



## **Commonwealth Of Massachusetts**

# **Analysis of the Economic Impact of the Recession on Massachusetts**

Developed for Massachusetts Plan for Workforce Development  
Under the American Recovery and Reinvestment Act  
Submitted to the U.S. Department of Labor

Developed through the Governor's Workforce Taskforce  
Lead by the Executive Office of Labor and Workforce Development

**June 2009**

**Commonwealth of Massachusetts**

Deval L. Patrick, Governor

Timothy P. Murray, Lt. Governor

Suzanne M. Bump, Secretary  
Executive Office of Labor  
and Workforce Development

Michael Taylor, Director  
Department of  
Workforce Development

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## **Analysis of the Economic Impact of the Recession on the Massachusetts Labor Market**

### **Introduction**

This report examines the impact of the current recession on employment in Massachusetts and on the composition and performance of the state's industries.

#### *Brief History of the Current Recession*

Triggered by a collapse in the global financial system, the US economy shed 5.6 million jobs (4 percent of total) between December 2007, the official start date of the recession, and April 2009. The steep rise in unemployment, together with the resulting breakdown of the world's financial system, eroded business and consumer confidence. This, in turn, inhibited business investment and consumer spending and reduced business and tax revenues. The US government responded to the crisis – seen by economists as the most serious since the Great Depression – by enacting a major stimulus bill.

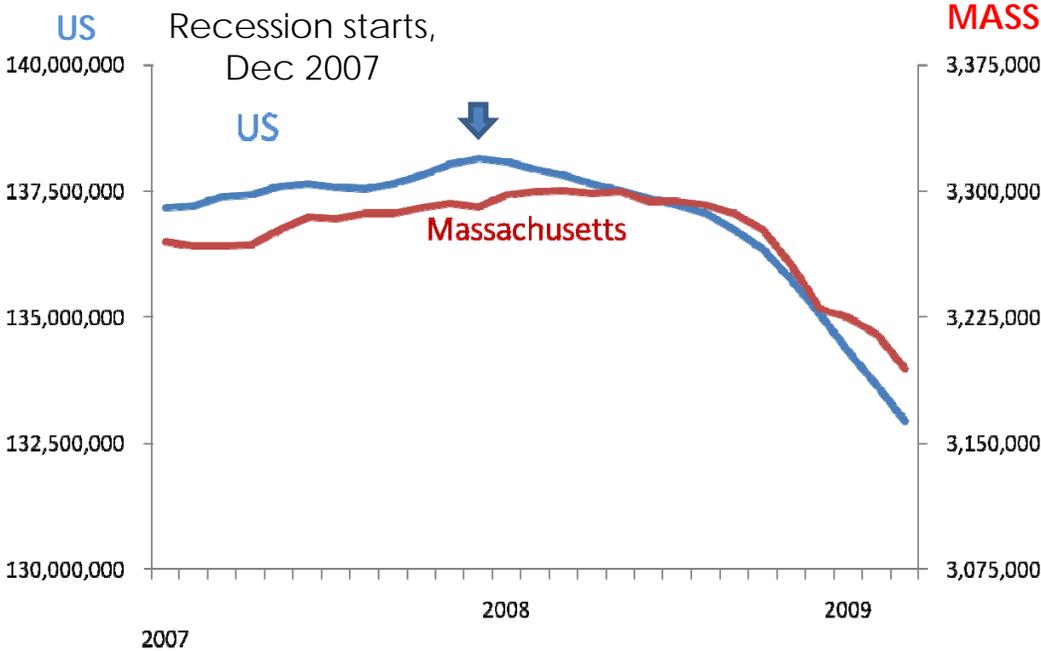
The Massachusetts economy held up fairly well during the initial stages of the recession. From December 2007 to August 2008, the state actually gained 800 jobs while nation lost jobs. See Figures 1 and 2. Massachusetts' better-than-average performance was short-lived, however. Between August 2008 and April 2009 Massachusetts lost 107,500 jobs (a 3.3 percent decrease) while its unemployment rate climbed from 5.4 to 8.0 percent.

To a large extent the effects of the recession were delayed in Massachusetts as a result of its industry mix. Knowledge-based sectors (health and education, technology and science) which represent a larger part of the state's economy than the nation's economy –initially performed better than manufacturing and construction. But when the recession spread to these knowledge-based industries, Massachusetts was inevitably hit with steep job losses.

The loss of jobs, both in Massachusetts and across the nation, has clearly been the most significant impact of the recession.

Figure 1

Massachusetts and US Employment since 2007



Bureau of Labor Statistics,  
Federal Reserve of Boston, Economic Indicators

**Figure 2**



Presentation by Paul Harrington (6/3/09), Center for Labor Market Studies, Northeastern

*The Recession's Impact on Key Sectors of the State's Economy*

The recession has had a wide-ranging impact on key sectors of the state's economy. Sectors such as Construction, Trade/Transportation/Utilities, Financial Activities, Administrative Services (Temp Help), and Manufacturing have fared the worst, each shedding more than 10,000 jobs between August 2008 and April 2009. See Table 1. In contrast Healthcare and Education and Federal and State Government have managed to add jobs or at least have held their own. Nevertheless, employers in these sectors have recently announced layoffs or hiring cutbacks.

**Table 1 Recent Industry Trends in Massachusetts (Seasonally Adjusted Data)**

Description	August 2008	April 2009	Absolute Change	Relative Change
TOTAL NONFARM	3,291.6	3,184.1	-107.5	-3.3%
CONSTRUCTION	131.7	116.6	-15.1	-11.5%
MANUFACTURING	285.8	273.0	-12.8	-4.5%
TRADE, TRANSPORTATION, AND UTILITIES	569.8	546.9	-22.9	-4.0%
INFORMATION	89.0	85.2	-3.8	-4.3%
FINANCIAL ACTIVITIES	220.7	209.5	-11.2	-5.1%
Professional, Scientific, Technical Services	259.1	249.7	-9.4	-3.6%
Management of Companies and Enterprises	61.1	59.0	-2.1	-3.4%
Admin & Support, Waste Man & Remediation	166.4	147.1	-19.3	-11.6%
EDUCATION AND HEALTH SERVICES	643.6	645.6	2.0	0.3%
LEISURE AND HOSPITALITY	305.1	296.8	-8.3	-2.7%
OTHER SERVICES	120.8	115.5	-5.3	-4.4%
GOVERNMENT	437.1	438.0	0.9	0.2%

A more detailed analysis of the effects of the recession from April 2008 through April 2009 on industry employment levels within these super sectors identifies the job losses more specifically. See Table 2. Thus, it is important to consider employment levels in April 2008 as well as job losses from August 2008 to April 2009. Both time frames are therefore referenced in the following analysis.

As of April 2009 Massachusetts employment stood at 3,184,100 jobs, down 115,000 jobs (3.5 percent) from April 2008 with most of the decline (92,800 jobs) occurring in the six months from November 2008 to April 2009.

- Healthcare and Education which comprises 20 percent of the state's employment compared to 14 percent of the US's continues to bolster the Massachusetts economy. Although this sector has seen a minor job decline during the recession, it remains the only private sector to add jobs over the year.
- Government employment increased by 1,400 jobs between April 2008 and April 2009 with increases of 1,400 and 300 jobs at the federal level and state level offset by the loss of 300 jobs at the local level.
- Professional and Business Services, a critical employment sector in Massachusetts which employs 14 percent of Massachusetts workforce compared to 13 percent of the US's, has seen significant job losses during the recession. Overall, employment stands at 455,800 jobs, down 33,200 jobs (6.8 percent) since April 2008. Administrative and Waste Management Services has lost 23,100 jobs while Professional, Scientific, and Technical Services is down 7,500 jobs.
- Financial Activities, a major factor in the genesis of this recession, currently accounts for 209,500 jobs, down 12,700 jobs (5.7 percent) from last year. This sector, which lost 600 jobs in April 2009 after holding fairly steady for the previous two months, lost 1,900 jobs over the first four months of 2009. This was a significant improvement over the final 3 months of 2008 when Financial Activities experienced a decline the 8,900 jobs. The losses were split between Finance and Insurance and Real Estate and Rental and Leasing. The latter group suffered a steeper decline (14.3 percent) than any other subsector for which estimates are published.
- Trade, Transportation, and Utilities shed 24, 600 jobs over the year. Retail trade accounted for most of the losses, declining over the year by 15,600 jobs (4.5 percent) to 333,500 jobs.
- Feeling the brunt of cutbacks in consumer spending, Leisure and Hospitality employment stands at 296,800 jobs, off 8,900 jobs over the year. Most of the losses were in Accommodation and Food Services.
- Information, which accounts for 85,200 jobs was the only sector to post a monthly gain between March and April 2009. Nevertheless, employment is still down 5,900 jobs (6.5 percent), from last year. Job losses were concentrated in Newspaper, Periodical, and Book Publishing, and Telecommunications.
- Manufacturing jobs continued to trend downward with losses recorded in both Nondurable and Durable Goods. With employment standing at 273,000 jobs in April 2009, manufacturing has lost 15,900 jobs (5.5 percent) since last year. Transportation Equipment and Food Products were the only sectors to post over-the-year gains. Fabricated Metals and Computer and Electronic Products recorded the greatest losses.

- Construction has lost 17,900 jobs. Its over-the-year rate of loss, 13.3 percent, is nearly twice that of any other sector.

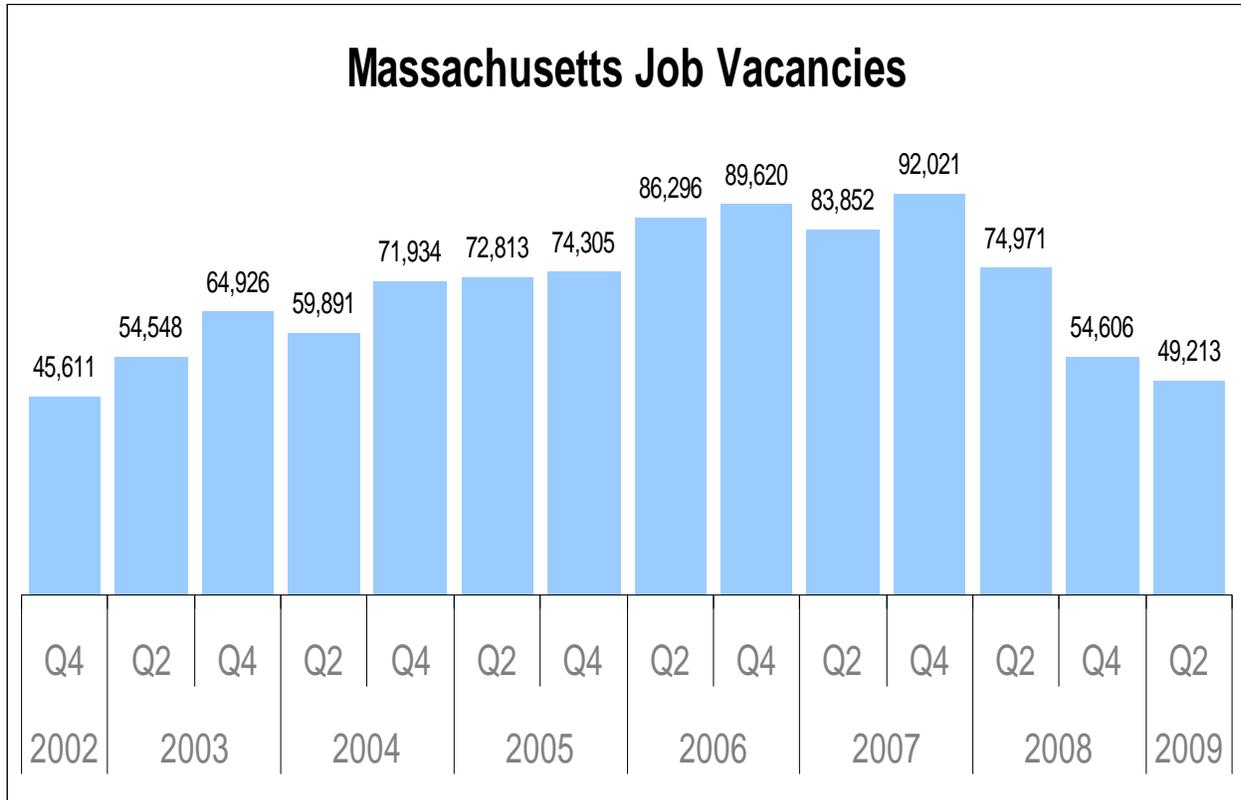
**Table 2 Massachusetts Job Gains and Losses,  
April 2008 to April 2009**

<b>Year</b>	<b>Industry</b>	<b>April 08</b>	<b>April 09</b>	<b>Employment Change</b>	<b>Percent Change</b>
2009	TOTAL NONFARM	3,299,100	3,184,100	-115,000	-3.5%
2009	CONSTRUCTION	134,500	116,600	-17,900	-13.3%
2009	MANUFACTURING	288,900	273,000	-15,900	-5.5%
2009	Durable Goods	191,200	181,400	-9,800	-5.1%
2009	Nondurable Goods	97,700	91,600	-6,100	-6.2%
2009	TRADE, TRANSPORTATION, AND UTILITIES	571,500	546,900	-24,600	-4.3%
2009	WHOLESALE TRADE	137,500	129,200	-8,300	-6.0%
2009	RETAIL TRADE	349,100	333,500	-15,600	-4.5%
2009	TRANSPORTATION, WAREHOUSING & UTILITIES	84,900	84,200	-700	-0.8%
2009	INFORMATION	91,100	85,200	-5,900	-6.5%
2009	FINANCIAL ACTIVITIES	222,200	209,500	-12,700	-5.7%
2009	Finance and Insurance	179,600	173,000	-6,600	-3.7%
2009	Real Estate and Rental and Leasing	42,600	36,500	-6,100	-14.3%
2009	PROFESSIONAL AND BUSINESS SERVICES	489,000	455,800	-33,200	-6.8%
2009	Professional, Scientific, Technical Services	257,200	249,700	-7,500	-2.9%
2009	Management of Companies and Enterprises	61,600	59,000	-2,600	-4.2%
2009	Admin & Support, Waste Man & Remediation	170,200	147,100	-23,100	-13.6%
2009	EDUCATION AND HEALTH SERVICES	637,500	645,600	8,100	1.3%
2009	Educational Services	160,900	161,100	200	0.1%
2009	Health Care and Social Assistance	476,600	484,500	7,900	1.7%
2009	LEISURE AND HOSPITALITY	305,700	296,800	-8,900	-2.9%
2009	Arts, Entertainment, and Recreation	48,500	47,300	-1,200	-2.5%
2009	Accommodation and Food Services	257,200	249,500	-7,700	-3.0%
2009	OTHER SERVICES	120,700	115,500	-5,200	-4.3%
2009	GOVERNMENT	436,600	438,000	1,400	0.3%
2009	Federal Government	48,800	50,200	1,400	2.9%
2009	State Government	117,000	117,300	300	0.3%
2009	Local Government	270,800	270,500	-300	-0.1%

*Impact of the Recession on Available Jobs*

As business and consumer spending declined over the year, the numbers of available or unfilled jobs steadily dropped. Figures 3 and 4 show this trend. In 2007 the volume of job postings began to edge down, and then declined rapidly in 2008.

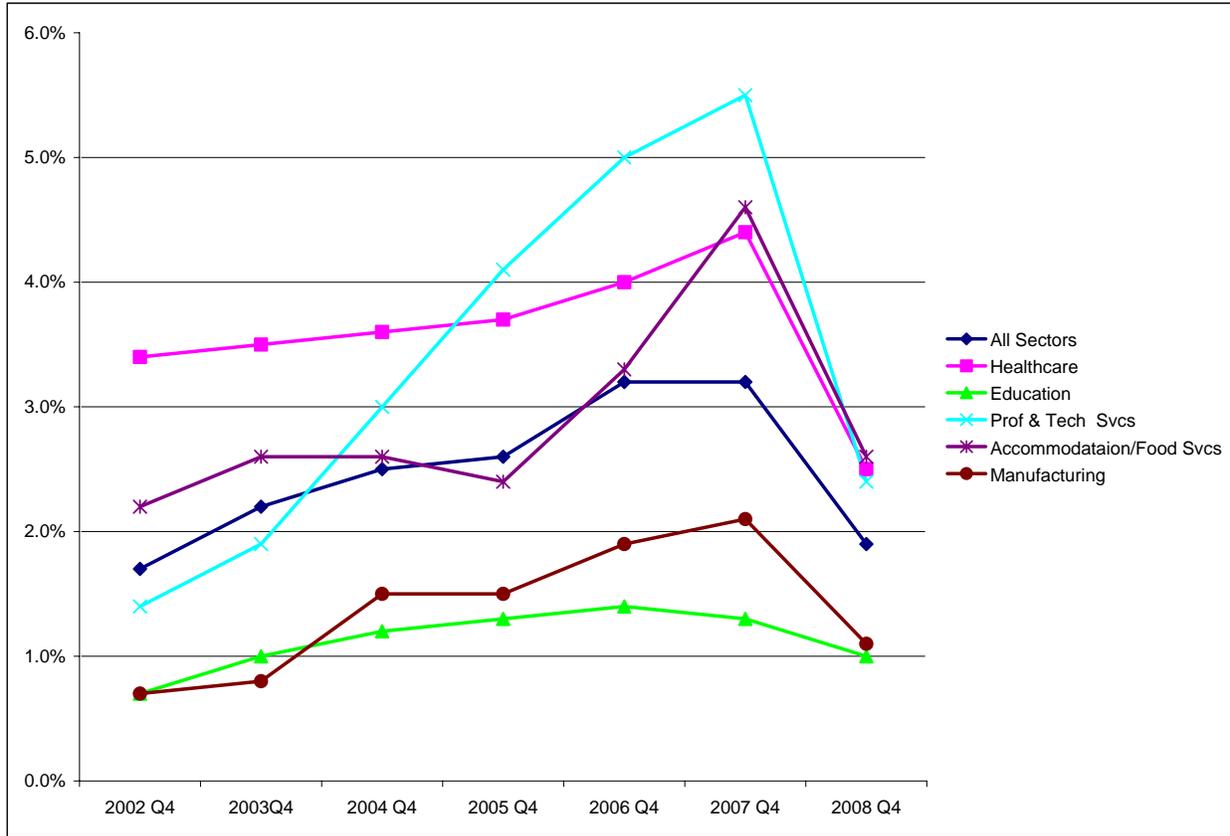
**Figure 3**



Source: Massachusetts Department of Workforce Development, Job Vacancy Surveys 2002-2008

## Figure 4 Massachusetts Vacancy Rates by Major Sector

*Vacancy Rates have been falling since 2007 Q4*



Source: Massachusetts Department of Workforce Development, Job Vacancy Survey.

During this time frame job vacancy rates (the number of job vacancies per employed worker) in several key sectors of the state's economy also began dropping. As shown in the Figure 4 above, job vacancy rates in Professional, Technical Services, Accommodation and Food Services and Healthcare fell in 2008, although they still consistently exceed the overall industry average vacancy during the recession.

Vacancy rates for Accommodation and Food Services may be higher due to a more rapid turnover in food service occupations and temporary seasonal factors. Education and Manufacturing sectors have consistently lower vacancy rates, although some employers within these sectors still have relatively high vacancy rates for "skills gap" occupations (i.e., occupations for which job vacancies tend to persist).

The devastating impact of the current recession has created major supply/demand gaps in the demand for labor within specific occupational groups, and if these gaps do not improve during the recovery the social and economic implications for declining incomes and increasing poverty are major causes of concern.

According to the 2<sup>nd</sup> quarter 2009 job vacancy report, Massachusetts employers had 49,200 positions open for immediate hire, a 1.7 percent job vacancy rate (job postings per 100 filled positions). Both job vacancies and the rate were down over the year. Full-time permanent job postings were also down while temporary/seasonal postings) and part-time positions (both permanent and temporary) were up.

The steep drop in job postings combined with the sharp rise in unemployment has made it increasingly difficult for workers to find jobs. The state's 2<sup>nd</sup> quarter of 2009 supply/demand ratio, (the number of unemployed workers per job vacancy) was 5.7 percent, its highest rate since the job vacancy series began.

It should be noted that this rate only provides a measure of the relative tightness of the state's job market in the aggregate and does not suggest that the occupations of the unemployed directly align with the jobs posted. In some occupational groups, the supply/demand rate is much worse. In the production and construction occupational groups, for example, the 2<sup>nd</sup> quarter 2009 job vacancy rate was 0.4 percent, the lowest rate recorded among the 20 major occupational groups for which job postings are tracked. Because of a sharp increase in the numbers of unemployed in these skill trades, and a precipitous drop in employment and job postings, these two occupational groups recorded the most unfavorable supply/demand ratios of all occupational groups. In contrast healthcare practitioners and technicians continue to enjoy the most favorable supply/demand ratios, because job postings outnumber job seekers.

### *Critical Occupations*

Another fallout of the recession can be seen in the drop of the number of occupations considered “critical”. Critical occupations are those that meet the following criteria: 1) a large number of vacancies or a vacancy rate of at least 5 percent; and 2) an annual median wage of at least \$25,000.

In the 2nd quarter of 2008, there were 70 critical occupations compared to 92 in the 4th quarter of 2007 and 86 in the 2nd quarter of 2007.

The following table provides hyperlinks to a complete list of the critical occupations. (You can also find the chart at <http://www.commcorp.org/researchandevaluation/vacancy-critical.html>).

**Table 3**  
**Critical Occupations**

Job Families	No. of Critical Vacancies	Employment in Critical Occupations
	(2008, Q2)	2007 May
<a href="#">Office &amp; Administrative Support</a>	5,271	302,490
<a href="#">Management</a>	4,869	136,270
<a href="#">Healthcare practitioner &amp; technical</a>	4,734	116,730
<a href="#">Computer &amp; Mathematical</a>	2,795	98,230
<a href="#">Education, training, and library</a>	2,302	93,180
<a href="#">Healthcare Support</a>	2,065	54,690
<a href="#">Business and Financial Operations</a>	1,647	62,480
<a href="#">Buildings and Grounds Cleaning and Maintenance</a>	1,567	76,240
<a href="#">Sales &amp; Related</a>	1,326	61,080
<a href="#">Community and Social Services</a>	1,126	22,160
<a href="#">Food Preparation &amp; Serving</a>	1,081	35,690
<a href="#">Transportation &amp; Material Moving</a>	1,051	88,790
<a href="#">Life, Physical, &amp; Social Science</a>	762	17,340
<a href="#">Architecture &amp; Engineering</a>	713	15,400
<a href="#">Installation, Maintenance &amp; Repair</a>	653	37,050
<a href="#">Personal Care and Service</a>	572	9,510
<a href="#">Construction and Extraction</a>	112	20,780
<a href="#">Arts, Design, Entertainment, Sports and Media</a>	78	1,450

The 70 occupations classified as critical in the 2<sup>nd</sup> quarter of 2008 accounted for 32,724 job vacancies (44 percent of all job vacancies in Massachusetts). Some 5,271 of these job vacancies were in the Office and Administrative Support category, down from 5,422 vacancies the previous year. The Healthcare practitioner and technical category accounted for 4,734 vacancies, down from 6,476 in 2007. Registered Nurses and Nurses aides and Assistants continued to account for the highest number of vacancies (3,251 and 1,573, respectively). New additions to the top 10 critical occupations were landscaping workers, tellers, preschool teachers, and secondary school teachers. Eight of the top ten critical occupations typically required training or educational credentials below a bachelor's degree. The smallest occupational category was Arts, Design, Entertainment, and Sports Media and Carpenters (under the Construction and Extraction family) with 112 and 78 vacancies, respectively.

Twelve of the 70 critical occupations were in the computer and mathematical; life, physical, and social science; and architecture and engineering. Such occupations are now often described as STEM (Science, Technology, Engineering, and Mathematics) occupations. With 4,270 job vacancies, these 12 occupations accounted for 13 percent of all 45,035 critical vacancies; and the job vacancy rate of one of them – Mechanical Engineering Technicians – ranked among the 10 highest of any occupation in the state.

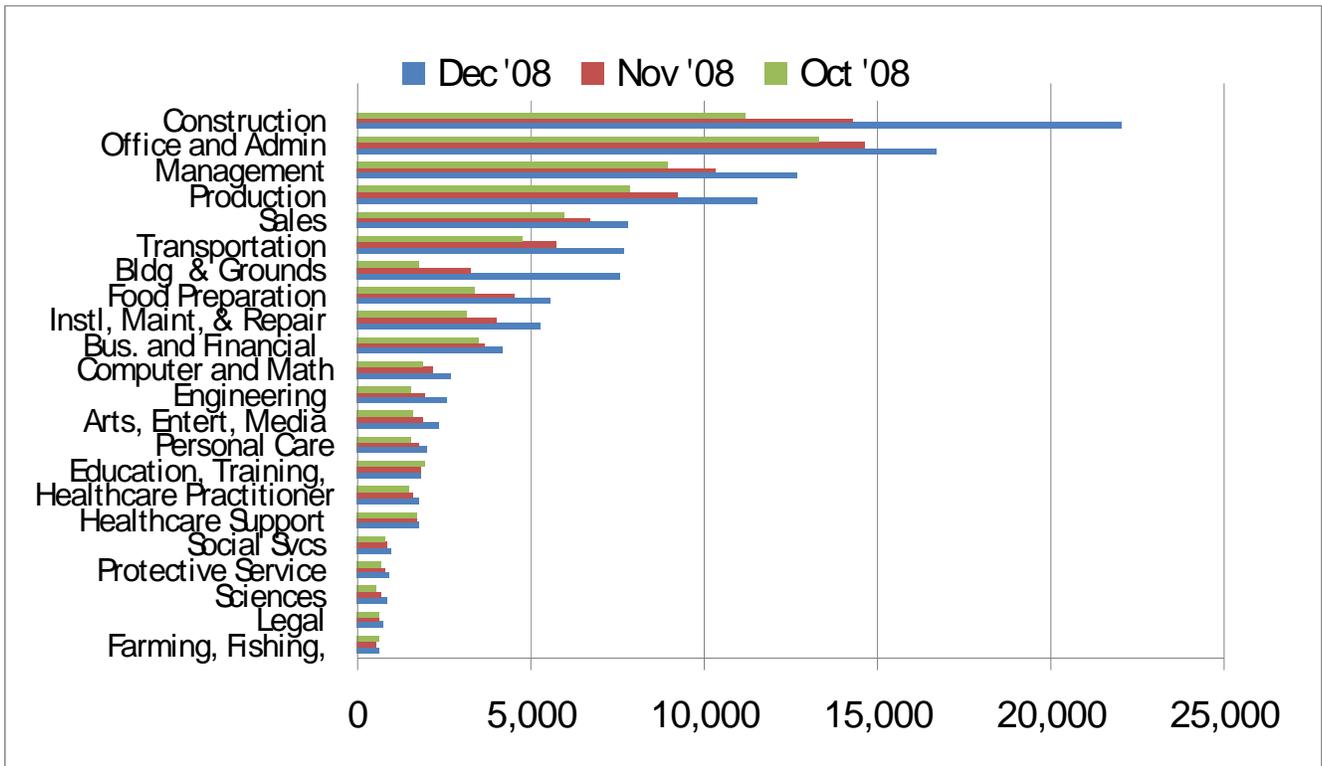
Thirty-five of the critical occupations (50 percent) required at least a bachelor's degree, but 19 (27 percent) required only on-the-job training for up to a year.

Forty-six of the 70 occupations were considered persistently critical, i.e., they had been critical for three job vacancy surveys. This indicates that the vacancies were not seasonal in nature and that they represented a shortage that was not a one-time phenomenon. These occupations represented 26,774 vacancies (82 percent of all critical vacancies). As in the case of critical occupations, the largest number of persistent occupations was in the Office and Administrative Support and the Healthcare Practitioner and Technical categories. A number of STEM occupations were also classified as persistent: five Computer-related occupations, two Engineering occupations, and two occupations from Life, Physical and Social Sciences.

*The Recession's Impact on UI Claimants*

As can be seen from Figure 5 below, Unemployment Insurance (UI) claims increased for many occupations in October, November and December of 2008.

**Figure 5**  
**Unemployment Insurance (UI) claims are increasing in a range of Occupations**



Tables 4 and 5 show that between the fall of 2008 and the fall of 2009 there was an increase in individuals claiming unemployment benefits over 15 weeks, and a slight uptick in the number of claims filed by women. The percentage of UI claimants with some amount of college education also increased, but the age and race of claimants did not change.

The range of occupations from which UI claimants were being laid off became increasingly diverse between December 2007 and April 2009. In addition, the percentage of claimants collecting top benefits rose as the number of claimants who had earned an average weekly wage of \$1,000 or more increased while the number of claimants who earned less than \$1,000 a week declined.

**Table 4 Percent of Claimants by Average Weekly Wage**

	<b>Average Weekly Wage</b>					
	<\$300	\$300-499	\$500-799	\$800-999	\$1000-1499	\$1500+
Apr-09	9.0	16.1	26.6	13.3	19.1	15.9
Dec-08	10.4	18.0	27.6	13.1	18.1	12.8
Apr-08	9.9	18.8	28.3	13.9	18.0	11.0

*Source: Massachusetts Division of Unemployment Assistance, Profiles of Massachusetts Unemployment Insurance Claimants*

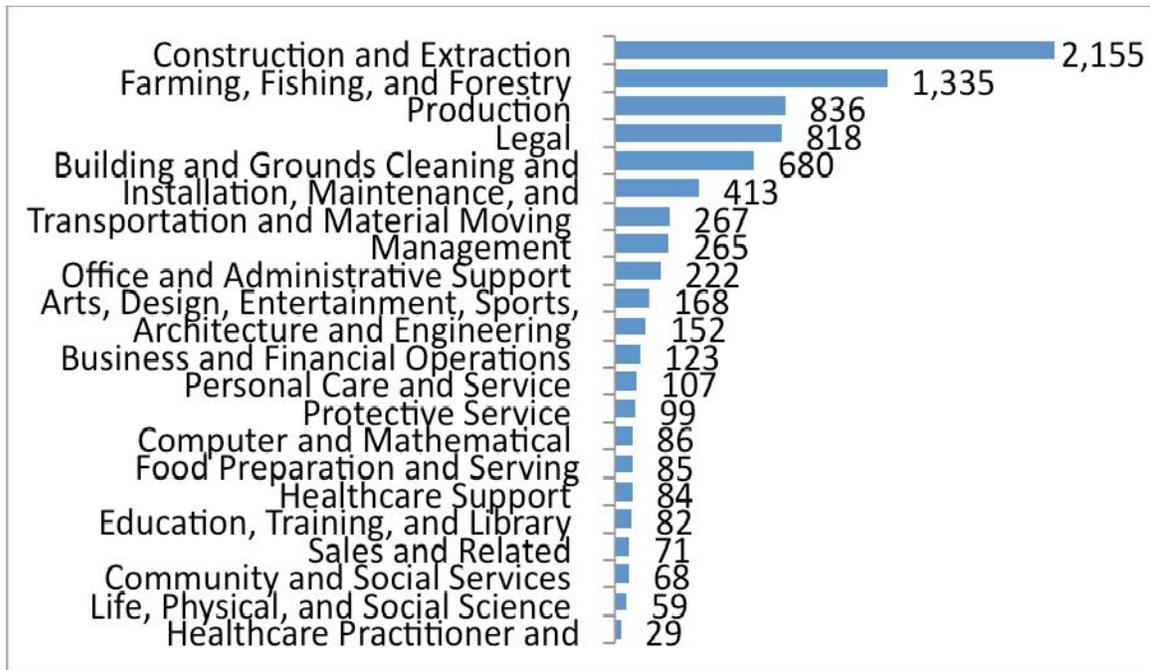
Table 5 Comparing UI Claimants in late 2007 to UI Claimants in late 2008

Race	Q4, 2007	Q4, 2008	Age	Q4, 2007	Q4, 2008	Weeks Unemployed	Q4, 2007	Q4, 2008
Hispanic/Latino	9%	9%	Under Age 22	3%	3%	1-2 Weeks	21%	20%
Asian	3%	2%	Ages 22-24	6%	5%	3-4 Weeks	15%	13%
Black	7%	8%	Ages 25-34	22%	22%	5-14 Weeks	38%	35%
Native American	0%	0%	Ages 35-44	24%	25%	15+ Weeks	26%	32%
Pacific Islander	0%	0%	Ages 45-54	25%	25%	<b>Education</b>	<b>Dec, 2007</b>	<b>Dec, 2008</b>
White	73%	73%	Ages 55-64	15%	15%	Up to Grade 8	4.5%	3.9%
Ethnic Unknown	7%	8%	Ages 65 and Over	4%	4%	9 to 11 Grade	9.5%	8.8%
<b>Gender</b>	<b>Q4, 2007</b>	<b>Q4, 2008</b>				High School Grad	43.2%	43.5%
Male	63%	60%				1 – 3 Yrs College	22.8%	21.7%
Female	37%	40%				4 or More Yrs College	20.0%	22.1%

*Current and Impending Skills Gaps*

Figure 6 represents the ratio of claims to vacancies by occupation for the period between the fall of 2007 and the fall of 2008. The data indicates that Massachusetts has skills gaps in the majority of health-based and science-based occupations, including: healthcare practitioners; life/physical/social sciences, healthcare support; and computer and mathematical and other occupations.

**Figure 6 Number of Claims for Every 100 Vacancies**



*Skills demanded by industries and occupations that are expected to grow during an economic recovery*

**Conclusion**

The impact of this recession on Massachusetts economy has been widespread, cutting across most industries, occupations, and regions of the state. At present it is difficult to predict the effects of the stimulus bill on job growth within the state’s economy because each job that it creates directly will create additional jobs indirectly.

In the end, the state’s recovery will depend largely on whether the national economy can continue to grow after the stimulus program ends. The Massachusetts economy will also

be affected by other factors such as: federal support for biotechnology R&D, health care and finance reform; and the trade deficit, and the strength of the dollar.

A weak dollar, will help the state's software developers and high tech manufacturers by making their products less expensive overseas.



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