



Mass Economy: the Labor Supply and Our Economic Future

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10 YEARS

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MARKET STUDIES

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MassINC is a non-partisan, evidence-based organization. We reject rigid ideologies that are out of touch with the times and we deplore the too-common practice of partisanship for its own sake. We follow the facts wherever they lead us. The complex challenges of a new century require a new approach that transcends the traditional political boundaries.

MassINC is a different kind of organization, combining the intellectual rigor of a think tank with the vigorous civic activism of an advocacy campaign. Our work is organized within four Initiatives that use research, journalism and public education to address the most important forces shaping the lives of middle-class citizens:

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- **Lifelong Learning**—Building a ladder of opportunity through the continuum of learning
- **Safe Neighborhoods**—Creating crime-free communities for all
- **Civic Renewal**—Restoring a sense of “commonwealth”

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MassINC has a long history of work within this initiative. Past research projects include: *The Changing Face of Massachusetts* (2005), *The Graying of Massachusetts* (2004), *Mass.Commuting* (2004), *Mass.Migration* (2003), *The State of the American Dream in Massachusetts, 2002* (2002), *The Changing Workforce: Immigrants and the New Economy in Massachusetts* (1999), *The Road Ahead: Emerging Threats to Workers, Families, and the Massachusetts Economy* (1998), and *Lessons Learned: 25 Years of State Economic Policy* (1998). Articles in *CommonWealth* magazine include: “Blue Collar Blues” (Spring 2004), “Job (Dis)Qualifications” (Fall 2003), “Mass. Production” (Summer 2003) and “Life After Lucent: A region tries to adjust” (Winter 2002).

All of MassINC's research and *CommonWealth* articles are available free-of-charge through our website, www.massinc.org.

Mass Economy: the Labor Supply and Our Economic Future

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December 2006

Dear Friend:

MassINC is proud to present *Mass Economy: The Labor Supply and Our Economic Future*. This joint project with the Center for Labor Market Studies was made possible by the generous support of The Boston Foundation, Harvard Pilgrim Health Care, Mellon Charitable Giving Program/Alice P. Chase Trust, Merrimack Valley Economic Development Council, Inc., and Serono, Inc.

Our state's highly skilled work force is rightfully a source of pride. This research assesses the health of the state's supply of labor, both now and into the future. A key question is whether the state has an adequate supply of qualified workers to fuel our next round of economic expansion. In recent years, when the national economy began to recover from the recession of 2001, the US labor force expanded, as would be expected. In all of the other New England states, their labor forces have expanded as well in recent years. In sharp contrast, the Massachusetts labor force has not grown at all since 2000, even though the state started adding jobs in 2004.

The state's stalled labor force is a result of two very different trends. The first is the continuing out-migration that our state has faced in recent years. Since 2000, more than 200,000 people, on net, have left the Bay State. Relative to our state's population, this level of out-migration is the 2nd highest in the nation, trailing only New York. As other MassINC research has documented, out-migrants tend to be young, well-educated managers and professionals who work in the knowledge economy. The challenge for policymakers is twofold. Strategies to boost job creation are central to stem the future flow of out-migrants. Policymakers should seek ways to make it as easy as possible for people to put down roots in our state, with particular attention to affordability and quality-of-life issues.

The second trend is declining participation rates. A large number of men, especially those with limited education, are neither working nor actively looking for work. From 1989 to 2005, the share of working-age men participating in the state's labor force dropped from 77.7 percent to 72.8 percent. This decline occurred even during strong economic times, suggesting a structural mismatch between available jobs and willing workers. Good-paying jobs for those without college degrees or advanced skills have become considerably harder to find, and more so in our state than in other parts of the nation. A consequence of the New Economy appears to be men with limited education, but still in their prime working years, withdrawing from the labor force. Their withdrawal has contributed to steep declines in the earnings of men without advanced degrees and has also led to rising income inequality in the state. A comprehensive strategy to retrain people for the New Economy, preferably before they lose their jobs, is needed. The human, fiscal, and economic costs of not doing so are enormous.

We are extraordinarily grateful to our partners: Andrew Sum and his colleagues at Northeastern University. In this project, as in all of their work, they have gone well beyond the call of duty, and in doing so, they have broadened and deepened our understanding of the Massachusetts economy and of the critical challenges ahead. On the MassINC team, Dana Ansel, our talented research director has led this important—and complicated—project. We would also like to thank the many reviewers whose critical insights have strengthened this report.

Finally, we would like to thank all of our sponsors who have been generous and enthusiastic partners throughout this project. They have been ideal sponsors, encouraging the authors to go where the data led them. MassINC aims to inject solid, objective research into public policy debates, and to that end, we hope that you find *Mass Economy* a provocative and timely resource. We invite you to become more involved in MassINC, and we welcome your feedback.

Sincerely,



Ian Bowles
President & CEO



Peter Meade
Chairman

Mass Economy: the Labor Supply and Our Economic Future

TABLE OF CONTENTS

Executive Summary	5
Key Definitions	5
Key Findings	6
I. Introduction and Overview of the Report	19
II. The Massachusetts Labor Force	30
III. Trends in the Working-Age Population and Outmigration	40
IV. Trends in Labor Force Participation Rates	55
V. Labor Underutilization Problems	85
VI. The Absence of Labor Force Growth: Should We Be Worried?	91
VII. The Projected Outlook for Labor Force Growth in Massachusetts, 2005-2015	97
VIII. Summary of Key Findings	109

EXECUTIVE SUMMARY

The workers of Massachusetts attract businesses from around the nation and the world. With few natural resources, the state's competitive advantage lies with its skilled workforce. Nearly one out of every three adults in Massachusetts (32.9%) has a four-year college degree or higher, compared with a national average of only 23 percent. Massachusetts is the top state in the nation in terms of the share of its working-age residents with a bachelor's or higher degree.

At the same time, Massachusetts has a chronic labor supply problem. It has been most evident during times of economic growth. Within the last decade, labor shortages in some fields have underscored the consequences of an inadequate supply of workers. But, even today, low unemployment rates only serve to disguise the underlying economic problem of workers in short supply. Today, the most recent data indicate that the state's economy is strengthening, outperforming the growth rate of the national economy.¹ The question is: Does the state have a sufficient supply of qualified workers to fuel the state's next round of economic growth?

A growing labor force is often a key indicator of a healthy economy. The availability of jobs and the availability of workers are integrally related. As an expanding economy attracts workers, a sluggish one spurs residents to consider opportunities elsewhere. On the other side of the equation, the availability of workers, especially ones with high levels of education and skills, creates a desirable environment for employers. If employers expand their operations and new employers locate to take advantage of skilled workers, the economy grows, creating more opportunities. Conversely, an inadequate supply of workers tends to make a place less attractive and deters employers from opening

new facilities or expanding existing operations.

Drawing on both historical data and the most current information available, this research report raises questions about the health of our state's labor supply.² We analyze the causes of the state's stalled labor force, placing recent trends in historical and regional context, in order to highlight a range of policy options. We also look forward, showing how the state's future supply of workers will depend on successfully incorporating more older workers and immigrants into the workforce as well as stemming the high levels of domestic outmigration.

Specifically, we find that the state's labor force has not grown at all over the last five years—the only state in New England that has not seen its labor force grow.³ Since 2000, jobs and workers

KEY DEFINITIONS:

Labor Force – Includes all people of working age (16 and older) who are working or actively looking for work (Employed people + Unemployed People = Labor Force).

Labor Force Participation Rate – The share of people in a given population subgroup who are either working or actively looking for work.

Out-migrant – A person who moved from Massachusetts to any of the other 49 states or the District of Columbia.

Out of the Labor Force – Those people who are not currently working or actively looking for work. The reasons that people are out of the labor force vary, with some out by choice and others out involuntarily.

Unemployed – Those people actively looking for work and available to accept a job. The precise definition of unemployed varies slightly, depending on the data source.

Working-age Population – All people 16 years of age and older.

have been negatively reinforcing each other in our state. During this time, our labor force grew slightly but then shrunk over the past three years, wiping out all of the gains, and the state is down 150,000 payroll jobs from the peak of the previous

force, while Massachusetts has not. The fact that the nation's labor force is growing, as are the resident labor forces of other states in the region, raises important questions about the reasons that Massachusetts is not attracting or retaining workers. Two very different trends help to explain our state's stalled workforce. First, a substantial number of workers have left our state for other states. Previous MassINC research has documented that migrants typically tend to be young, well-educated managers and professionals who fuel the state's knowledge economy.⁴ The second trend is that male workers, especially those with limited education, have stopped working in large numbers and are not actively looking for work. In large

A GROWING LABOR FORCE IS A KEY INDICATOR OF A HEALTHY ECONOMY

economic boom in early 2001. In this, the experience of Massachusetts sharply contrasts with the nation and the other New England states.

Over the past five years, all of the other New England states have added workers to their labor

KEY FINDINGS:

- From 2000 to 2005, the Massachusetts resident labor force did not grow at all, while the national labor force grew by nearly 5%. On this measure, Massachusetts ranked 48th lowest among the 50 states.
 - In the most recent three years (2003-2005), the Massachusetts labor force contracted by 1.7%, and it was the only state in the nation to decline each year during this time period. The nation's labor force expanded by 3.1%.
 - Within Massachusetts, the local labor forces declined in Norfolk, Middlesex, and Suffolk counties (-38,600 workers) between 2000 and 2005. The increases in the 10 smaller counties were not enough to offset these losses in Greater Boston.
 - Since 2000, the labor force experiences of Massachusetts have contrasted sharply with the rest of New England. The Massachusetts labor force was the only one not to grow, while the labor forces in all the other New England states grew between 4.6% (CT) and 6.0% (VT).
 - From 2000 to 2005, the state's working-age population increased by 94,000, or 1.9%, while the nation's increased by 6.4%.
 - Massachusetts had the highest share in the nation of its working-age population with a bachelor's or higher degree (32.9%), compared with the national average of 23.4%.
 - From 2000 to 2005, the state lost, on net, 233,000 residents to other states. In relative terms, the state lost 3.6% of its 2000 population.
- Relative to our state's population, this level of outmigration was the 2nd highest in the nation, trailing only New York.
- Since 2000, there has been no increase in the number of in-commuters from neighboring states, indicating that the people who leave for neighboring states are not continuing to work in Massachusetts.
 - In 2003-04, the top five destinations for outmigrants were Florida, New Hampshire, Texas, Connecticut, and Rhode Island. The state is primarily losing adults in their prime working years and their families, not retirees. Outmigration was particularly high among 16-24-year-olds and 35-54-year-olds. In 2004, the state lost, on net, 18,000 people with a bachelor's degree or higher.

part, these men's withdrawal from the labor force is a consequence of structural changes in the job market, leaving limited economic opportunities for those without a college degree. This trend is occurring nationally but even more so in our state. These two trends, which have different consequences and policy implications, have combined to severely limit the state's supply of workers.

A Stalled Labor Force

From 2000 to 2005, there was no growth in the state's resident labor force, while the nation's labor force grew by nearly 5 percent. In 2000, the estimated size of the Massachusetts labor force was 3,365,600 workers; in 2005, it was

3,364,500 workers. Moreover, during this time, the number of people who were unemployed increased by 70,000 people, while those who had jobs declined—both are included in the labor force estimates.

What is most striking is the trend over the last three and half years, when the national economy began to add jobs, recovering from the recession of 2001. A growing labor force typically accompanies a recovering economy, as more people enter the job market either working or actively looking for jobs. The nation's labor force expanded by 3.1 percent during this period. In sharp contrast, from 2003 to 2005, the size of the Massachusetts labor force is estimated to have

- Between 2000 and 2004, net out-migration from Greater Boston (Middlesex, Suffolk, and Norfolk counties) accounted for nearly all (99%) of the state's net outmigration, which is associated with the high levels of payroll job losses.
- Between 2003 and 2005, Massachusetts exported 120,000 workers to other states.
- In 1989, 68.9% of the state's population (16 and older) was active in the labor force, meaning they were either working or actively looking for work. This participation rate represented an all-time high. In 2005, the state's participation rate was 66.9%, only slightly higher than the national average of 66.0%. Massachusetts ranked 30th highest in the U.S. on this measure of labor force attachment.
- Each one-percentage-point increase in the state's participation rate would have increased the size of the labor force by slightly more than 50,000 workers in 2005. If we had matched our 1989 participation rate, the state would have had an additional 100,000 workers.
- The decline in the state's labor force participation rate over the last 16 years is almost entirely a result of the behavior of males. The participation rate of women has been roughly constant over this time period. In contrast, the male participation rate dropped from 77.7% in 1989 to 72.8% in 2005.
- Among men of prime working age, labor force participation declined in each educational attainment group. Since 1990, the steepest drops were among males without a high school diploma (-10.3 percentage points) and those with no post-secondary education (-6.7 percentage points).
- Fewer teens and young adults, especially those who are low-income and/or minorities, are working. For instance, fewer than one-third of young high school dropouts (31.4%) had any type of job. Massachusetts ranked 6th lowest among the 50 states on this measure.
- The participation rate for four-year college graduates in 2005 was 77.6%. If Massachusetts had matched the average participation rate of the top five states, there would have been 90,000 more workers with a bachelor's degree or higher in our labor force in 2005.

contracted by 1.7 percent. Even as the state started adding jobs in 2004, its labor force has not expanded. This does not bode well for sustaining our recent growth. Massachusetts was the only state in the nation to experience a decline in the size of its labor force over each of the last three years. The most recent data suggest that the state might be heading for its fourth consecutive year of a shrinking labor force, which would be un-

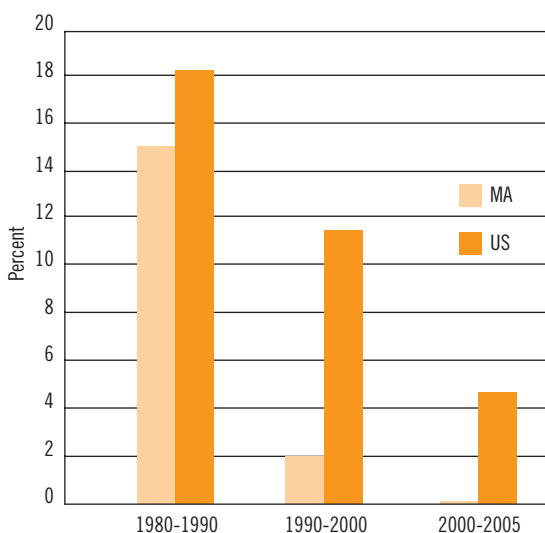
EVEN AS THE STATE STARTED ADDING JOBS IN 2004, ITS LABOR FORCE HAS NOT EXPANDED

precedented for Massachusetts in the post-World War II era.

There are differences in local labor force developments within the state. In ten of the state's 14 counties, the local labor forces have grown since 2000. Leading the state were the two small island counties, Nantucket and Dukes County, where the labor forces grew by 10.0 percent and 8.3 percent, respectively. In Barnstable County, the labor force increased by 6.9 percent. In sharp contrast,

ES Figure 1:

Labor Force Growth



according to the current estimates, the labor forces in the three counties that approximate Greater Boston—Middlesex, Suffolk, and Norfolk counties—contracted. Together, the labor forces of these three counties shrank by 38,600 workers, a loss large enough to offset the growth in the state's other less populous counties.⁵ Even more telling was the decline in the number of employed people in Greater Boston, a consequence of the steep declines in the number of payroll jobs. From 2001 to 2005, the number of employed workers in Greater Boston fell by more than 64,000 people, or nearly 4.5 percent.

To some extent, this is nothing new. Historically, our state has lagged the nation in terms of labor force growth. In the 1990s, the Massachusetts labor force grew by only 2 percent, and the state ranked 47th lowest among the states in its labor force growth. Still, Massachusetts primarily achieved major economic expansion in the 1990s by increasing labor productivity, which is measured as real output per hour of work. By the end of the 1990s, Massachusetts ranked third highest among the 50 states on labor productivity. The prosperity of this decade, however, was not widely shared, and the gains went disproportionately to those families with the highest incomes. An economy based on increasing productivity clearly had success, but it is somewhat risky to be solely dependent on increased productivity for economic success, particularly for achieving a broad-based prosperity.

And in the 1990s, Massachusetts was not alone in terms of its slow-growing labor force. Three of the four slowest growing states in the nation were in New England—Connecticut, Massachusetts, and Rhode Island. The other state was our western neighbor, New York. This finding is important in several respects. First, it suggests that what was happening in Massachusetts in the

1990s was part of a larger regional dynamic. In addition, it means that Massachusetts is unlikely to be able to expand its labor force today by attracting workers from neighboring states, since they too are facing similar demographic challenges. In the northern tier of states, young workers will be in short supply over the coming decade.

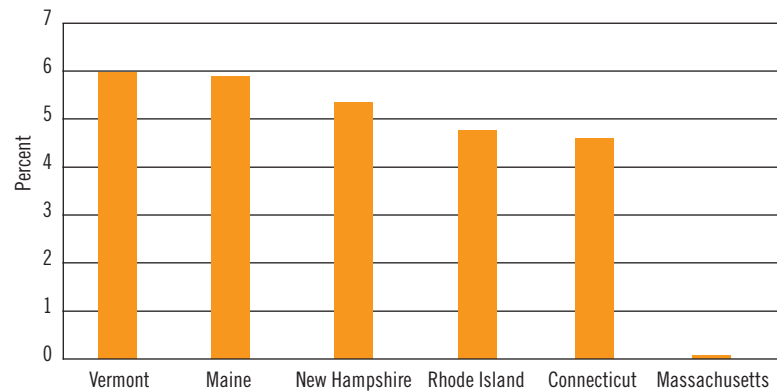
Since 2000, however, the experience of Massachusetts stands in sharp contrast with those of the other New England states. Between 2000 and 2005, each of the five other New England states expanded their labor forces, ranging from a growth rate of 4.6 percent (Connecticut) to 6.0 percent (Vermont). Note that even Connecticut, which had slower labor force growth than Massachusetts in the 1990s, grew by 4.6 percent. And, in the first five months of 2006, the labor forces have grown everywhere else in New England. The key factor underlying these differences in recent years is the level of outmigration. Other New England states have not had large numbers of people leave their states as Massachusetts has. The high levels of outmigration raise important questions about the attractiveness of Massachusetts as a place to live and work.

The Working-age Population

Three factors determine the size of a state's resident labor force: 1) the size of the working-age population (16 years and older); 2) its demographic characteristics, such as age and education; and 3) the rate at which people participate in the workforce. The size of the state's working-age population represents the pool of potential workers. The working-age population in Massachusetts has grown at a slower rate than the nation's since 1960. However, the gap in the relative growth rates of the state and nation has widened over time. In the most recent five years, the state's working-age population increased by 94,000 potential workers,

ES Figure 2:

Growth Rates of the Resident Labor Force of Each New England State Between 2000 and 2005



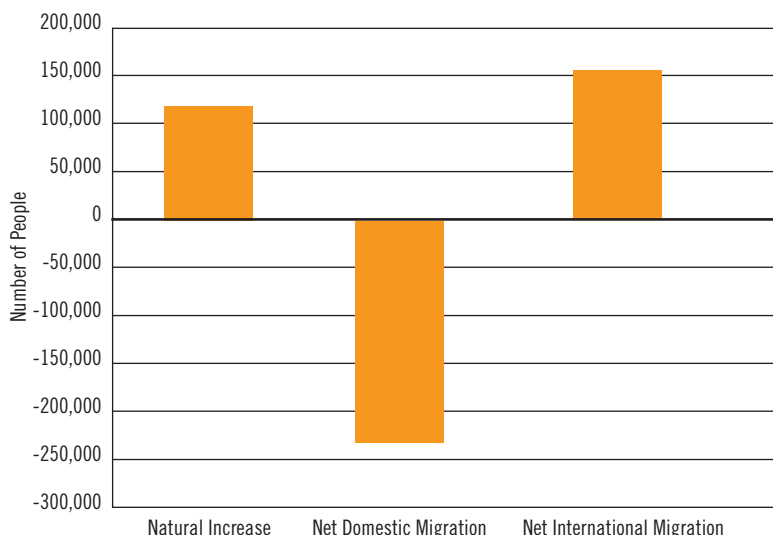
or 1.9 percent. Nationally, the working-age population expanded by 6.4 percent.

The working-age population is ultimately a function of a state's overall population.⁶ The growth of a state's overall population is determined by: 1) natural increases, or the difference between the number of births and the number of deaths; 2) net domestic migration, which is the difference between the number of people who move to Massachusetts from other U.S. states and those who leave Massachusetts for other states; and 3) net international migration, which is the difference between the number of immigrants who enter Massachusetts from abroad and those who leave it to live abroad.⁷

On two of these three measures, Massachusetts has experienced net-positive changes. Over the past five years, there have been more births than deaths in Massachusetts, which adds to the state's overall population, and there has also been a net gain of nearly 154,000 immigrants. Since a substantial number of the new immigrants are of working age and the likelihood of immigrant males working is quite high, these new immigrants have bolstered our state's workforce.⁸ While some immigrants are highly skilled, pre-

ES Figure 3:

Components of Change in the Population of Massachusetts, 2000-2005



ES Table 1:

Characteristics of Working-Age In and Out-Migrants from Massachusetts by Educational Attainment, 2004

	IN-MIGRANTS	OUT-MIGRANTS	NET DOMESTIC OUT-MIGRATION
No high school diploma	4,765	12,609	-7,844
H.S. diploma/GED	13,768	27,195	-13,427
1-3 years of college	13,917	35,256	-21,339
B.A. degree	29,258	40,754	-11,496
Master's or higher	18,270	24,703	-6,433

Source: 2004 American Community Surveys, public use files.

vious MassINC research, *The Changing Face of Massachusetts*, has documented that many new immigrants have limited education and language skills, and thus face a number of challenges in being able to fully engage in the Massachusetts economy. At the same time, Massachusetts continues to be plagued by large numbers of people leaving the Bay State for other states. Their departure is constraining the size of the state's supply of workers. Between 2000 and 2005, Massachusetts lost, on net, 233,000 people to other states.

Voting with Their Feet: Outmigration

Every year since 1990, Massachusetts has been a net exporter of people to other states.⁹ Although the state lost more residents than it gained even at the height of the economic boom, job growth (or decline) is a major determinant of the levels of migration. In recent years, related to the sharp decline in payroll jobs from 2001 to 2003, the state lost a large number of residents. In absolute terms, a loss of 233,000 people is quite significant. But, its significance is even more evident when considered relative to the state's overall population. From 2000 to 2005, 3.6 percent of the state's 2000 population chose to leave our state. Only New York experienced a higher level of net outmigration in relative terms.

Within the state, nearly all (99%) of the net outmigration was from Greater Boston (Suffolk, Middlesex, and Norfolk counties) between 2000 and 2004, according to IRS records. In Greater Boston, the rate of net domestic migration was 9.5 per 1,000 people, which was the third highest rate in the country.¹⁰

The sheer number of people leaving our state distinguishes Massachusetts from the rest of New England. In three New England states—Maine, New Hampshire, and Vermont—more people chose to move in than to move out. Indeed, New Hampshire gained 40,861 people, boosting its population by 3.3 percent. Although Connecticut and Rhode Island both lost more people than they gained during this period, the sizes of their losses relative to their population were much smaller than in Massachusetts.

In 2004, the top destinations for people leaving the Bay State were Florida, New Hampshire, Texas, Connecticut, and Rhode Island.¹¹ Many of the people leaving Massachusetts are workers and their families. More children and teenagers left Massachusetts than entered it, meaning that

Massachusetts families with children are leaving the state in sizeable numbers. In the single year 2004, 28,000 people under age 16 left Massachusetts, while 13,630 entered the state, leading to an overall loss of 14,370 people under the age of 16. There were also large losses of people between the ages of 35 and 54 years old. Overall, the state lost 29,033 in that age group in 2004. The state is also losing people at all education levels. Although the state attracts many people with advanced degrees, on balance, it lost 18,000 more people with a bachelor's degree or higher than it gained in 2004.¹²

The impact of the departure of these people on our workforce is substantial. The vast majority of people who are relocating to our New England neighbors are not continuing to work in Massachusetts. Since 2000, because of the large job losses, there has not been an increase in the number of people commuting into Massachusetts for work from neighboring states. In addition, our analysis of out-migrants who were active participants in the state's labor force finds that the overwhelming majority of workers leaving our state (88%) actually left the New England region, and, thus, are unlikely to be available as workers for Bay State companies. Between 2003 and 2005, Massachusetts exported 120,000 workers to other states.

Losing Men: Labor Force Participation

The rate at which people participate in the labor force is critical in determining the size of the labor force. That is, of all the potential workers, how many choose to work or are actively looking for work? We can divide all potential workers into two categories: 1) people who are working or are actively looking for work and 2) people who are out of the labor force. The reasons that people are out of the labor force vary. Some people are out

of the labor force by choice and others are out involuntarily. Some do not want to work, but others are so discouraged that they are no longer actively looking for work. Of the former, some are full-time students; others are unable to work because of physical or mental disability. Of those who are out of the labor force, some would not enter the workforce for any wage, but others could potentially be drawn back into the workforce under the right circumstances and with

ONLY NEW YORK EXPERIENCED A HIGHER LEVEL OF OUTMIGRATION BETWEEN 2000 AND 2005

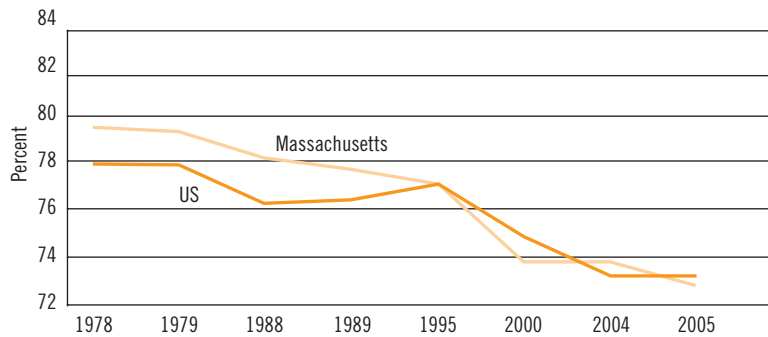
appropriate training and rehabilitation services. The education and skill levels of this population vary considerably. A disproportionate number of them have limited education and skills, but some have advanced degrees.

Labor force participation in Massachusetts hit an all-time high in 1989 when 68.9 percent of the state's population (16 and older) was in the labor force, working or actively looking for work. During the 1990s, however, the participation rate declined, despite record low rates of unemployment at the end of the decade. By 2000, the participation rate was 67.4 percent, and in 2005, it had declined slightly further to 66.9 percent. This drop in the participation rate, while it might seem small, actually has a large impact on the size of the state's labor force. Each percentage point decrease in the state's participation rate decreases the state's labor force by approximately 50,000 workers. If Massachusetts had matched its 1989 participation rate, the state would have had an additional 100,000 workers in 2005.

The overall participation rate of workers in Massachusetts is slightly higher than the national average, which was 66.0 percent in 2005. Our

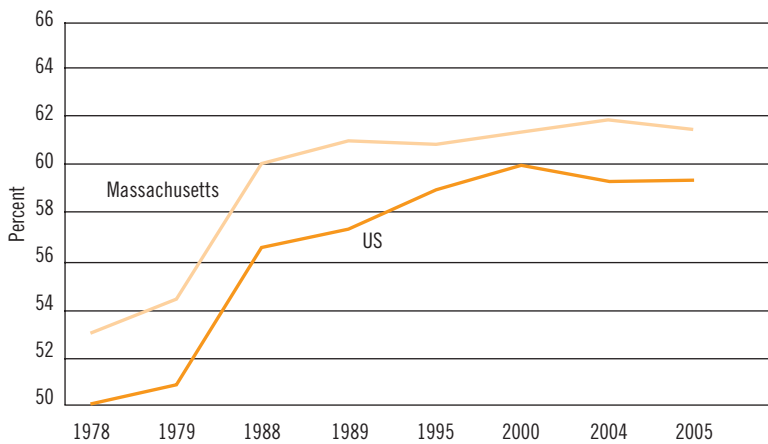
ES Figure 4:

Trends in the Labor Force Participation Rates of Men (16+) in Massachusetts and the U.S. (Annual Averages)



ES Figure 5:

Trends in the Labor Force Participation Rates of Women (16+) in Massachusetts and the U.S. (Annual Averages)



relative ranking, however, has declined significantly over the last 15 years. In the peak year of 1989, Massachusetts ranked 19th highest in the nation in its labor force participation rate. Since then, as the participation rate has declined, so has the state's ranking. In 2005, the state ranked 30th in the nation.

The decline in the state's labor force participation rate over the past 15 years is almost entirely a result of the behavior of males. As more women entered the workforce in the 1970s and 1980s,

the participation rate of women increased substantially but has remained roughly stable since about 1989. In 2005, 61.5 percent of all adult women in Massachusetts participated in the state's labor force, either working or actively looking for work. In sharp contrast, the behavior of men has changed considerably over the past 15 years. During the 1990s and continuing today, a substantial number of prime working-age men, especially those with limited education, have stopped working and are not actively looking for work. In 2005, only 72.8 percent of all men in Massachusetts were active members of the labor force, 4.9 percentage points lower than in 1989. While similar trends have occurred across the country, the decline in Massachusetts has been steeper (-4.9 percentage points vs. -3.1 percentage points).¹³

The withdrawal of men from the labor force is related to the state's changing economy. As the state's economy has shifted from a goods-producing to a service-providing economy, these structural changes have had profound impacts on the types of jobs and opportunities available to workers. The demand for workers has grown more rapidly in occupations dominated by college graduates. Consequently, workers with limited education have faced fewer job opportunities, especially in manufacturing, and substantial numbers have left the work force.

The changes in the structure of the job market have been affecting men more than women—even among those with comparable levels of education—partly because men were more entrenched in the blue-collar jobs that have disappeared and also because more of the job opportunities for those with limited education are in occupations dominated by women, such as retail trade and health care services. The participation rate for male high school dropouts dropped by

ES Table 2:

Trends in the Labor Force Participation Rates of 16-64 Year Olds in Massachusetts by Educational Attainment and by Gender, 1990-2000 (Excluding Students)

	MEN			WOMEN		
	1990	2000	PERCENTAGE POINT CHANGE	1990	2000	PERCENTAGE POINT CHANGE
No high school diploma	75.8	65.5	-10.3	53.5	51.9	-1.6
H.S. diploma/GED	89.6	82.9	-6.7	71.4	69.6	-1.8
13-15 years	91.9	88.2	-3.7	79.2	77.8	-1.4
Bachelor's degree	95.5	93.6	-1.9	83.3	81.1	-2.2
Master's or higher degree	96.2	94.4	-1.8	88.5	85.6	-2.9

10.3 percentage points during the 1990s. The withdrawal of men with limited education has implications for family formation, including a rise in single-parent families. In addition, their withdrawal has contributed to higher levels of income inequality and increased dependency on state and federal aid.¹⁴ With the state's economy at its peak in 2000, the continuing withdrawal of men from the state's labor force signals a serious and growing mismatch between workers and jobs. These challenges appear to be the most severe in the state's large urban centers, such as Boston, Springfield, Lawrence, Fall River, and New Bedford.

Still, there are other workers who could potentially be drawn into the state's labor force. The participation rates of adults vary considerably by their age and education levels. Participation rates rise rapidly from the teenage years to the early 20's and then decline from the early 50's onward, with steep declines after age 65. Massachusetts is below average with respect to the participation rates of many age groups and is not a leader in any age group. In particular, among teens, there have been sharp declines in the share of teenagers who were working. There are also substantial gaps in participation rates across income levels and

race and ethnicity, with poor and minority youth lagging far behind their more affluent counterparts. Research suggests that these declines in youth employment will likely have long-term effects on their earning potential and future employment, given the long-term importance of early attachment to the labor force.¹⁵

Adults with higher levels of education are more likely to be active participants in the labor force. In 2005, only 63.6 percent of the state's high school graduates were active participants in the state's labor market, while nearly 78 percent of the state's college graduates were. Still, if we compare the participation rates of Massachusetts residents by education level with those of other states, Massachusetts ranks quite low among all educational subgroups, except for those with a master's degree or higher. Among workers who hold a college degree, Massachusetts ranks 32nd in the country in its rate of participation. In 2005, 77.6 percent of Bay State residents who have a bachelor's degree were either working or actively looking for work, slightly below the national average of 77.9 percent. In some states, such as Minnesota, Iowa, Nebraska, and North Dakota, nearly 85 percent of residents with a bachelor's degree participated in the labor force. This find-

ing raises interesting questions regarding the reasons that Massachusetts residents with a college degree are not participating in the workforce. Although it is not clear how many of these college-educated people would enter the workforce for the right opportunity, a potential opportunity exists for employers to draw some number of college-educated workers who already live in Massachusetts into the labor force.

The State's Future Workforce

In the coming decade, the growth of the state's future workforce depends upon three critical factors: 1) incorporating more older workers into the workforce; 2) incorporating immigrants into the workforce; and 3) stemming the high levels of outmigration.

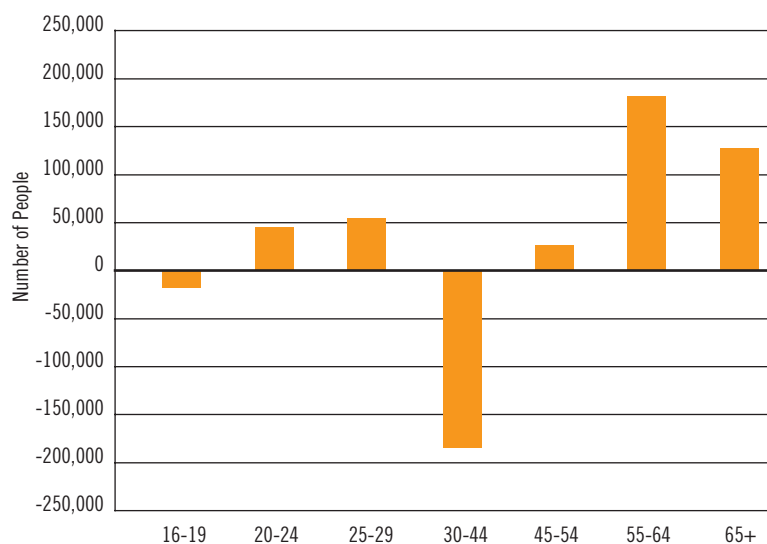
The aging of the baby boom generation (those born between 1946 and 1964) will strongly influence the future age distribution of the working-age population. Over the next decade, the number of people over 55 years old will increase substantially in our state. At the same time, the num-

ber of workers in what is considered the "prime working age years" (25-54 years old) is expected to decline. Thus, it appears that any growth in the state's labor force over the next ten years will be concentrated among older workers. In particular, between 2010 and 2015, the graying of the Massachusetts labor force will accelerate further. As previous MassINC research, *The Graying of Massachusetts*, has documented, although the stage appears to be set for older workers to emerge as a key source of labor for employers, a number of challenges still exist in order to capitalize on this opportunity.¹⁶

Second, immigrants will continue to be an important part of the state's future labor force. The state has been completely dependent on immigrants for its population and labor force growth over the past 15 years, and the next ten years appear to hold more of the same. Consequently, the state's ability or lack thereof to absorb new immigrants into the labor force will have significant implications for the workforce. On the positive side, new immigrants are more likely than the native-born population to be of working-age, and newer male immigrants are also more likely to participate in the workforce. Yet, as has already been noted, a relatively high number of new immigrants have limited education and English language skills, creating a number of challenges for them to fully engage in the Massachusetts economy.

A third factor is the rate of domestic outmigration. If the number of people leaving our state does not decrease, the state's working-age population will shrink and so will the size of the state's labor force. Consider that between 1995 and 2000, on net, Massachusetts exported 21,000 workers to other states. Between 2003 and 2005, Massachusetts exported 120,000 workers to other states. The level of outmigration, however, does

ES Figure 6:
Projected Changes in the Working-Age Population of Massachusetts
Between 2005 and 2015



appear to be moderating. In 2003, nearly 50,000 workers left the state. In 2005, that number declined to roughly 26,000 workers. Strategies to reduce outmigration and promote job growth will be critical to the state's future ability to grow its workforce.

Concluding Thoughts

Massachusetts has a chronic labor supply problem. In recent years, its labor force has grown at an anemic rate (in the 1990s) or not at all (2000-2005). With the Massachusetts economy picking up steam, a key question is whether there will be enough workers to fuel the next economic expansion. The stakes are high for the overall economic health of the state, but also for individual workers and their families.

The state's stalled labor force growth is a result of two different trends, which have different causes and affect different groups of workers. The first is the departure of a large number of people from Massachusetts to other states. Since 2000, more than 200,000 people, on net, have left the Bay State. The number of people leaving our state relative to our state's population is the 2nd highest in the nation, trailing only New York. Typically, out-migrants are young, well-educated managers and professionals who work in the knowledge economy.

The high levels of outmigration from Massachusetts raise important questions about the attractiveness of Massachusetts as a place to live and work, especially for those who have choices. Our highly skilled workforce is the state's competitive advantage, and the state can ill afford to lose large numbers of well-educated residents who help fuel the knowledge sector industries, the state's economic engine. These workers will seek the best opportunities. Patterns of migration closely follow the business

cycle, with many more people leaving during weak economic times in our state.

The challenge for policymakers is threefold. First, the recent high levels of outmigration are related to the high losses of payroll jobs. The state is still well below the job peak of 2001. Thus, strategies to boost job creation are central to the stem the future flow of outmigrants. In addition, the affordability of housing and quality-of-life issues are important to address. Policymakers should make it as easy as possible for people to lay down roots in our state, which will help deter them from leaving our state in the future. Finally, the state must also focus its attention on improving the skills of current residents of Massachusetts who have strong ties to the state and, thus, are less likely to leave. A greater urgency is needed in the effort to build their skills and education levels to help them share in the state's future economic prosperity, while also helping to fuel the state's economy.

The second trend is the large number of men, especially those with limited education, who are not working and are not actively looking for work. From 1989 to 2005, the share of working-age men participating in the state's labor force dropped from 77.7 percent to 72.8 percent. These declines occurred even during strong economic times and were the steepest among men with limited education. The same trends have happened elsewhere but the declines have been steeper in Massachusetts. As the industrial structure of the state economy has fundamentally changed, good-paying opportunities for those without college degrees or advanced skills have narrowed considerably, and such opportunities are even more limited in our state than in other parts of the nation.

Thus, a by-product of the new economy appears to be men with limited education withdrawing

from the labor force. Many of these men are in their prime working years. Their withdrawal from the labor force has contributed to large drops in their earnings and has also led to rising income inequality in the state. A comprehensive strategy is needed to help workers transition to the new economy. The focus should include both displaced workers and those at risk of being displaced. Research has actually found that intervening before workers become displaced is most effective in helping workers achieve a successful

A SUBSTANTIAL NUMBER OF MEN IN THEIR PRIME WORKING YEARS HAVE STOPPED WORKING AND STOPPED LOOKING FOR WORK

transition. Targeted efforts focused on education and skills, the keys to economic success, are critical. The human and economic costs of not doing so are enormous. Strategies should be developed that link increases in public spending to performance data.

More generally, there is a need for a more nuanced understanding of why some people are not actively engaged in the labor force. While disproportionately those with limited education, many people out of the labor force have some college or a college degree. To the extent that employers are seeking workers, there is an opportunity to draw more workers into the labor market. But, the current statistics cannot adequately distinguish between those out of the labor force by choice or those out involuntarily. The declining participation rate among all different types of workers creates an interesting opportunity for Massachusetts to expand its labor force by developing strategies to increase the share of people already living in this state to become

members of the workforce. Consider that the participation rate in some states is more than 70 percent, compared with 68 percent in Massachusetts. These states are more successful than Massachusetts in incorporating their residents into the workforce. Some insights could be gained by a closer look at practices of other states that are leaders in incorporating their residents into the labor force and setting ambitious goals for improvement. While this approach is novel, it is also low-cost and the payoff for such a strategy in Massachusetts could be significant.

Finally, there are three other groups of workers that merit attention: older workers, immigrants, and youths. Going forward, the state will be heavily reliant on older workers (55 and older) and new immigrants to expand its supply of labor. These groups offer real opportunities as future workers, but they present different sets of challenges. In the case of older workers, the structure of the workplace is typically not oriented to their preferences such as phased retirement and flexible work schedules. In addition, there are retraining issues for some older workers, particularly those who are dislocated. Because 55-and-older workers will become a considerably larger share of the workforce, these issues will take on a growing importance over the coming decades. The government should convene a summit meeting of public and private sector leaders to plan for this change.

The share of immigrants in the Massachusetts labor force has nearly doubled since 1980. In 2004, 17 percent of the state's labor force consisted of immigrants. While our state attracts many highly educated and skilled immigrants, it is also true that immigrants are more than three times as likely as native-born adults to lack a high school diploma. Significant challenges exist to successfully incorporating immigrants into our

workforce, particularly if they lack the essential English-language skills and formal schooling. In particular, the state's English for Speakers of Other Languages (ESOL) classes reach only a fraction of the immigrants in need of English language classes. In recent years, the waiting lists for ESOL classes have grown considerably, with roughly 20,000 people on waiting lists. The Legislature recently took steps to address this challenge by appropriating significant new money in 2006 for workforce development, Adult Basic Education, and ESOL classes. As taxpayers invest in these efforts, the state should systematically track the "return on investment." It is important for the state to take a leading role in expanding and reforming efforts to teach immigrants to speak English. But, at the same time, meeting this challenge will require more than simply increased government spending on ESOL classes. This long-term issue requires a comprehensive public/private strategy.¹⁷

For youths, we need to continue our efforts at helping them understand the changing education and skills requirements of the economy. Expanding internship and summer job opportunities will also help them develop their work readiness skills. Early attachment to the labor force is

critical to their long-term economic success. As the state's future workers, there is a clear need for workforce development policies that boost employment opportunities for disadvantaged teens and young high school dropouts.

The quality and quantity of the state's workforce is key to the state's future economic health. A highly skilled workforce is the state's competitive advantage, but having a sufficient number of workers is critical as well. Massachusetts is a leader in the education levels of its workforce, but we are losing workers overall, including well-educated young people. The loss of workers to other states and the withdrawal of prime working-age men from the labor force have reduced the future economic competitiveness of the state and heightened economic inequality. Ensuring an adequate supply of labor and broadening economic opportunity in our state will require several different strategies geared toward the challenges documented in this research report. The current state of Massachusetts' labor supply does not have to be indicative of its future labor supply. The time to address these challenges is now, before we are faced with large numbers of job vacancies, threatening the economic vitality of the state.

Endnotes

1. See "The Benchmarks Bulletin," *Mass Benchmarks*, October 31, 2006 and Gavin, Robert, "Mass. Economy Grows 3.4%, twice US Rate," *The Boston Globe*, October 28, 2006.
2. This research is based on a variety of national and state data sources, including the decennial Censuses, the monthly Current Population Surveys (CPS), the American Community Surveys (ACS), and the Local Area Unemployment Statistics (LAUS) program. These surveys use similar but not identical definitions of labor force activity. For instance, the decennial Census' definition of the unemployed differs slightly from that of the Current Population Surveys. Because of these differences, the numbers vary slightly, depending on the source, but the overall findings are not affected by these conceptual differences.
3. This estimate is based on the Local Area Unemployment Statistics (LAUS) program, which is considered the official labor force statistics for states. According to the Current Population Survey (CPS), the state's labor force grew slightly, adding 43,000 workers over this five-year period. While the precise numbers may vary, the larger trend of very limited labor force growth is accurate.
4. See Nakosteen, Robert, Michael Goodman, Dana Ansel, et. al. *Mass.Migration*. A joint project of MassINC and University of Massachusetts Donahue Institute, 2003.
5. It is possible that the Suffolk County labor force estimate might be revised at a later point, reflecting the revised City of Boston population estimates. While the precise numbers might change, the overall

trend will not change. The upward revised labor force estimates would not be enough to change the finding that the state's labor force contracted over the last three years.

6. Recently, the U.S. Census Bureau revised its population estimates for the City of Boston. Instead of losing population from 2000 to 2005 as had been previously reported, the City of Boston is estimated to have grown by 1.3 percent. This revised estimate does not directly affect the findings presented in this research, because they are based on different data sources and use different methodologies. At a later point, the Census will revise the state population numbers. But, while the specific population estimates will change modestly, the overall trends will not change substantively. Massachusetts ranks near the bottom of the nation in terms of population growth in recent years.
7. From 2000 to 2005, the state's overall population is estimated to have increased by slightly under 50,000 people or 0.8 percent. During this time, the population under 18 is estimated to have declined by 2.8 percent. The drop in the under 18 population is a result of the outmigration of families with children combined with the state's low fertility rates. In 2003, the fertility rate among women ages 15 to 44 in Massachusetts was 57.2 babies per 1000 women, well below the national average of 66.1. These low fertility rates are not completely surprising given the high levels of education that tend to correspond with smaller households, but they do represent another challenge for the state in terms of growing its population and its future labor force.
8. The likely increase in the number of illegal immigrants has also had some adverse effects. Although the hiring of undocumented workers is illegal under national labor law, the absence of active enforcement increases willingness of employers to hire them. The presence of undocumented immigrants, including many with limited education, increases the supply of low-skilled workers and has adverse effects for native-born workers who also have limited education. In addition, their presence shifts some of the economic activity to an underground economy, which depletes the state's resources and denies workers adequate protection under existing labor laws.
9. See *Mass.Migration*, 2003.
10. These estimates of outmigration are based primarily on IRS tax returns and are not affected by the revised population estimates for the City of Boston. The IRS records have trouble capturing students and are biased toward overcounting out-migration. Nonetheless, even after estimating the effects of the student population, the levels of outmigration from Greater Boston are substantial.
11. In 2004, there were a few notable changes in terms of the destinations for outmigrants compared with the findings of earlier MassINC research *Mass.Migration* (2003). Similar to the findings of *Mass.Migration*, Florida and New Hampshire were overwhelmingly the top two destinations of choice. In contrast, in 2004, a sizeable number of outmigrants moved to Connecticut and Rhode Island. From the period 1990 to 2002, Massachusetts actually gained, on net, more people from those two states than it lost. In the 1990s, California, Georgia, and Arizona were popular destinations, while these states are not among the top ten destination states in 2004. It is normal to see some fluctuations in the destination states.
12. The impact of the outmigration of college-educated people on the state's labor force is even greater than this number implies, because a substantial fraction (40%) of recent in-migrants with college degrees came to Massachusetts to attend graduate school and are not employed. In contrast, the vast majority of out-migrants who have a college degree are not students but are working in their new state of residence. However, neither the ACS data nor the IRS records do a good job at capturing the movements of undergraduate students. Both are biased toward overstating net outmigration.
13. For more on low rates of labor force participation, see: Katharine Bradbury. "Additional Slack in the Economy: The Poor Recovery in Labor Force Participation During this Business Cycle." *Public Policy Briefs*, Federal Reserve Bank of Boston, No. 05-2. She finds that, nationally and in our state, the labor market has been slow to recover from the last recession. Labor force participation rates relative to the business cycle have not recovered as much as would be expected based on past business cycles. Thus, both the employment and unemployment rates have overstated the strength of the recovery, given the lower participation rates and the existing slack in labor supply.
14. There has been a large increase in the number of disabled people over the last six years. The increase is primarily among prime-age working people, who are disproportionately men, and an overwhelming number of them have limited education. Khatiwada, Ishwar, Andrew Sum, Joseph McLaughlin with Sheila Palma and Paulo Tobar. *The Labor Force Behaviors, Employment and Earnings Experiences, and Labor Market Problems of the Disabled Working-Age Population in Massachusetts, New England, and the U.S. in 2003 and 2004*. Center for Labor Market Studies, Northeastern University. Prepared for The Commonwealth Corporation and Massachusetts Rehabilitation Commission, June 2006.
15. Sum, Andrew, Neeta Fogg, Garth Mangum. *Confronting the Youth Demographic Challenge: The Labor Market Prospects of Out-of-School Young Adults*. Sar Levitan Center for Social Policy Studies, Johns Hopkins University, Policy Issues Monograph 00-01, October 2000.
16. For instance, older workers are more expensive to employ for a number of reasons. Their earnings tend to be higher and the cost of benefits, particularly health insurance, also rises with age. In addition, the structure of the workplace is often not geared towards the preferences of older workers. Finally, it is an open question whether older workers will have the skills needed for the future jobs. On the positive side, they are the only age group in Massachusetts that has increased its rate of labor force participation over the past five years. For more on these issues, see Munnell, Alicia, Kevin Cahill, et al. *The Graying of Massachusetts*. A Joint Project of MassINC and Center for Retirement Research at Boston College, 2004.
17. See *The Changing Face of Massachusetts* for more specific recommendations.