

Prospects for the Northeast Region



DO MODEST GAINS SIGNAL PROGRESS AFTER MANUFACTURING AND HIGH-TECH SLUMPS?

The Commonwealth's northeast region comprises 43 cities and towns, including several of its earliest industrial powerhouses and many of its newest high-tech/knowledge sector leaders. Bordered on the north by New Hampshire and running to the ocean as far south as Marblehead, the region is home to three high-tech corridors along Routes 128, 495 and 3. Eight years ago the following appeared in these pages: "The Northeast region combines a strong economic engine" with the "relative ease and affordability of suburban life [*Massachusetts Benchmarks*, Spring, 1999]." Then, the region maintained a concentration of high-tech manufacturing jobs well above the state average and that paid relatively well.

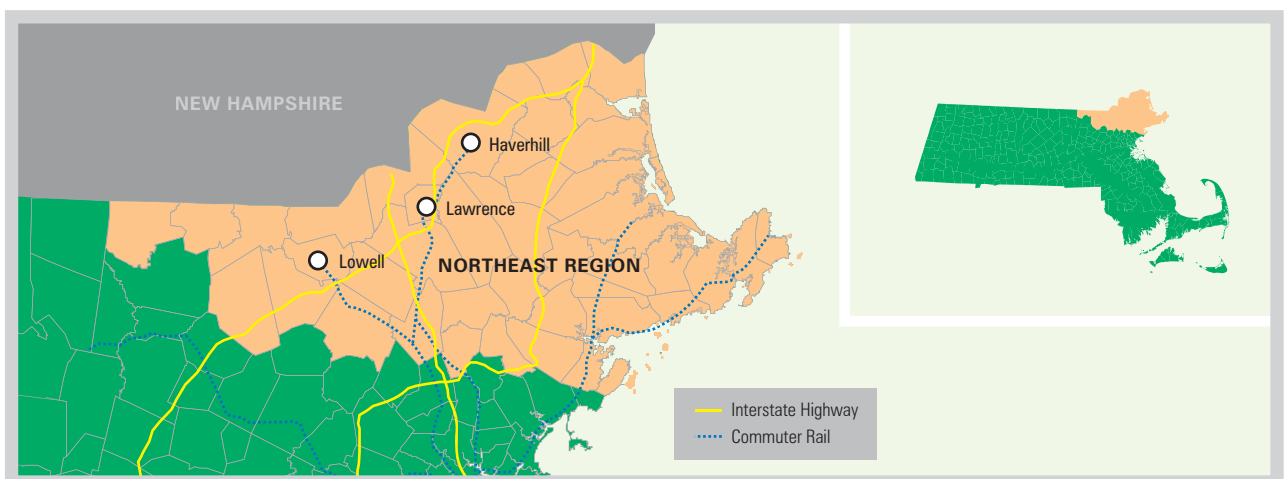
The bigger picture back then was not so optimistic and there are danger signs on the horizon today, including skyrocketing home foreclosures and the loss of thousands of well-paying jobs. This has forced many families in the region to work two and three low-paying jobs to make ends meet.

Especially in the region's older mill cities where traditional manufacturing — metalworking, apparel, shoes, and textiles — had been a core employer, overall employment declined severely between 1985 and 1999 and has not yet recovered. Modest employment growth has occurred mainly in suburban industrial parks, inaccessible to people without cars in older mill cities where most work had disappeared.

What's going on right now?

So, where are we in early 2007? Population in the Northeast region grew approximately 1.6 percent since 2000 — hardly robust, but better than the Commonwealth's anemic 0.8 percent growth over the same period. Like the state, the region's unemployment rate rose as a result of the 2001 recession. Compared to the state, however, the region's unemployment rose more sharply and has barely recovered over the last three years. Massachusetts and the region had identical 2.7 percent unemployment rates in 2000; by 2003 the region's rate reached 6.4 percent and the state's 5.8 percent. In July of 2007 the state rate was 5.2 percent compared to 5.3 percent in the Northeast region.

High rates of unemployment and slow recovery from the recession demonstrate how dependent the Northeast



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region was upon the success of fickle high-tech industry segments. The concentration of those industries along Interstates 495, 93 and 95, coupled with the growth of outsourcing and high-tech contract manufacturing outside of the Commonwealth, made the region particularly susceptible to economic suffering after the telecommunications equipments and software bust.

According to Dr. Edward March (a former top executive at Lucent Technologies in North Andover and now affiliated with the University of Massachusetts Lowell's Center for Industrial Competitiveness), past employment trends can be likened to "falling off a cliff." Computers, electronics, and telecom equipment supported steady employment growth from the early 1980s to about 1999, but then contract manufacturing took root in the industry. "Now," says March, "we are not seeing the thousands of jobs that were available. If I am a telecom equipment manufacturer, after I build the prototypes I can send the volume production off to China."¹

In other words, the high-tech bust alone cannot be blamed for regional employment decline. Outsourcing and contract manufacturing contributed to two of the biggest problems facing manufacturing employment in the region today: one, that jobs and investment capital are fleeing to locations where returns are expected to be greater; and two, that remaining jobs are more concentrated in sectors requiring very specific skill sets. While research and development capabilities have remained within the region, mass production is increasingly contracted out to firms anywhere in the world capable of manufacturing a diverse array of products at lower cost. "The barriers to entry into high-tech manufacturing operations" says March, "have dramatically reduced," removing the cachet once held by the Northeast region and in turn contributing to declining employment levels and intensified global competition.²

Whither employment?

After a sharp recession at the start of the new century, the region had fewer total jobs in 2006 (405,053) than it did in 2001 (425,742), a loss of more than 20,600 jobs. The regional unemployment burden has fallen disproportionately upon women (especially single mothers), young peo-

ple, and people without college degrees.³ Manufacturing jobs fell to 62,254 in 2006 from 87,559 in 2001, a loss of 25,305 jobs. Continued deindustrialization has in turn contributed to the loss of employment in related industries, with thousands of jobs lost in the Professional and Business Services sectors over the same period. Long a high-tech growth machine, the Northeast region appeared to be 'running on fumes' as 2006 closed.

In the Northeast, employment loss has brought increased homelessness, heightened income inequality, and sparked a startling rise in home foreclosures. As has traditionally been the case in the Northeast region, the old mill cities have suffered disproportionate economic losses while regional wealth remains concentrated in the suburbs. In December 2006 a website tracking foreclosures reported that Lowell had more foreclosed properties than all but five of the Commonwealth's 363 cities and towns. While the entire state suffered record high foreclosure rates in 2006, the Northeast region's cities were especially hard-hit. Lawrence, Haverhill, and Methuen were not far behind Lowell, each posting more foreclosures than 351 towns. Lowell and Lawrence each reported 2006 foreclosure rates more than double those of 2005.⁴

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The mini-me solution?

Amidst the negatives there are signs of progress and new possibilities for the regional economy. In 2006 life sciences firms in the Merrimack River Valley added a modest amount of jobs, and tech exports have surged statewide. According to one report, foreign sales of semiconductor manufacturing and testing equipment nearly doubled from late 2005 to late 2006.⁵ This is good news for the Northeast region, which despite recent hard times still maintains a higher-than-state-average concentration of firms engaged in the manufacture of computer and electronic products.

Compared to statewide figures, the Northeast region derives a significant employment and income from such high-tech manufacturing, with nearly 6 percent of total Essex County employment and 3 percent of Middlesex County employment (32,565 jobs in 2004) in this sub-industry. Though this is a far cry from the late 1980s peak, this regional manufacturing specialty may well be cause for optimism in coming years. A further glimmer of hope can be found in the fact that from 1998 to 2004, Essex County manufacturing employment loss and manufacturing's overall share of employment declined less sharply than the national averages. However, late 2006 cuts to state programs that provide technical assistance to small- and medium-size manufacturers could slow this very modest recovery.⁶

The Northeast region has recently begun to plan further investment in high-tech manufacturing. UMass Lowell is engaged in a site selection process to construct an \$80 - \$100 million nanotechnology research center it hopes will fuel substantial employment growth up and down the Merrimack River Valley. By some estimates the center could attract upwards of 10 new manufacturing plants to the region and generate 8,000 to 10,000 well-paying jobs. As the region struggles to recover from past high-tech slumps, it appears that nanotechnology could be an engine for long-term economic growth.

According to the National Science Foundation, products using nanotechnology will rack up global sales of \$1 trillion by 2015, and the Northeast region has the potential to take a piece of that pie. Lowell officials are hopeful that the center will be constructed on an available parcel of downtown land, spawning numerous service-related small businesses. Nanotechnology, best described as the science of very small things, is connected with several fields — including electrical engineering, chemistry, medicine, biology and physics — and has numerous product applications. Thirty countries and twenty-five states have 'nano' initiatives but UMass Lowell hopes to take the international lead in manufacturing new products and improving old products using nanotechnology. But before we break out the champagne, there are things to consider.

- The region's economic history is characterized by dramatic booms and busts in what were once 'leading technologies'. Because high-tech industries are susceptible to bigger booms and busts than other industries, too narrow a focus on one industry, as savior — no matter how good it looks — is risky.
- The Commonwealth's budget situation may hamper efforts to fully fund the UMass Lowell research center. With mounting global investment in nano research, the region could quickly lose any competitive advantage.
- Educated young people continue to leave the region for higher-paying employment elsewhere. A nanotech center alone is not likely to end 'brain drain'. Among other things, affordable housing, greater access to university science education, and major spending to improve high school science education are required to prepare the region's young people for whatever nano-jobs are created.

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Are start-ups the answer?

Spin-offs from UMass Lowell research are engaged in significant new product development in medical and energy areas. For example, Konarka Technologies produces lightweight, low-cost solar fabric, based on an idea that came from university research. The firm has secured venture capital and other funding and currently employs 37 people. University researchers are also engaged in numerous health-related projects that may fuel further biotechnology employment growth. However, this good news is tempered by the fact that Boston-area venture capitalists continue to place a substantial portion of their bets on start-ups outside of the high-tech Northeast region and out of the state completely.

According to a recent *Boston Globe* report, area venture capitalists spent 62.4 percent of their money outside the state in 2003 and nearly 70 percent in 2005. It is cause for alarm that Silicon Valley received \$1.9 billion in venture capital funds in 2005 (32 percent of the total) with New England a distant second with \$578 million (9 percent of the total). Texas, Metro D.C., and L.A./Orange County

were not far behind. Even near-neighbor Rhode Island has set its sights on luring biotech firms away from the Northeast region with its mix of biotech tax credits, more affordable housing, and ever-growing arts and culture scene.⁷

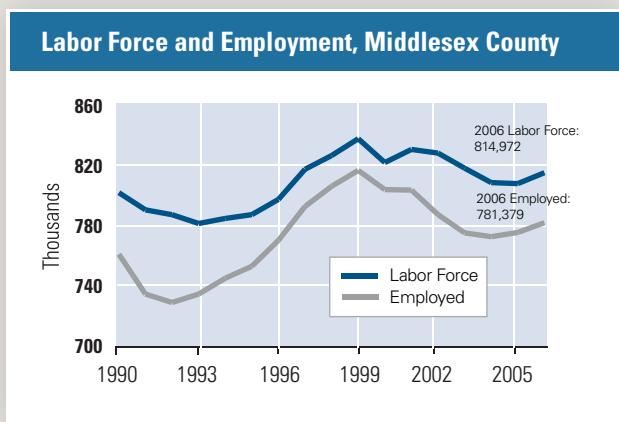
Could a housing crisis slow regional recovery?

Rising homelessness and foreclosure rates in the Northeast region are indicative of a mismatch between regional income levels and regional housing costs. Lack of affordable housing is one of the greatest contributors to the ‘brain drain’ phenomenon plaguing the region and state.⁸ A study released in December 2006 by MassInc concluded that from 2000 to 2005 nearly 233,000 people (3.6 percent of the population) left the state. The study found that “workers with bachelor’s degrees constituted the largest group of those leaving Massachusetts.” A sizable portion of the people who left the state once lived in the Northeast region.

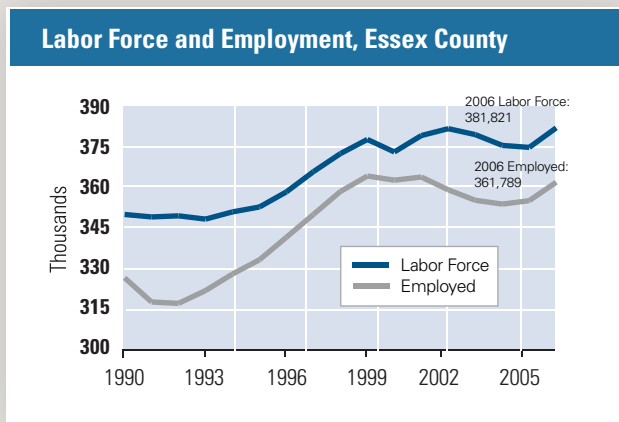
In 1999 there were almost 508,000 people in the region’s workforce; by December 2006 the figure was just over 495,308. According to Andrew Sum, director of Northeastern University’s Center for Labor Market Studies, “It’s not a good phenomenon for a state that is trying to foster faster job growth and meet the labor needs of firms that are trying to grow here. You’ve got to make sure you have sufficient numbers of workers, and when you lose that group, you’re losing part of your competitive advantage.” In other words, the region will not be able to sustain growth in high-tech (i.e., profitable) sectors if educated and skilled workers are forced out by high housing costs.⁹

Ted Semesnyei, economic and community development coordinator for the Merrimack Valley Planning Commission (MVPC), confirms Sum’s prognosis: “The high cost of housing is increasingly driving young people away, making it difficult to find qualified workers.”¹⁰ Absent an increase in affordable housing, firms interested

Northeast Region Indicators

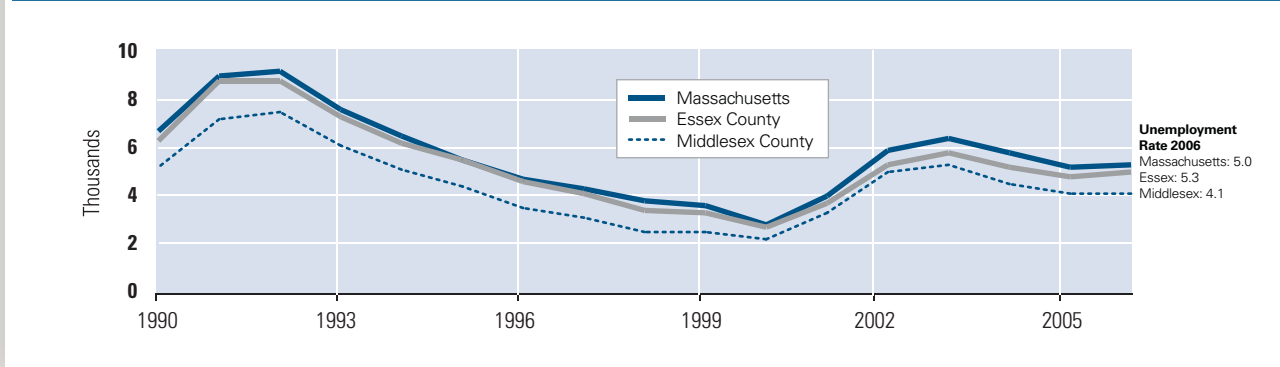


Source: Massachusetts Division of Unemployment Assistance (MA DUA), LAUS series



Source: MA DUA, LAUS series

Unemployment Rates: Massachusetts, Essex and Middlesex Counties



Source: MA DUA, LAUS series

in expanding in the Merrimack Valley will find it difficult to recruit workers to move here, while young people with science and technology degrees will continue to flee this harsh housing market for ‘warmer’ climates like North Carolina, Georgia, and Arizona. The Northeast region’s skilled workforce has long been a draw for high-tech employers, who in turn have kept the region’s economy afloat despite the decline of manufacturing. In order to ensure that financial capital does not flee the region, the out-migration of intellectual capital must be slowed.

Final thoughts from the field

In Lawrence, efforts are under way to transform part of the historic mill district for mixed-use development. The renovation of the Washington Mills Building, a woolen and cotton textiles factory constructed in 1886, is the centerpiece of an effort there funded in part by the Bank of America (BOA). The BOA also pledged a minimum of \$250,000

between 2007 and 2011 to two nonprofits — Lawrence Community Works and Groundwork Lawrence — to promote the construction of affordable housing. Close to \$200 million in private investment projects are also under way in the city. In Lowell, a task force appointed by the city manager is developing an affordable housing plan to ensure that working people can afford to live there, while the city is moving forward with plans to capitalize on the strong growth of several of its ‘creative economy’ measures.

Haverhill is making it easier for developers to build affordable rental units, using the Commonwealth’s new 40R program, which encourages development near public transportation. Nearby, the Merrimack Valley Economic Development Council (MVEDC) continues to work with the developers of the 157-acre site recently occupied by Lucent Technologies to develop what is now called Osgood Landing consistent with “smart growth and sustainable development principles.”¹¹

Employment by Industry, Essex and Middlesex Counties							
Industry	ESSEX COUNTY		MIDDLESEX COUNTY		PERCENT CHANGE 2001 – 2006		
	2006	% Total	2006	% Total	Essex	Middlesex	MA
Arts, Leisure and Hospitality	29,088	9.8%	61,542	7.7%	1.6%	4.4%	5.8%
Construction	14,235	4.8%	37,744	4.7%	10.6%	-7.4%	0.6%
Education & Health Services	72,323	24.4%	179,906	22.5%	6.9%	8.6%	7.8%
Financial & Real Estate	13,420	4.5%	35,134	4.4%	13.1%	-2.3%	-1.7%
Information	6,890	2.3%	37,362	4.7%	-26.4%	-21.8%	-20.9%
Manufacturing	45,226	15.3%	87,140	10.9%	-22.8%	-25.9%	-23.1%
Natural Resources & Mining	723	0.2%	2,057	0.3%	-12.2%	23.0%	6.7%
Other Services	11,722	4.0%	25,308	3.2%	10.9%	-2.1%	8.0%
Professional & Business Services	36,276	12.2%	167,947	21.0%	2.5%	-5.9%	-2.6%
Public Administration	11,670	3.9%	23,895	3.0%	-2.2%	-1.7%	-5.4%
Trade, Transportation & Utilities	54,966	18.5%	141,783	17.7%	-5.9%	-7.4%	-4.3%
Total, All Industries	296,539	100.0%	799,819	100.0%	-3.1%	-5.9%	-2.5%

Source: MA DUA, ES-202 series *2006 numbers are provisional, based upon quarterly reports

Cumulative Estimates of the Components of Population Change: April 1, 2000 to July 1, 2006								
	Total Population July 1, 2006	Total Population Increase Since April 1, 2000	Percent Change	NATURAL INCREASE			NET MIGRATION	
				Births	Deaths	Total	Net International Migration	Net Internal Migration
Massachusetts	6,437,193	88,096	1.39%	499,440	349,448	149,992	200,155	-289,967
Essex County	735,958	12,539	1.73%	59,358	40,814	18,544	18,451	-22,234
Middlesex County	1,467,016	1,620	0.11%	115,544	71,166	44,378	66,138	-112,742

Source: Population Estimates Program, U.S. Census Bureau

For the MVPC's Semesnyei, the region's location remains a strength, along with its diversity of urban, sub-urban, and rural settings and the existing stock of still-underutilized mill buildings. To boost sustainable growth he suggests that the region "increase funding for workforce retraining and establish stronger links between traditional high schools, vocational schools, two- and four-year colleges, and the business community."¹²

As the region has relied upon high-tech manufacturing and services to mitigate the inevitable effects of deindustrialization, it is essential to support those industries. This need not take the form of a series of "business-friendly" policy concessions that sap social spending, especially in a region where income inequality starkly divides urban from suburban municipalities. Continued investment in the region's skill base through K-12 and higher education funding will provide high-tech industries with the workforce that they need to be competitive in the global market. At the same time, continued support for the region's numerous arts and culture efforts is an essential part of a larger effort to diversify the regional economy and take full advantage of the Northeast's rich and growing creative economy.

Finally, while the Northeast region's excellent colleges and universities will continue to turn out graduates with strong technical (and other) skills, it is uncertain that young people will stay in the region or the state. The region's competitiveness will depend upon its capacity to maintain employment in innovative sectors by cultivating its greatest asset, a well-educated workforce able to live comfortably in the region. High housing costs are forcing talented graduates to seek employment in states with lower costs of living. Nothing would help the region more than greater investments in training and education along with development of more affordable housing. This is essential to ensuring sustainable social and economic growth in the future.

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ENDNOTES

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