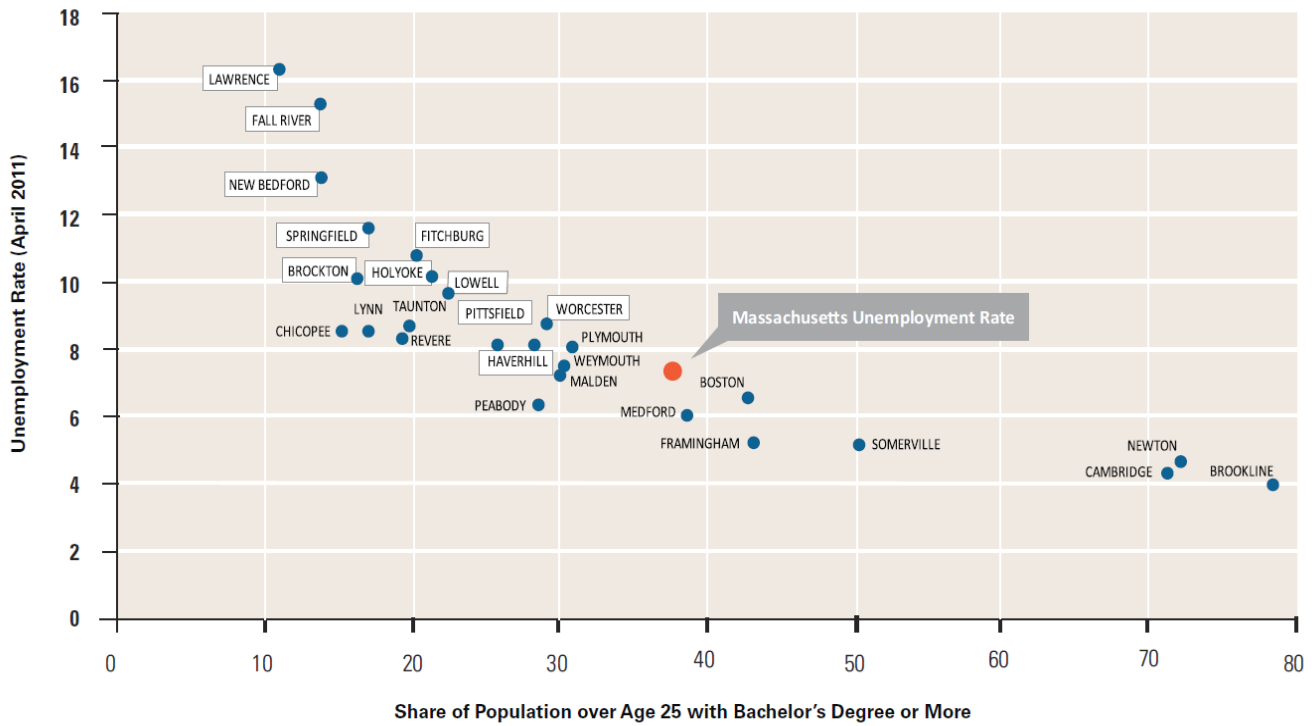


The Recession and Unemployment

One of the unfortunate hallmarks of this recent recession has been the high level of unemployment. Although output in the state has been expanding since the summer of 2009, and the unemployment rate has been falling since December 2009, the unemployment rate

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FIGURE 2



Note: This figure shows the top twenty-five largest cities (in total population) according to both Decennial Census 2010 and AFF ACS 2005-2009 plus three additional Gateway Cities
 Sources: U.S. Census Bureau, American Community Survey 2005-2009 and Decennial Census 2010; Massachusetts Division of Unemployment Assistance, LAUS series; calculations by UMass Donahue Institute

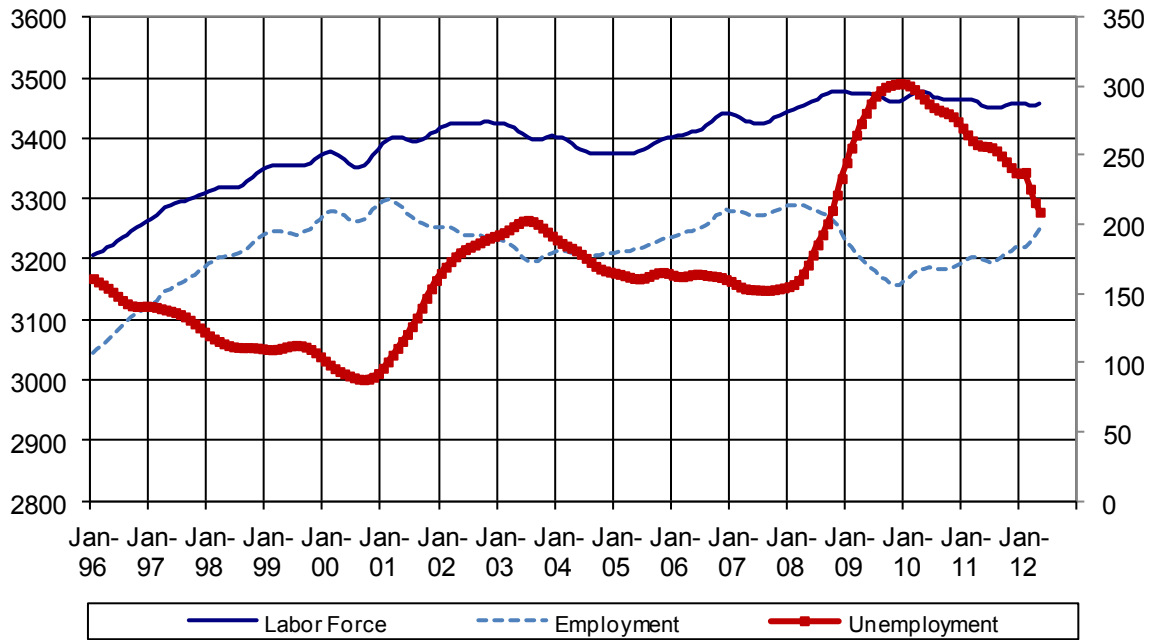
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of 6.0% in May 2012 is at the same level as during the depths of the prior recession in the “dot-com” bust; and with 209,200 unemployed, there are more unemployed residents now than there were at the worst of the “dot-com” bust (Figure 3).

FIGURE 3

Massachusetts Household Employment, Labor Force, and Unemployment

Source: DUA

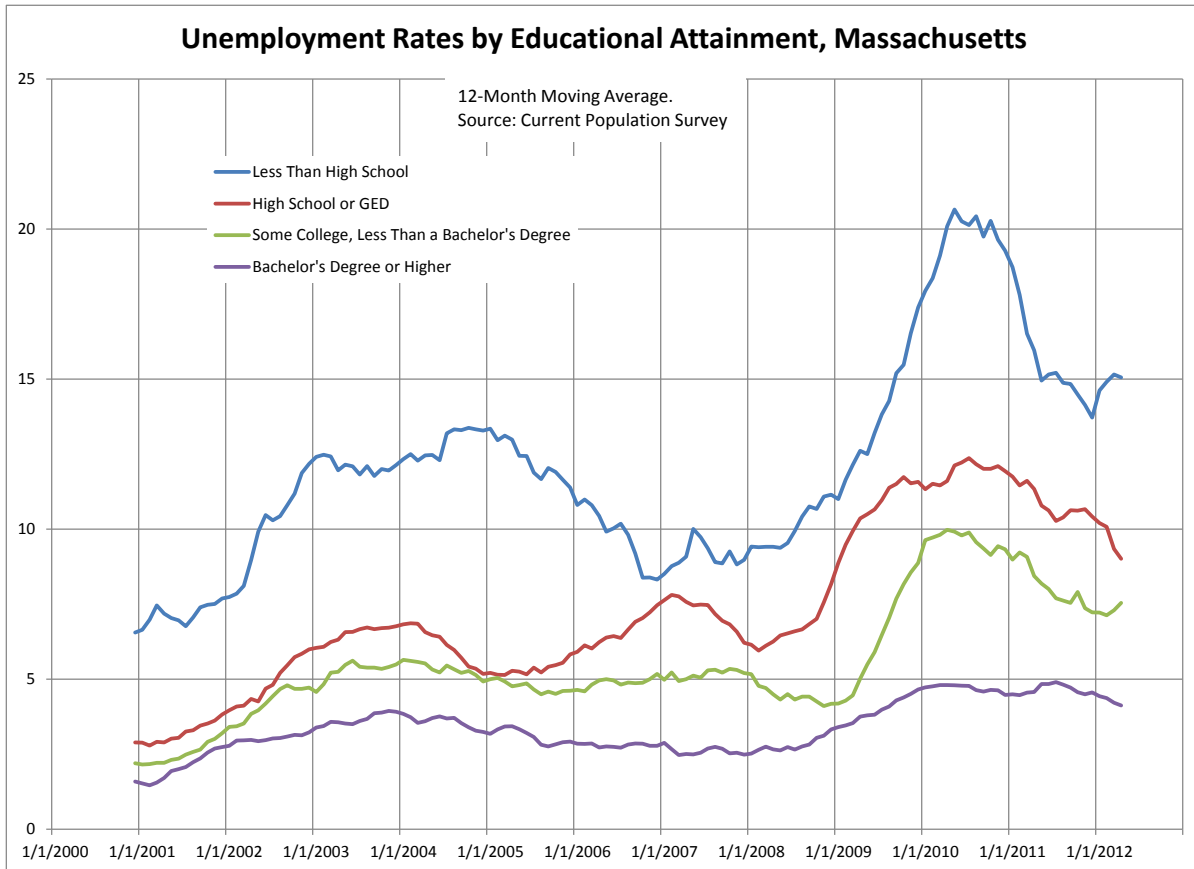


That said, the unemployment rate, and the number of unemployed, have fallen significantly from their recession peaks. The number of unemployed reached its peak of 302,400 in December 2009, with a peak unemployment rate of 8.7%. The unemployment rate has fallen more than halfway back to its pre-recession level, and, at 6.0% in May, is significantly below the 8.2% level that prevails in the U.S. as a whole.

Unemployment rates vary significantly by education, age, minority status, and sex. During the 12 months ending in April 2012, the average unemployment rate in Massachusetts was 6.9%. All figures below represent a 12-month moving average. By educational attainment they were (Figure 4):

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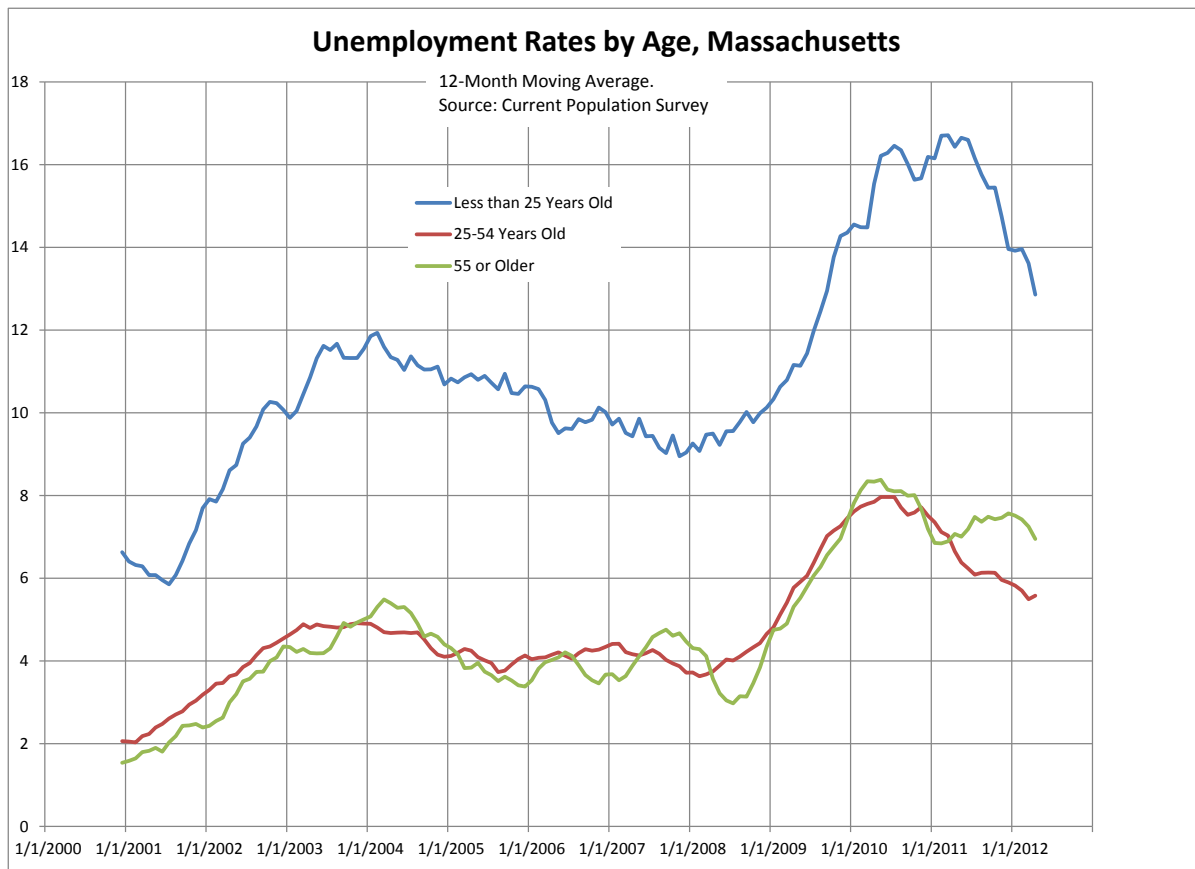
FIGURE 4



- 15.1% for those with less than a high school diploma or GED. Unemployment rates for this group peaked at over 20%.
- 9.0% for high school graduates.
- 7.5% for those with some college, but less than a bachelor’s degree.
- 4.1% for those with a bachelor’s degree or higher attainment. Unemployment rates for this group never exceeded 5% during the recession.

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FIGURE 5

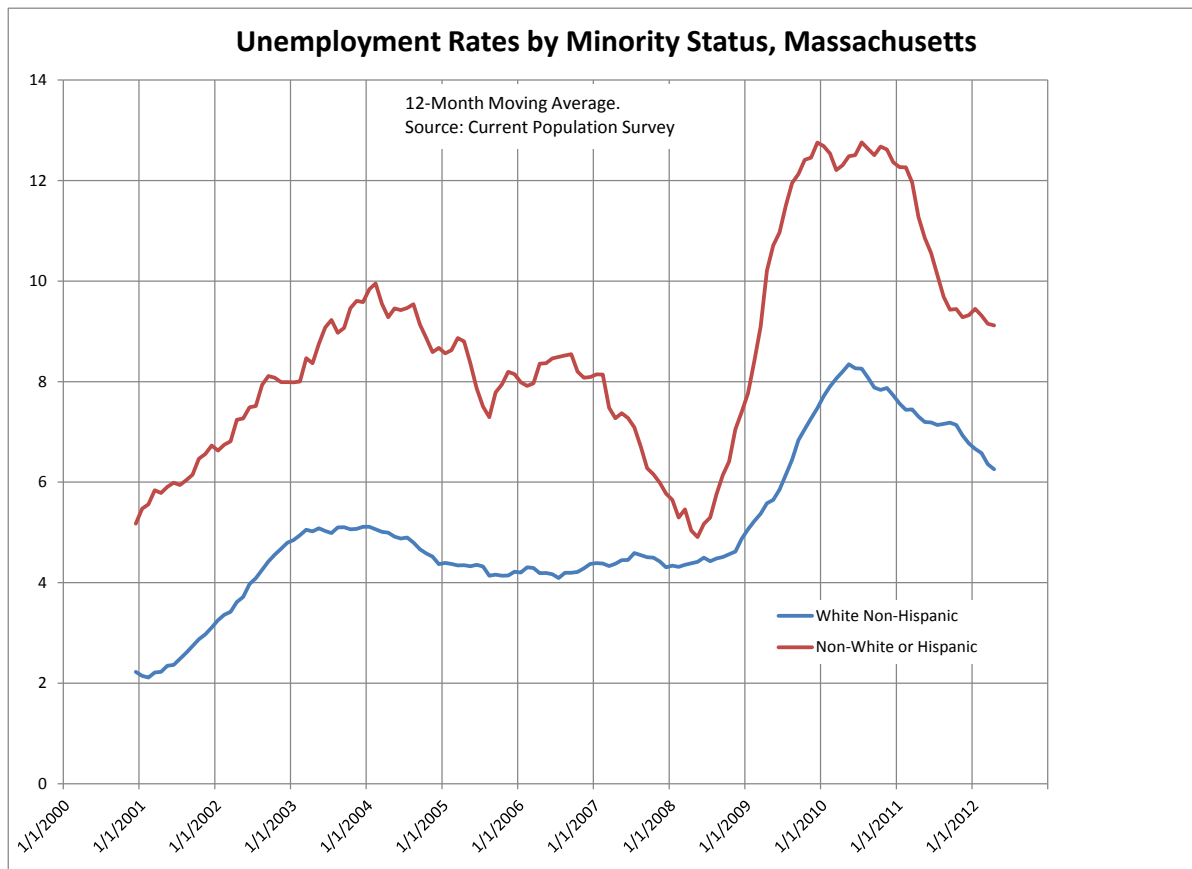


By age they were (Figure 5):

- 12.9% for persons less than 25 years of age. Unemployment rates for this group peaked at 16.7%.
- 5.6% for persons aged 25-54 years old.
- 6.9% for persons 55 or older. Unemployment rates for this group tracked the 25-54 age group during most of the recession, but, in the past year, have not declined like those of younger persons.

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FIGURE 6

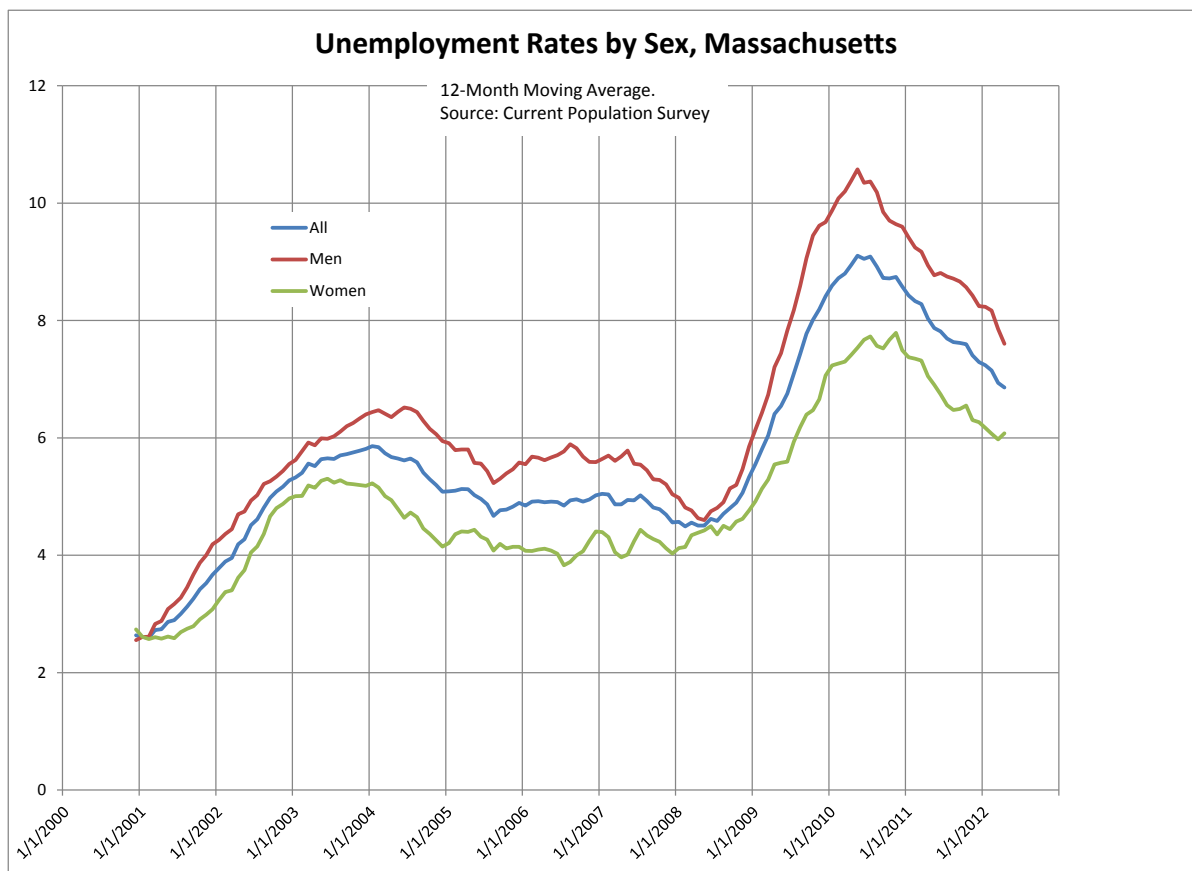


By minority status they were (Figure 6):

- 9.1% for non-Whites or Hispanics.
- 6.3% for White, non-Hispanics.

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FIGURE 7



By sex they were (Figure 7):

- 7.6% for men.
- 6.1% for women.

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Recent Economic Performance

The Massachusetts economy has been in an expansion phase since the summer of 2009 (since July 2009 as dated by the Massachusetts Current Economic Index). The pace of expansion appears to have slowed from the robust rate of growth in 2010, although in 2011 it appears that the state's economy grew moderately, with growth faster than the nation's.

In 2010, state real gross domestic output grew 4.3% on an annual average basis according to the U.S. Bureau of Economic Analysis (BEA), the 11th best performance among states that year. In contrast, U.S. real gross domestic product grew 3.0%. In 2011, growth in both the nation and Massachusetts slowed. Real output in Massachusetts grew 2.2%, as estimated by the BEA, the 7th best performance among the states, while the U.S. grew 1.7% according to the BEA.

The labor market improved throughout 2010 and 2011, with moderate employment growth and declining unemployment rates. Massachusetts payroll employment grew 1.1% in 2010 (December 2009 to December 2010) and likely grew at a similar pace in 2011, while U.S. payroll employment grew 0.8% in 2010 and 1.4% in 2011. Since the employment trough in November 2009, Massachusetts has gained back 88,200 of the 143,000 jobs it lost during the recession. (Employment statistics in this paragraph are from the BLS.)

National and international information technology markets, which rebounded sharply from the spring of 2009 through 2010, cooled in 2011. The level of output and sales in these markets was high but showed markedly slower growth in 2011 than in 2010. The exception was U.S. industrial production of information and processing equipment, which exhibited faster growth in 2011 than in 2010.

Massachusetts merchandise export growth also slowed, from 11.3% in 2010 to 5.5% in 2011. U.S. merchandise export growth was considerably faster in both years: 21.0% in 2010 and 15.9% in 2011. The slower growth in Massachusetts may reflect a higher dependence on Europe as an export destination. In the first three months of this year, merchandise exports to Europe fell 8% from the first three months of last year (WISER Trade). (This excludes the United Kingdom. It appears that exports of precious metals – gold – to Britain surged in the beginning of this year.)

So far this year, the state's economy appears to have accelerated at the same time that the U.S. economy has slowed. According to MassBenchmarks, Massachusetts real gross state product grew at an estimated 4.1% annualized rate in the first quarter of this year (Clayton-

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Matthews, 2012a), compared to a 1.9% annualized rate for real U.S. gross domestic product. In the fourth quarter of last year, the Massachusetts economy grew at a 2.8% rate versus 3.0% for the U.S.

These estimates of state growth in the first quarter reflect a rapid acceleration in payroll growth, which surged from a 0.9% annualized growth in the fourth quarter of last year to a 2.7% rate in the first quarter of this year (BLS). Because of recent experience with large revisions to the survey-based employment estimates and the more moderate growth suggested by withholding and sales tax revenues, the MassBenchmarks report (Clayton-Matthews, 2012a) discounts somewhat the large growth rates given by the Massachusetts Current Economic Index, suggesting that a better estimate of recent real output growth would be about 3.5%. Even so, this is still substantially stronger growth than in the nation as a whole.

The NEEP Outlook for Massachusetts Through 2015

Note: This section on the outlook is from the New England Economic Partnership outlook for Massachusetts (Clayton-Matthews, 2012b). This is the view of one economic forecaster only, and should be viewed as suggestive of what might be expected in the period 2012-2016, rather than what will happen.

The Massachusetts economy is expected to slow somewhat, but should continue to expand at a moderate pace. This assumes that the effects of the economic crisis in Europe and the slowing Chinese economy will be more than offset by growing demand within the U.S., and that the looming fiscal austerity scheduled to begin in 2013 will be softened by post-election compromises in Washington. The forecast assumes, however, that the cut in the social security tax rate will not be extended again, but will revert back to its full rate at the beginning of 2013.

Payroll employment is projected to grow 1.2% in 2012 and 1.0% in 2013, on a fourth-quarter to fourth-quarter basis, to accelerate moderately to about a 1.5% annual rate in 2014 and 2015, and then to slow in 2016 as retiring baby-boomers slow the growth of the labor force. For the forecast period as a whole, for 2012-2016, employment growth is expected to average 1.3% per year. Growth in income and output will essentially follow the same profile as employment. Real gross state product growth will average 2.3% per year over the forecast period, while nominal personal income growth will average 5.2% and nominal wage and salary growth will average 5.8% over the five year forecast horizon.

Massachusetts workers are expected to retain their pay premium over the average U.S.

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worker, that is, wage and salary income per payroll worker in Massachusetts is projected to remain about 22% higher than for the U.S. as a whole.

The state's unemployment rate is expected to rise somewhat, to 7.0% by mid-2013, as improving job prospects entice workers who have given up looking to re-enter the labor force. Thereafter, the unemployment rate is expected to fall steadily to just over 5.0% by the end of 2016.

It is important to note that recent legislative changes or policy initiatives that are in the early stages of implementation are not accounted for in these projections. For instance, the legislature's recent law on health care cost control could significantly effect the cost of doing business in Massachusetts and could significantly change the projections. Descriptions of some policy activities and initiatives in the early stages of implementation are located in appendix B.

Employment by Sector (NEEP Outlook)

Note: The employment sectors in this section refer to the twelve "super sectors" of the North American Industrial Classification System (NAICS). These sectors are not the same as the conceptual "prominent" sectors (information technology, life sciences, etc.) referred to in other sections of this report.

By the end of the forecast period, in 2016, the industrial structure of the state's economy will look significantly different from the one that preceded the recession. This is due to long-term trends in the demand for the mix of goods and services, the comparative advantages and disadvantages of the state's economy in supplying the nation and the world with products and services, and technological change. Business cycles often accelerate the timing of these changes.

At one extreme, the number of jobs in education and health services is expected to be 16% higher by the end of 2016 than in the beginning of 2008, while at the other extreme, the number of jobs in construction is expected to be 21% lower. Total nonagricultural employment is projected to be 3.6% higher, with the number of jobs reaching its pre-recession peak in the first half of 2014. Leisure and hospitality and professional and business services will also comprise higher shares of the economy in 2016, with employment in both sectors about 10% higher than before the recession.

Government, information, and other services will comprise roughly the same share of jobs

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as before the recession. Financial activities, trade, transportation, utilities, manufacturing, and construction will comprise a lower share of jobs than before the recession.

Furthermore, the number of jobs in these sectors will be lower than before the recession began. The number of jobs in financial activities and trade, transportation, and utilities will be roughly 5% less, while the number of jobs in manufacturing will be about 9% less.

Much of the changes in the relative share of super sectors are due to differential rates of job loss during the recession. For example, education and health care continued to grow throughout the recession, while construction lost over 20% of its jobs, manufacturing lost 13% of its jobs, and professional and business services lost nearly 8% of its jobs.

Over the five year forecast period, from the last quarter of 2011 to the last quarter of 2016, overall payroll employment is projected to expand at an annual average rate of 1.3%, which is somewhat higher than in the prior expansion (2004q1-2008q1), in which employment growth was 0.9% per year on average. Employment in professional and business services; information; leisure and hospitality; and education and health services will grow substantially faster than overall employment, with average annual growth rates of 2.5%, 2.1%, 2.1%, and 2.0% respectively. Employment in the remaining sectors will lag that of overall employment. The number of jobs in government, financial activities, and manufacturing will grow at annual average rates moderately below that of overall employment, at 0.9%, 0.9%, and 0.7% respectively. Employment in other services will grow at only 0.3% per year, construction not at all, and trade, transportation, and utilities employment is expected to shrink at 0.3% per year.

Housing (NEEP Outlook)

The residential housing market may finally be at its bottom. This has been the worst housing market for Massachusetts since the Great Depression of the 1930s. Although it does not approach the severity of that time, when prices fell in half and the housing slump – the period from the peak before the crash to when the price level attained its former peak – lasted roughly 20 years, this housing slump is significantly worse than the one in the late 1980s and early 1990s. On that occasion, the median price (as measured by the National Association of Realtors) fell 11% between the second quarter of 1988 and the third quarter of 1993 and the slump lasted 9 years.

This time prices fell 25% between the third quarter of 2005 and the first quarter of 2009 (National Association of Realtors). Since then sales and prices began to rise in response to the homebuyer credit program, but after that program ended the market weakened. By the

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end of the forecast period – 11 years after the peak in 2005 — prices are still expected to be well below their former peak.

However, there are finally some positive signs for the Massachusetts housing market. Most importantly, sales are picking up, and recent permit data (through March 2012) suggest that construction may finally be increasing. Prices may continue to fall slightly as the foreclosure backlog clears out this year, but then they are expected to rise at a modest pace. Sales and permits are expected to reach pre-recession levels in 2015, while prices will rise at an average annual rate of nearly 3% between the end of 2013 and the end of 2016. By the end of the forecast, the median existing home price will still be 13% below its peak in 2005.

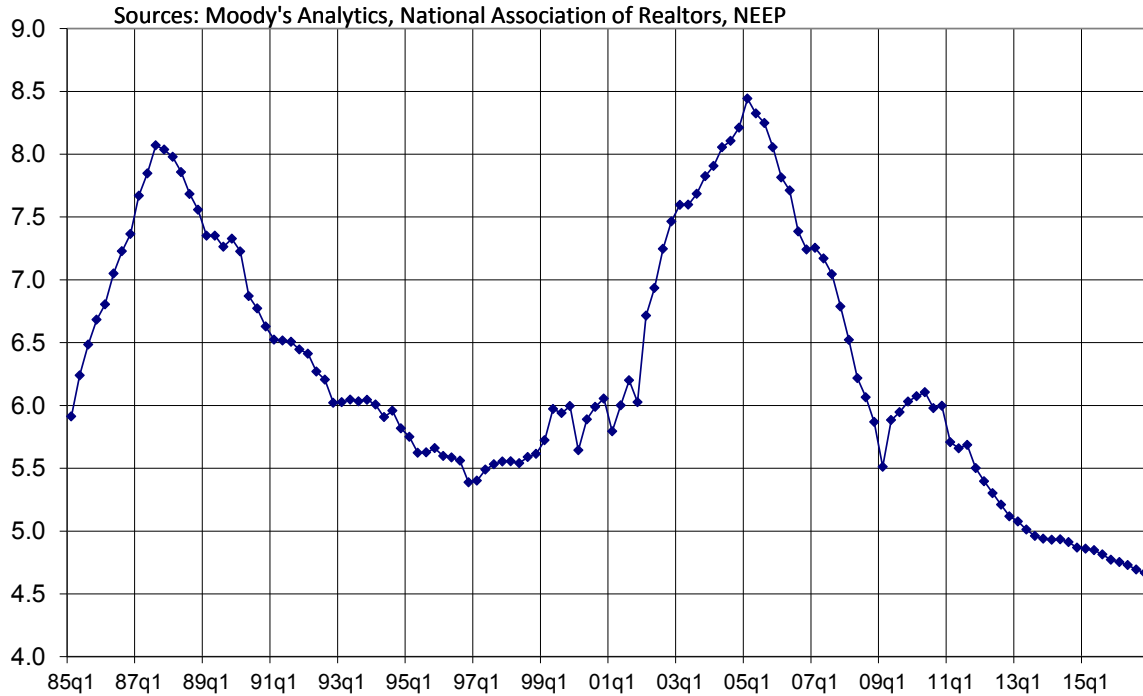
Home affordability has long been a significant economic issue for Massachusetts residents. The median home value in the state is more than double the national average and higher than any other state except for New York, California and Hawaii (National Association of Realtors), Massachusetts had the sixth highest median monthly housing cost in 2010 at \$1,331 as compared with the United States median at \$981. One reason for the high cost of housing in Massachusetts is the slow rate of production of reasonably affordable housing stock. Between 2000 and 2010, Massachusetts had the sixth slowest housing unit growth in the United States, behind only Pennsylvania, New York, Rhode Island, West Virginia and Louisiana. This slow rate of growth has contributed to inflated housing prices, which impacts individuals and families across the state. Between 2000 and 2010, the number of owners spending 35% or more of their household income on housing costs jumped by 34% and 30% for renters.

There is an upside to the weak housing market. It makes houses more affordable for new homeowners, and lowers the cost of living. One measure of affordability is the median house price to per capita income ratio. At the peak of the housing market, this measure reached 8.5. It is now at about 5.5, and is expected to continue to fall throughout the forecast to under 5.0 by the end of 2016 (Figure 8). At this level, houses will be more affordable than they were in the mid-1990s and early 1980s.

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FIGURE 8

Median House Price to Per Capita Income Ratio, Massachusetts



The Effect of Demographics on the Labor Force Through 2030

Note: This section is taken from Clayton-Matthews (2011).

In 2004, the Census Bureau released annual projections of population by state, age, and sex for 2004 to 2030. These projections were based on recent historical birth, death, and fertility rates, and recent state-to-state migration patterns based on IRS income tax returns for domestic migration, and recent historic patterns for international migration. The 2000 decennial census was used to distribute state-to-state migration flows across demographic groups, based on the demographic characteristics of migrants and was also used to distribute international migration by state and demographic group.

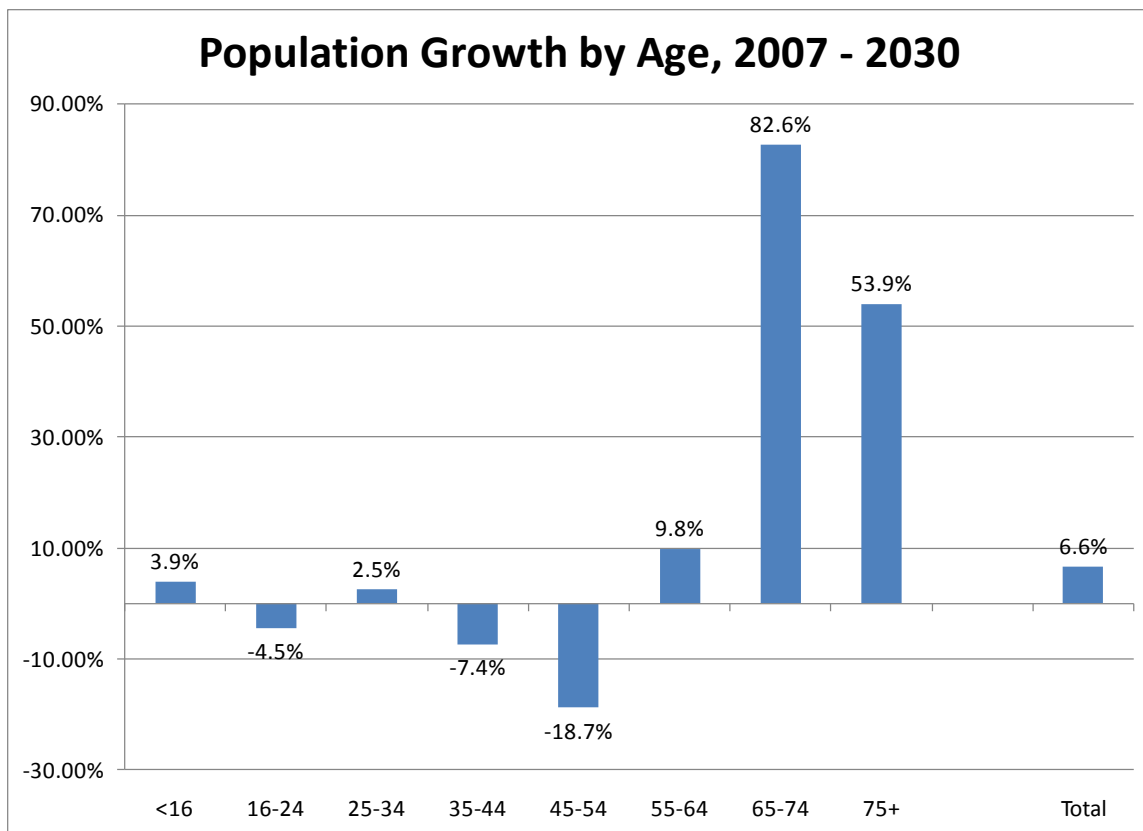
Every two years, the Bureau of Labor Statistics releases 10-year projections of labor force participation rates for the U.S. (as well as projections of employment by industry and

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occupation). These projections are based on econometric models and expert qualitative analysis, and are made to be consistent with the Census Bureau's population projections.

By combining these projections, one can project long-term state labor force and employment trends. This was done for Massachusetts using the 2006-8 combined American Community Survey as the base from which to project. Population growth rates by year and age group from the Census Bureau's population projection for Massachusetts were used to grow the 2007 state population to 2030. Overall population is projected to grow by 6.6% over this period of time, but growth rates vary dramatically by age group. At one extreme, the 65-74 year old age group will grow by 83% and the 75 and older age group will grow by 54% (Figure 9). These represent the aging of the baby-boomers. At the other extreme, the prime working-age groups will see declines of 7% for the 35-44 year old age group and 19% for the 45-54 year old age group. Age groups 34 and younger will see relatively little growth in either direction (less than 5% in absolute value), while the 55-64 year old age group will grow by 10%.

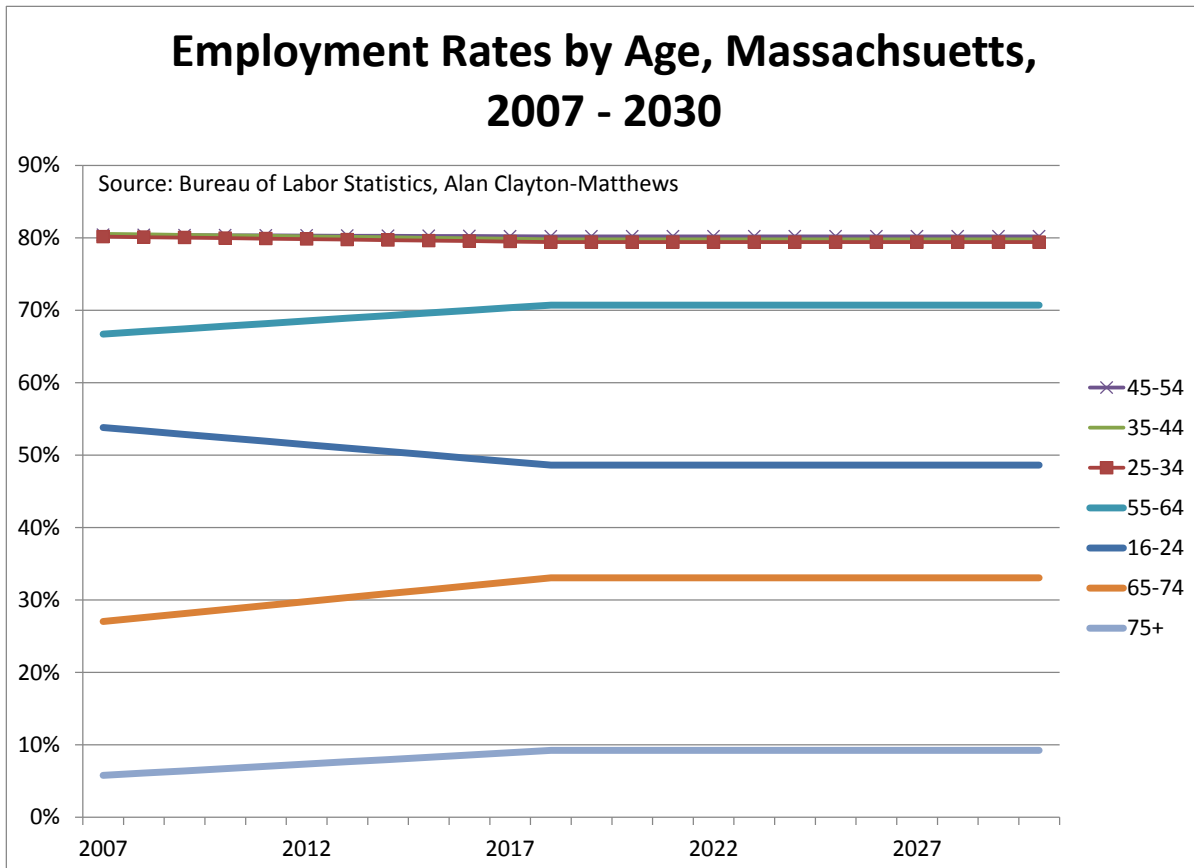
FIGURE 9



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These shifts in the distribution of age reflect the aging of the baby boom generation. The “hole” left by their aging is only partially filled by the millennial generation. The consequences for labor force and employment growth will be dramatic if these projections become reality. This is because labor force participation rates vary substantially by age. For this exercise, projected changes in labor force participation rates by age at the national level (the BLS only produced national level estimates) were applied to employment rates by age in Massachusetts from the 2006-8 American Community Survey. The BLS participation rate projections go out to 2018. For 2019-2030, participation rates were assumed to remain at their 2018 projected levels. The BLS projects labor force participation rates for older workers to rise moderately between 2008 and 2018, but these increases are dwarfed by the fall in participation rates that results as people age. The prime working-age population, consisting of those between the ages of 25 and 54, has an employment-to-population rate of 80% (Figure 10). For those 55-64 years of age, the employment rate is expected to rise slightly through 2018 and then to level off at about 70%. For those in the 65-74 year old age group, the employment rate is also expected to

FIGURE 10

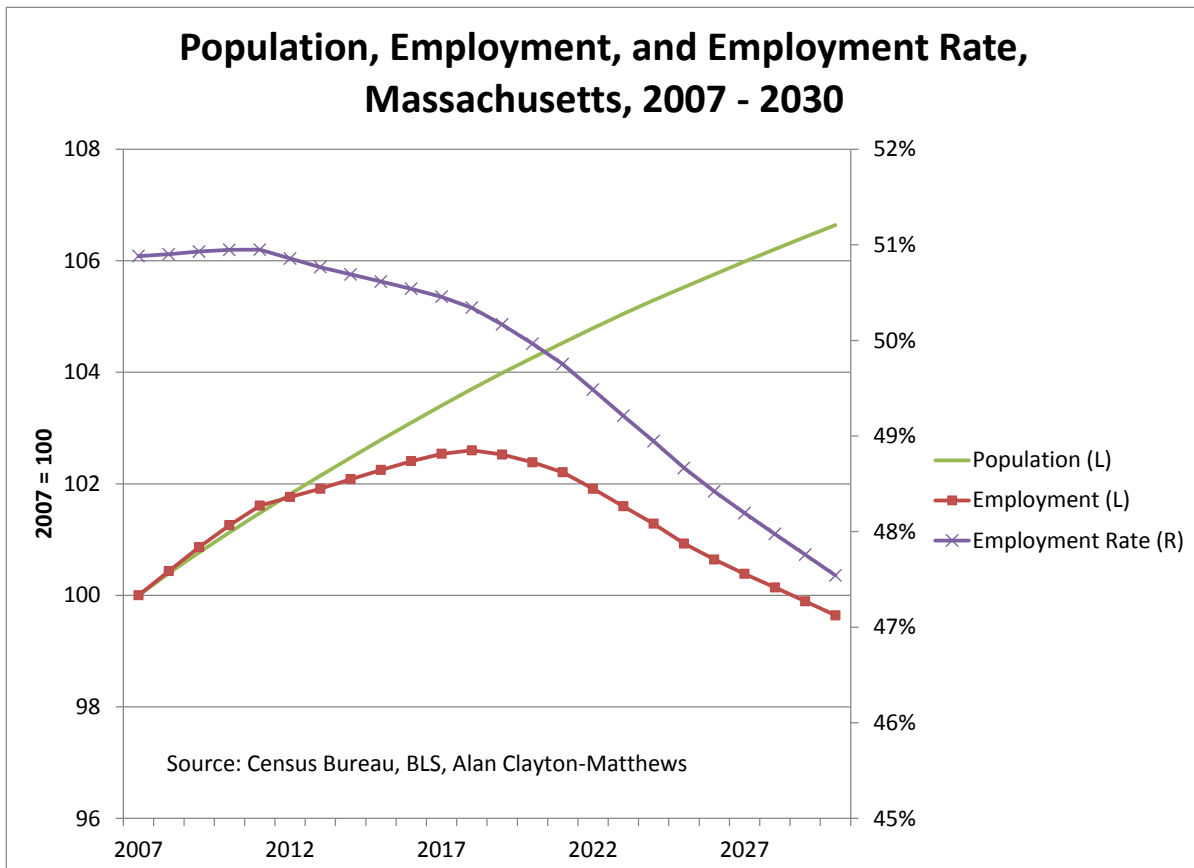


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rise, but to level off at only about 33%, while for the 75+ age group, the participation rate will only reach about 10%.

As the baby boomers age over the next couple decades, their employment rates will thus fall markedly, being replaced in fewer numbers by younger workers with high employment rates. For the population as a whole, therefore, the aggregate employment rate (at full employment) is projected to fall by 3.5% between 2007 and 2030 (Figure 11). Although this may not seem like a large amount, it is enough to result in a decline in the future size of the labor force and employment. In fact, according to the projection, the (full-employment) level of employment will peak in 2018. Thereafter, the decline in the aggregate employment rate associated with the aging population will be great enough to decrease the size of the (full-employment) labor force and employment. Although the population is projected to increase by 6.6% over the 2007-2030 period, employment is expected to decline by 0.5% over this period, rising by 2.5% between 2007 and 2018, and then declining by 3% from 2018 to 2030.

FIGURE 11



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What will be the consequences of such an employment decline? The primary concern is simply the size of the workforce and pool of available labor. Size matters. Employers are drawn to metropolitan Boston not only for the skills and knowledge of its workforce, but also because the labor market is large and therefore firms can hire the workers they need. However, this availability of workers is threatened by these demographic trends.

What can be done about this future? These demographic trends are not destined to happen if the migration patterns on which these trends are based change. Net in-migration can be increased by policies that lower the cost of living and doing business, such as the high cost of housing and energy. Migration can also be enhanced by providing amenities that attract and keep households and businesses, such as quality public education and infrastructure. Market forces themselves may also help boost net in-migration. As baby boomers retire and scale down their housing needs, pressure on single family home prices in communities that will educate the next generation may ease, making Massachusetts more affordable for young families. It is also possible that in response to the recession more baby boomers may delay retirement and increase their labor participation rates thus expanding the available pool of labor.

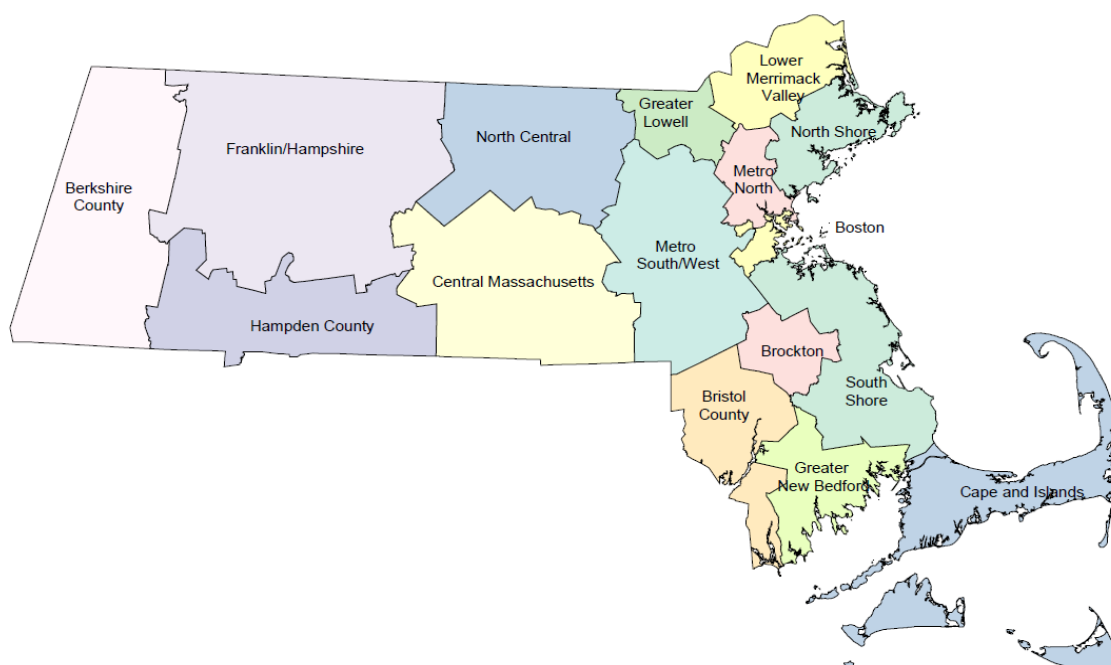
Regional Analysis by Workforce Investment Area:

Payroll Employment Trends since the Recession

Labor market fortunes have varied significantly across the Workforce Investment Areas (WIA) before the recession, during the recession, and in the recovery to date. This section compares employment trends in each WIA relative to the statewide average, in terms of jobs lost and regained since the statewide average pre-recession peak. The payroll job counts are from the quarterly wage and employment census, and so are reliable. (The data in this section are from the Executive Office of Labor and Workforce Development.) Because the data are not seasonally adjusted, payroll employment comparisons are made using a 4-quarter moving average. On this basis, peak statewide employment occurred in the third quarter of 2008. (That is, the four consecutive quarters with the highest average employment was 2007q4 through 2008q3.) Employment in each WIA and the state as a whole was indexed to be 100 at this point in time, so comparisons could be made and graphed on the same scale. The last available time period for this data source is the third quarter of 2011.

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FIGURE 12
Workforce Investment Areas



Prepared by Massachusetts Department of Workforce Development
Economic Analysis Office

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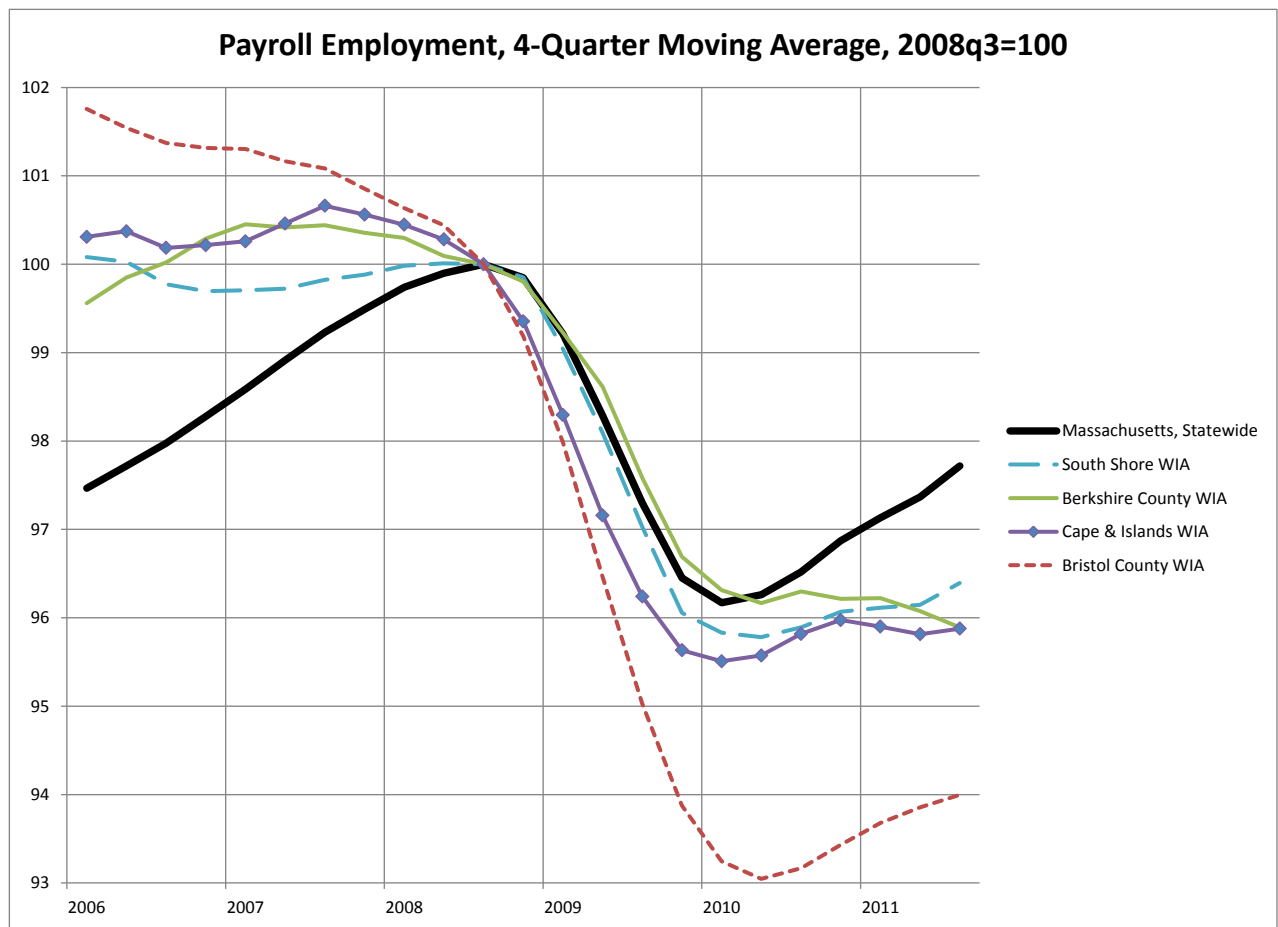
Among the 16 WIAs, employment in the Bristol County WIA, which includes Fall River, is still the lowest relative to what it was in the third quarter of 2008, the quarter in which state employment was at its pre-recession peak (Figure 13). The Bristol County WIA lost 7% of its jobs since the recession began (that is, since the statewide employment peak), and by the third quarter of 2011, payroll employment was still only 94% of its prerecession level. In contrast, the state as a whole lost 3.8% of its jobs during the recession, and by the third quarter of 2011, payroll employment was 97.7% of its pre-recession level. Furthermore, the Bristol County WIA was losing jobs during the period *before* the recession began, losing 1.8% of its employment between the first quarter of 2006 and the third quarter of 2008.

Four other WIAs have fared significantly worse than the state as a whole during the recession in terms of job growth (Figures 13 and 14). These include the Cape and Islands WIA, the Berkshire County WIA, the South Shore WIA, and the North Central WIA. In

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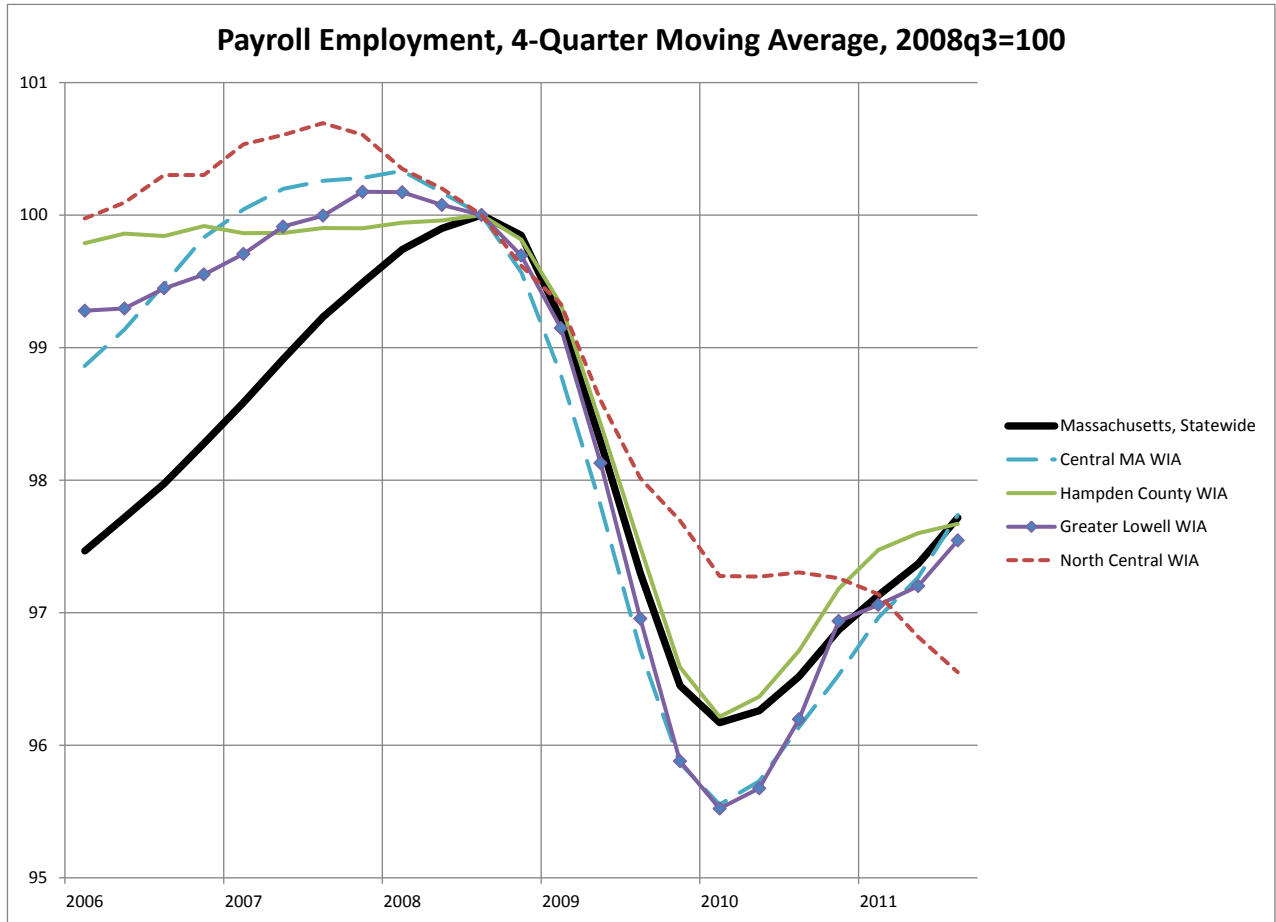
terms of payroll employment in 2011q3 versus the statewide peak in 2008q3, employment levels in 2011q3 as a percent of 2008q3 in these four WIAs were 95.9, 95.9, 96.4, and 96.6% respectively. Their job performance can be characterized as virtually no growth or very slow growth during the recovery and virtually no or much slower growth than the state as a whole before the recession began. The Cape and the Islands WIA and the South Shore WIA had steeper job losses than the state during the recession. Although the North Central WIA, which includes Fitchburg and Leominster, lost a smaller proportion of its jobs during the recession than the state, it began losing jobs before the recession began, and has continued to lose jobs during the state’s recovery.

FIGURE 13



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FIGURE 14

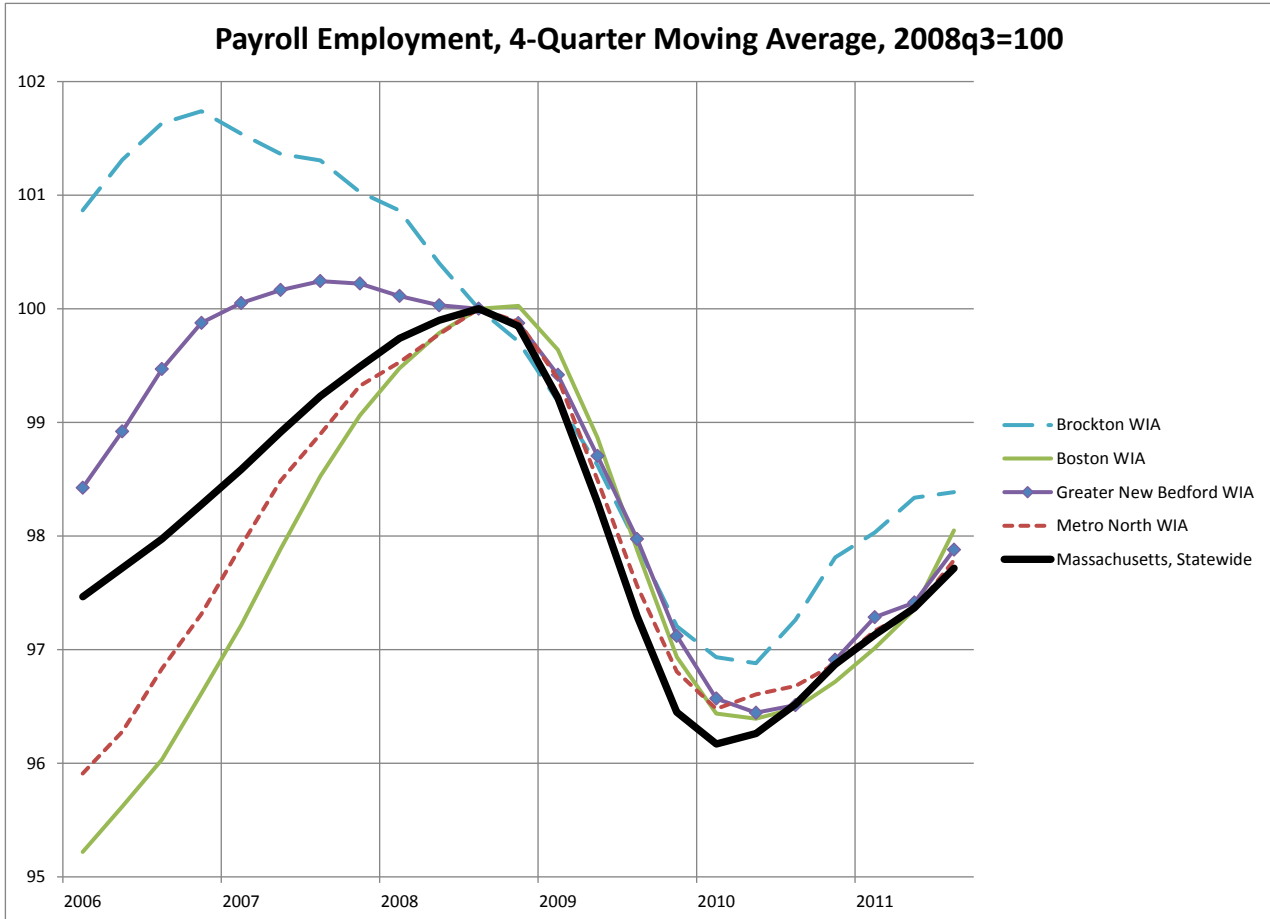


Six WIAs had employment levels in 2011q3 that are about the same as the state as a whole in terms of the proportion of the 2008q3 statewide peak: the Greater Lowell WIA, the Hampden County WIA (which includes Springfield), the Central Massachusetts WIA (which includes Worcester), the Metro North WIA (which includes Cambridge), the Greater New Bedford WIA, and the Boston WIA (Figures 14 and 15). In terms of payroll employment in 2011q3 versus the statewide peak in 2008q3, employment levels in 2011q3 as a percent of 2008q3 in these six WIAs were 97.5, 97.7, 97.7, 97.8, 97.9, and 98.0% respectively. All but two of these had slower growth than the state before the recession. The exceptions were the Metro North WIA and the Boston WIA, which had significantly faster growth than the state as a whole prior to the recession. Two WIAs, the Greater Lowell WIA and the Central Massachusetts WIA, had steeper employment declines than the

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state as a whole during the recession, and faster employment growth than the state as a whole in the expansion.

FIGURE 15

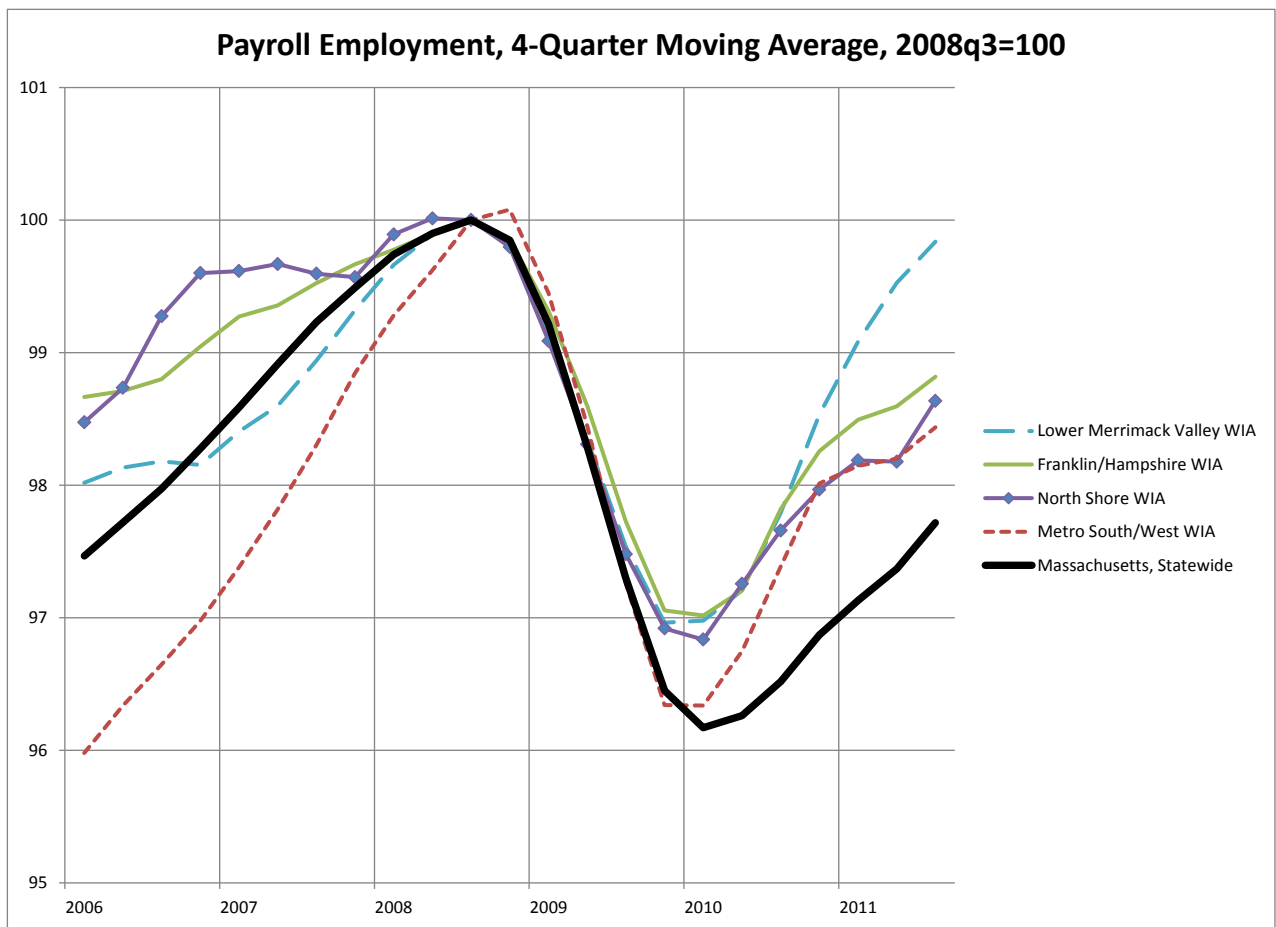


Five WIAs had employment levels in 2011q3 that are significantly higher than the state as a whole in terms of the proportion of the 2008q3 statewide peak: the Brockton WIA, the Metro South/West WIA (which includes Brookline and Framingham), the North Shore WIA (which includes Gloucester, Lynn, and Peabody), the Franklin/Hampshire WIA (which includes Amherst), and the Lower Merrimack Valley MIA (which includes Lawrence and North Andover) (Figures 15 and 16). In terms of payroll employment in 2011q3 versus the statewide peak in 2008q3, employment levels in 2011q3 as a percent of 2008q3 in these five WIAs were 98.4, 98.4, 98.6, 98.8, and 99.8% respectively. Among these WIAs, the Metro South/West WIA was the only one with significantly faster employment growth than the

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state before the recession. The Lower Merrimack Valley WIA had about the same rate of job growth as the state before the recession, the North Shore and Franklin/Hampshire WIAs had slower pre-recession growth than the state, while the Brockton WIA was losing jobs for two years before the recession began. Four of these WIAs – the exception was the Metro South/West WIA – lost a significantly smaller proportion of jobs than the state as a whole during the recession. Among all 16 of the WIAs, the Lower Merrimack Valley MIA was the only one to essentially regain its pre-recession peak employment level by 2011q3.

FIGURE 16



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The Massachusetts economy has many strengths

The historical narrative that best explains the state’s prosperity is one of innovation in response to new economic circumstances. A spirit of innovation underlies the efforts of individuals and businesses to respond to difficult changes with new ideas. This spirit and culture of entrepreneurship are the sources of vitality in our current economic activity. It is reflected in mature industries embracing change, a steady stream of new ideas and technologies coming out of Massachusetts research institutions, rapidly changing advanced manufacturing capacity, a vibrant start-up community inventing new industries and bringing profound change to the supply chain of existing industry clusters.

The Commission learned that in certain industry clusters Massachusetts has a competitive advantage over other states and nations. This prominence is evidenced by the location coefficients as described in Section 4 and was apparent in the testimony and presentations considered by the Commission at meetings and hearings. These sectors are information technology, life sciences (including biotechnology, health care, pharmaceuticals, and medical devices), higher education, defense, clean energy, advanced manufacturing and other knowledge based sectors including professional services and financial services.

The Commission also heard about other economic activities that substantially contribute to wealth and prosperity in Massachusetts, including: the “creative economy”- activities such as film, television, digital media, advertising, design and architecture, video games, cultural nonprofits, artists and artisans; tourism and its impact on many sectors such as hospitality, retail and cultural venues; marine based commerce such as fishing, research and development, vessel trade and maintenance; and hyper-local economic activity - town centers, city neighborhoods, and local independent businesses which create a significant number of local jobs and bring outside wealth into the locale.

Educated Labor Force

As described in Section 4, the well educated Massachusetts labor force is the “natural resource” that is essential to our knowledge-based economy. For many jobs in highly technical and science based sectors the skills available in the labor force have been well matched to employer needs. The Massachusetts adult population has a very high number of bachelor’s degrees and the pre-K to 12 public education system is excellent. Additionally there are many “pipeline” programs and policy initiatives in place with the goal of preparing

SECTION FIVE: JOBS CREATION COMMISSION OBSERVATIONS

young people to enter the industry workforce. These include well coordinated efforts to increase interest and competency in STEM fields coordinated by the *Massachusetts' Plan for Excellence in STEM Education*, vocational-technical schools, internship programs, and union apprenticeships. The incumbent workforce training system has helped many industries. However for some industry needs the skilled labor force is now, or soon will be, too small.

Research Institutions

Our many research institutions are among the best in the world and essential to innovation in our economy. They are an important reason why Massachusetts is a good place to start and build many types of businesses. The presence of renowned higher education institutions, research facilities and hospitals draw very highly educated individuals to live and work in the state. The scientific discoveries at these institutions lead to the development of new technologies and new businesses are often created to build, market, or use these technologies. Additionally, research institutions are large employers that hire at all skill levels. Finally, for many of these institutions education is the core mission. They draw a large student population - with its attendant economic activity - from outside Massachusetts and they are continually replenishing our highly skilled labor force.

Infrastructure

Public investment in the creation of physical infrastructure has helped these industries and many others. It contributes significantly to making a geographic region attractive to businesses and residents. Investments are varied and include: major transportation assets; water and sewer facilities; broadband expansion; convention centers; and school building assistance. These investments have been made directly by the Commonwealth and also in partnerships with municipalities and the private sector. Often they are made in a way that leverages significant private investment. Sometimes these investments have been targeted to advance specific job creation activity.

Efficient and Stable Government

Core government activities and policies which are important to maintaining the state's economic vitality are conducted in a reliable and predictable fashion. State fiscal policy has been responsible. Today the Commonwealth's bond rating is excellent, ensuring access to capital for infrastructure maintenance and investment. The efficiency with which the state fulfills its core mission is increasing. Recent years have seen continual reform of major

SECTION FIVE: JOBS CREATION COMMISSION OBSERVATIONS

state agencies and quasi-public authorities. These efforts have brought about consolidations, increased transparency and accountability, and the introduction of performance management systems. The regulatory environment is being fine-tuned in order to meet the obligations of protecting the public welfare while becoming more business friendly. There is an ongoing review of all existing regulations and more public outreach and participation in the creation of new regulations. As a result, government is less costly, more responsive to residents and businesses, and better at delivering services. Even in an extremely difficult fiscal environment the Commonwealth has consistently provided important services and revenue to cities and towns.

Quality of Life

The quality of life in Massachusetts is very attractive to residents. Individuals and families wish to work and live here for many reasons including: ethnic, cultural and topographical diversity; high wage jobs in safe working environments; access to health insurance and health care; public education at K-12 level that is among the best in the nation; champion professional sports teams; and the many regional and local amenities available to residents.

Challenges

The Commission conducted its work during a period when many regions, businesses, and residents were experiencing severe economic hardship from reduced investment, loss of customers, declining income and unemployment. Testimony revealed many difficulties and problems with economic activity throughout the state and concerns about the efficiency and effectiveness of existing policy responses. However, as the regional hearings progressed the testimony to the Commission seemed to be more optimistic; both the public and private sector participants communicated a sense of increased commercial activity and employment opportunities and had clearer ideas about the changes needed to support business growth and increasing employment.

Expand Job Openings

The recession dramatically changed the employment landscape across the nation and in Massachusetts. It structurally changed the type of jobs in the economy as well as the total number of jobs available. Prior to this recession employment peaked at 3,304,400, and the unemployment rate was 4.5 percent. As the Massachusetts economy recovers more quickly than the nation, we still had 206,900 individuals who were officially unemployed and looking for work as of June 2012. In addition, in June there were another 38,400 persons

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who wanted a job but were not counted as officially unemployed because they had not looked for work in the last 4 weeks, and another 193,600 persons who wanted full-time work but could only obtain part-time work. [The source of the 3,304,400, 4.5%, and 206,900 is the BLS/EOLWD. The source for the other numbers – 38,400 and 193,600 – is the BLS/Current Population Survey.] The primary challenge for the state is to continue to grow the total number of jobs available. This is the most significant way to reduce unemployment and was a key topic of discussion for the Commission.

Mismatch

There are many open jobs in Massachusetts today. A significant portion of those openings require highly skilled workers (scientists, engineers, computer software and hardware engineers and technicians, certified and licensed healthcare workers, etc.) and some employers have difficulty finding appropriate candidates. The labor force does not have enough individuals with higher level skills in science, technology, engineering, and math (STEM) and higher education retention rates to fill all of the job openings that exist today. However, over the course of this recession, typically nearly half of the individuals receiving unemployment insurance benefits had a high school diploma or less.

Additionally there are insufficient numbers of workers available to fill “middle skills” jobs, i.e. those requiring educational attainment beyond high school but less than a bachelor’s degree.

This mismatch between skills in the available workforce and those needed to fill available jobs exists now and will be exacerbated by baby boomer retirements. One identified concern is that high school curriculums should more consistently prepare students for college level STEM study or to proceed directly to employment in STEM fields. Another identified concern is the lack of planning to retain older skilled workers as well as finding candidates to fill these jobs upon the workers’ retirements.

Disadvantaged Populations

Particularly at a time when there are many more job seekers than there are job openings, certain populations face potential barriers to employment. These barriers include lack of education, training and applicable work experience. They also can arise from bias related to matters individual to a job applicant, like age, criminal or court activity records, physical or mental disabilities, or work skills that were acquired in a military setting that are not well understood in the private job market.

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Education and Workforce Development Programs

The workforce training and displaced worker placement system consists of many public and private organizations and is sometimes confusing to workers and employers. There are many different institutions that can potentially help businesses find assistance in training workers and can provide services to a worker seeking new skills. Not all employers know where to go for assistance when they have specific training needs. Communication and coordination among area businesses, the Workforce Investment Boards, One-Stop Career Centers, health and human service employment programs, vocational technical education schools, community colleges and public universities must be improved. The response time to industry requests for worker training must be rapid and efficient.

For job seekers finding and funding training can be challenging. One-Stop Career Centers are a federally funded network of service centers across the state that assist both employers and job seekers. Career Centers help individual job seekers assess their skills and guide job seekers to employment opportunities, training, and support services such as child care and transportation. Career Centers use one-on-one counseling and technology tools like the Transformational Occupational Relationship Quotient (TORQ) that analyze an individual's skills and "remap" them to existing job openings. Career counseling tools help job seekers identify education or training that would assist them in getting reemployed.

Insufficient funding for training can result in unemployed job seekers identifying a particular training that they cannot receive. Expanding and better aligning education and training preparation with existing job demand is a critical need. Additionally Career Centers are not always able to provide job seekers with up-to-date information about employment trends and career pathways. As a result sometimes a job seeker chooses to complete a particular training that may not lead to a job. Strong career counseling is needed for individuals benefitting from education and training resources to maximize the possibility that their choices lead to employment. By continuing to seek industry involvement and accountability in defining pathways and establishing more frequent contact with business the training programs will be more employer-driven and reflective of demand.

Marketing Massachusetts

There are many characteristics that make Massachusetts a good place to do business and the legislature and administration have demonstrated a willingness to continually review and improve policies and circumstances that affect the cost of doing business in the state.

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However, the recent decreases in tax rates and changes to the regulatory environment are not widely known. The actual business climate should be more aggressively marketed. In addition, the Commission heard concerns that sometimes public policy activities affect certain underlying business costs. For some issues like energy, health insurance, and housing, legislative and administration efforts are underway to decrease costs. Other areas including unemployment insurance and administration of the tax code remain matters for which the public and private sectors are currently seeking long term solutions.

Infrastructure constraints

While many historical investments in infrastructure like the development of Routes 128, 495 and 90, the commuter rail system and the MBTA, water and sewer facilities, and the School Building Assistance program have contributed to a supportive environment for businesses and employees, there are now significant constraints on new investment. Insufficient funds are currently available to invest in projects that have been identified as needed for economic activity to proceed. This affects overall asset maintenance as well as specifically identified transportation, water, and sewer projects.

Regional Differences

The strengths of the “greater” Boston economy are not shared everywhere in the state. The regional analysis of payroll employment trends in Section 4 clearly indicates wide disparities in employment levels. Some regions have very significant need for infrastructure investment and increased access to public transportation. The industry sectors now responsible for prosperity in Massachusetts as a whole are not equally present in all regions. Many small towns in western Massachusetts and large urban areas outside of Greater Boston previously relied on traditional manufacturing companies that are no longer present. Many of these areas began losing jobs before the current recession and have continued to lose jobs during the state’s recovery. These communities are in the process of developing a new industrial base. Often the residents of those same areas are too distant from regions with new industry or without the public transportation capacity to get to areas with job growth. Additionally, the Commission heard that some regions are not in sufficiently close proximity to higher education and research institutions to benefit from the technology transfer and innovation generated by these associations.

SECTION SIX: RECOMMENDATIONS

GOAL: TO CREATE MORE JOBS

1. Strategy: Increase the demand for goods and services produced throughout the Commonwealth

Tactics:

- 1.1 Lower business costs so that goods and services created in Massachusetts and exported are competitively priced.
- 1.2 Lower the regulatory burden on businesses.
 - 1.2.1 Assist employers in navigating the healthcare, unemployment insurance and workers compensation regulatory requirements.
 - 1.2.2 Continue review of all state regulations affecting business.
- 1.3 Create a preference system that encourages the government and the private sector to purchase products and services produced in MA.
 - 1.3.1 Redirect state purchasing to Massachusetts companies.
 - 1.3.2 Examine the industrial base for the supply chain of vendors that the state uses to identify gaps in materials produced in state.
 - 1.3.3 Raise awareness of existing programs that encourage business to business relationships and the continued development of in state supplier communities to serve larger Massachusetts based businesses.
- 1.4 Market Massachusetts aggressively.
 - 1.4.1 Fully utilize the Massachusetts Marketing Partnership.
 - 1.4.2 Market Massachusetts as a business friendly state with a competitive tax structure, ongoing regulatory reform, and willingness among policymakers to undertake ongoing review of business concerns.
 - 1.4.3 Redouble efforts to encourage graduates of Massachusetts higher education institutions to remain in Massachusetts.

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- 1.5 Encourage increased exports.
 - 1.5.1 Raise awareness of assistance available to small business around exporting.
- 1.6 Address regional disparities in employment.
 - 1.6.1 Expand broadband access everywhere in Massachusetts.
 - 1.6.2 Target incentives and economic development efforts to address regional needs.
 - 1.6.3 Ensure that each region is ready for innovation - continue investments in the pre k-12 public education system to ensure excellence.
 - 1.6.4 Market the regions aggressively, highlighting permit-ready sites, local business cost structure and other regional strengths.
 - 1.6.5 Communicate to businesses seeking to locate or expand in Massachusetts the specific strengths of regions where unemployment is high.
 - 1.6.6 Invest in regional tourism promotion.

2. Strategy: Increase state investment in infrastructure.

Tactics:

- 2.1 Make capital investments in the construction of new and the maintenance of existing roads, bridges, state and municipal buildings, broadband, sewer and water treatment facilities.
- 2.2 Direct state investments to support economic development goals and job growth.
- 2.3 Prioritize discretionary state infrastructure investments toward furthering the goals of Priority Development Areas as identified by local, regional and state entities in state-sponsored regional plans.

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- 2.4 Increase capital investment in the rehabilitation of existing state and local government buildings thereby increasing the employment of construction trades.
- 2.5 Promote public and private investment in energy efficiency improvements to existing and new structures.

3. Strategy: Support public educational institutions and align education and training to job demand in order to ensure an appropriately skilled workforce.

Tactics:

- 3.1 Keep an ongoing focus on aligning the education system with job market demand and increasing college and career readiness.
- 3.2 Continue to provide an excellent prek-12 public education.
- 3.3 Continue to support excellent higher education and academic research to ensure that the state continues to supply a highly educated workforce and to foster innovation.
- 3.4 Increase and improve counseling around college enrollment and success. Also increase awareness of web based tools that assist in planning for college participation and financial aid.
- 3.5 Increase and improve counseling around career development and provide timely job vacancy data to high schools and colleges.
- 3.6 Increase the number of appropriately credentialed teachers aligned with job market demands.
- 3.7 Increase the focus on science technology engineering and mathematics (STEM) education and training in the pre k to higher education systems in order to raise interest in and preparedness for both employment and advanced education for STEM careers at all skill levels, as called for in “a Foundation for the Future: Massachusetts’ Plan for Excellence in STEM Education.

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- 3.8 Support internships for middle-school, high school and higher education students and work with business to encourage the utilization of interns.
- 3.9 Ensure that all public education facilities, including textbooks, materials, laboratories and overall physical plant are up to date.
- 3.10 Provide excellent skill specific training for middle and high skill jobs that are sustainable, good paying and benefitted.
- 3.11 Facilitate collaboration among industry groups to create and define certifications that are valuable to and recognized by employers. Use models such as the Advanced Manufacturing Collaborative’s goals to address workforce education needs with competency models that include industry certifications.
- 3.12 Increase coordination among public education institutions – vocational technical schools, community colleges, state universities – the business community, labor, and the Workforce Investment Boards
 - 3.12.1 Communication with and participation by businesses must be robust.
 - 3.12.2 Create educational programs that are capable of rapidly responding to industry needs and meet the requirements of career pathways that are recognized by employers.
 - 3.12.3 Increase coordination and collaboration among public education institutions building on models such as the ongoing US Department of Labor funded Community College Consortia. This would be reflected in better transferability and “stackability” of credits earned at different institutions.
- 3.13 Support research at higher education institutions and the transfer of technology from laboratory to commercialization.
- 3.14 Conduct a job vacancy survey at least annually, but preferably more often and provide data to all education and workforce training institutions.

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4. Strategy: Ensure robust and coordinated system of workforce training programs and job search resources.

Tactics:

- 4.1 Increased funding at One-Stop Career Centers and redeploy existing funding for identified successful initiatives – e.g. technology training, individual career counseling.
- 4.2 Institute programs to help veterans transfer skills acquired in the military to the civilian workforce such as the TORQ tool used at the One-Stop Career Centers.
- 4.3 Use more robust assessment of clients and evaluation of job market to guide the decisions about training.
- 4.4 Use successful, employer driven models and best practices to expand training to more workers and businesses.
- 4.5 Expand and better market the Workforce Training Fund.
- 4.6 Create supported internships for unemployed job seekers. Models discussed have included a state brokered internship program, (one example is the “Georgia Works” program), the Northeastern University Co-op program, the internship programs operated by the Massachusetts Life Sciences Center and the Clean Energy Technology Center, and union based apprentice programs.
- 4.7 Address potential barriers to employment among certain job seekers including but not limited to: those experiencing bias related to age, disability, criminal or court activity records or military experience.
 - 4.7.1 Identify a collection of best practices that successfully serve a particular group and use it as a model for assisting other groups of workers experiencing bias.
 - 4.7.2 Create a clearing house of information about which types of jobs are likely to be available to individuals with a criminal or court activity record in order to avoid having job seekers invest time and resources training for jobs from which they would be disqualified. Public, non-

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profit and for-profit education, training and job placement providers should use this information in guiding customers in their job search and training choices.

- 4.7.3 Provide more technology training for the unemployed and underemployed at every point along the career spectrum.
- 4.7.4 Provide opportunities for students to learn more about the culture of work while still in school.
- 4.7.5 Use state contract preferences to target and reward firms that hire workers with barriers to employment.
- 4.7.6 Promote entrepreneurship among populations with barriers to employment and individuals receiving various forms of assistance.
- 4.7.7 Review the potential benefits of wage subsidy programs that target particular industries or persons with barriers to employment, including but not limited to the ‘On the Job’ training program and youth work experience and skill training programs.
- 4.8 Recapitalize the Workforce Competitiveness Trust Fund.
- 4.9 Use the resources of the Massachusetts Growth Capital Corporation (MGCC) to encourage entrepreneurship. Revitalize the employee ownership and involvement program which is now part of the MGCC
- 4.10 Increase public awareness of the value of worker cooperatives and encourage the use of this model, particularly where keeping wealth locally is a community goal.

JOBS CREATION COMMISSION REPORT

SECTION SEVEN: APPENDIX

APPENDIX CONTENTS: All documents submitted to the Commission or created by the Commissioners.

APPENDIX A: ENABLING RESOLVE	Volume 1
APPENDIX B: EXISTING GOVERNMENT POLICY ACTIVITY RELATED TO THE COMMISSION'S WORK	Volume 1
APPENDIX C: MONTHLY MEETING SUMMARIES AND DOCUMENTS CONSIDERED	Volume 1 and 2
APPENDIX D: REGIONAL HEARING - OVERVIEW AND SUMMARY FOR EACH HEARING	Volume 3
APPENDIX E: SUBCOMMITTEE REPORTS - FINAL REPORTS AND SUMMARIES OF MEETINGS	Volume 3
APPENDIX F: SUBMITTED TESTIMONY	Volume 3