
The State of the American Dream in New England

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MassINC

The State of the American Dream in New England

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MassINC's work is published for educational purposes - - to help inform the public about important issues affecting their lives and to assist policy makers in their work to make our community a better place to live. Views expressed in the Institute's publications are those of the authors and not necessarily those of MassINC's directors, staff or other advisors. The work should not be construed as an attempt to influence any election or legislative action.

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January 22, 1996

Dear Friend:

We are proud to present *The State of the American Dream in New England* as the first research report produced by the Massachusetts Institute for a New Commonwealth (MassINC) - - a new, nonpartisan think tank created to take a fresh look at issues pertaining to middle and working class prosperity.

Over recent months, increased attention has been paid to a number of issues which are making life ever more difficult for middle and working class Americans - - stagnating wages, the necessity to work longer hours to keep pace financially, the changes in lifestyles resulting from the growth of two income families, the disappearance of manufacturing jobs and the increase in part-time, lower paying service sector jobs with few or no benefits. These are among the many obstacles which impede ordinary working Americans' pursuit of the American Dream.

As the country prepares for another election cycle and our federal government continues to shift responsibility to the states, MassINC believes that it is important for concerned citizens and policy makers to thoroughly comprehend the impact of these economic changes and shifting burdens on our state and region.

This report assesses the state of the American Dream for us and our neighbors by answering three questions:

How have economic conditions in New England changed over the past fifteen years?

Does the New England experience differ from the experience of persons and families nationwide and in other regions?

How do trends in these measures of well-being differ across demographic and socioeconomic subgroups?

Consistent with MassINC's intentions to approach public policy issues from a genuinely nonpartisan perspective, we have focused this first report exclusively on the facts. The document was prepared by some of the most respected labor market experts in the country: Andrew Sum, Neeta Fogg, Neil Fogg, and Paul Harrington, from the Center for Labor Market Studies at Northeastern University. Their work on this

comprehensive study was nothing short of extraordinary and we want to extend our deepest appreciation to them for producing a document that we hope will not only serve as an invaluable starting point for further MassINC policy work, but also promote a new degree of awareness in our community about the condition of our lives.

Through future work, including further policy analysis and evaluation, public forums, public opinion research, and our new magazine, *Common Wealth*, MassINC will continue to examine a broad range of economic, social and political issues confronting working and middle class people in Massachusetts. Committed to promoting thinking that extends beyond the traditional political debate, we will enlist underutilized local experts to report on public policies that work, as well as those that do not.

As we release this report and publicly launch our new organization, we are mindful of the need for our substantive research to not only impact the public debate, but ultimately to influence policy making. With admiration for all individuals who choose to enter the public arena and assume the responsibility of protecting the public trust, we very much hope that *The State of the American Dream in New England* will serve as an important resource for them during their difficult and challenging deliberations to improve the quality of life for all citizens in our community.

We want to thank you for taking the time to read our report and encourage you to share any feedback with us. We also want to extend an invitation to you to contact us in order to get more involved in MassINC's work.

Sincerely,

Mitchell Kertzman
Chairman & Founder

Tripp Jones
Executive Director

Executive Summary

THE NATIONAL STORY

IN 1992, presidential candidate Bill Clinton garnered knowing nods of approval from audiences around the country when he uttered one of the signature phrases of his campaign: "People are working harder and harder for less and less."

Unfortunately, for many families that phrase continues to ring true. And for families across America, the central strategy they have used for 15 years to counter the effects of shrinking career prospects and sinking real wages for their primary breadwinner is about to reach its breaking point.

Real median family incomes (adjusted for inflation) began stagnating in 1973, and have been virtually flat for over 20 years. Since 1989, real family incomes have actually declined, despite renewed employment and output growth.

For most men, the news is even worse. Their real annual earnings and weekly wages have been falling for over 15 years. Industries which used to employ men in large numbers, like manufacturing, are transforming themselves. Fewer of those that remain rely on blue-collar workers. More rely on automation and white collar workers with higher educational levels. Thus, while total output and worker productivity have continued to rise, the number of people needed to produce that growing amount of goods has been shrinking.

In response to the decreased earnings and purchasing power of most husbands, many women have chosen to enter the workforce, and those who are working, are working longer and longer hours.

The change has been profound. Two-income families are now the rule, not the exception,

and most married women without children living at home are now working the equivalent of a full-time, year-round job. Even married women with children living at home now work the equivalent of 25 hours per week — a dramatic rise of almost 150 percent since 1979.

Shifting from one-income to two-income families has helped hold real family incomes constant — otherwise they would have declined. But the ability of this strategy to offset another decade of flat or declining real incomes and wages for husbands does not look promising. With 3 out of 4 married women working, and most working full-time or close to full-time, most married couples don't have many additional hours to work in order to offset further declines in incomes and wages.

As millions more women have entered the labor force, the national economy has generated a staggering number of net new wage and salary jobs: 24 million since 1979. But, in that same time period the number of people working or actively seeking work has increased by roughly 26 million. In part because the number of new job seekers has grown as fast as the number of new jobs being created, real wage and income growth have been sluggish. Even more importantly, labor productivity has grown quite slowly and few of the gains in productivity have been passed on to workers, producing minimal wage and earnings growth for the average worker.

The dramatic changes sweeping through the American economy are producing clear winners and losers. The winners have been:

1. The highly educated — because most of the job growth has been generated in occupational areas requiring higher educational attainment levels;

2. Married couples — because they have the resources of a second income-earner to utilize; and
3. Those at the top of the income distribution — because this group is primarily composed of two-income, married couple families with high educational attainment levels.

The principal losers have been:

1. People with lower levels of educational attainment — because blue-collar jobs, requiring lower educational attainment levels and providing more on-the-job training, are disappearing;
2. Single-parent families — because they do not have a second income earner to send into the labor market to offset declining wages and incomes; and
3. Those at the bottom of the income distribution — because this group is disproportionately composed of single-parent families with lower educational attainment levels and limited work experience.

Poorly educated female-headed families have been especially hard hit. In fact, being born to a young, poorly educated single mother is a virtual guarantee of a child living in poverty. A staggering 92 percent of children nationwide living in female-headed households whose head has no high school degree and is under 30 live in poverty — 98 percent in New England! Almost half of all families in the bottom fifth of the income distribution — 42.4 percent in 1994 — are female-headed families.

Because of these changing economic patterns, income inequality has risen dramatically. The gap between those at the top and bottom of the income distribution scale is much greater today than it was 20 years ago.

However, contrary to the “conventional wisdom,” these gaps are not being generated by tremendous real income gains for those in the top 20 percent of the income distribution. In fact, the real income gains for families in the

top 20 percent over the past 15 years have been quite modest, compared to the tremendous strides made at every income level in the 1950s and 1960s. Instead, “the rich are getting richer” primarily because while their real incomes are growing at a moderate rate, real incomes for those in the middle and bottom of the income distribution are actually declining.

Increasingly, the broad middle class is dividing into two distinct groups with very different profiles and prospects for long-term economic success — and education lies at the fault line between these two groups. One group, primarily those with college degrees or postgraduate educations, are moving ahead in the new economy. While higher education levels have not guaranteed economic progress, many of these families have actually moved from the middle class to the top income group.

The second group, primarily those with a high school degree or less, are falling behind in today’s economic world. Their wages and incomes are falling, their career job prospects are decreasing, and the unions that used to help protect their wages and working conditions are vanishing. A growing number of these families are sliding out of the middle class — and face an uphill climb to return to their former economic level.

At the bottom of our income distribution, a distinct underclass has emerged which appears to have minimal prospects for moving up into the middle class in the absence of radical changes in their employability, work effort and real wages. Almost half of all families in the bottom 20 percent of incomes have no wage-earner in their family. Over 40 percent of families in the bottom fifth are headed by a high school dropout. Families in this bottom group also receive more of their family income from government transfer payments than from earnings, regardless of the business cycle. None of these factors bodes well for families in this bottom income group.

THE NEW ENGLAND STORY

NEW ENGLAND'S STORY has varied from the national one in a number of key respects over the past 15 years — especially in the booming 1980s. Compared to the dismal family income growth generated nationally, the 1980s in New England produced dramatic gains across the board — at every educational level, at every income level, and for both married and single-parent families.

As New England family incomes soared in the 1980s, so too did the productivity of New England's workers. New England's gross regional product per worker went from being 10 percent below the national average in 1977 to 4 percent above that national standard in 1992. And the 28 percent gain in real output per worker in New England over that period was the highest for any region in the country, almost tripling the national rate.

The broader trends observed on the national level — that economic changes are favoring the more highly educated, married couples, and those with higher incomes — still held true in New England, because each of those groups did better than their counterparts. But because of the strong economic conditions throughout the region, every demographic group made real economic progress.

The 1990s unfortunately have produced a brutal reversal of the progress made in the 1980s. New England families' real incomes have fallen twice as fast as the national rate from 1989 - 1994. Across the board, in every educational, income, and family composition subgroup, real incomes have fallen. Every group, including those with post-college educational experience, has obtained a level of real income below that they achieved in 1989.

Throughout the 1980s boom and the 1990s recession and slow recovery, the New England economy has been transforming itself. Where once manufacturing was the dominant employer, by 1994, service and retail trade jobs were producing the over-

whelming lion's share of job growth throughout the region.

New Englanders have made remarkable strides in trying to adapt to these new conditions, but these efforts are being swamped by the rapid changes taking place in the economy. By 1992, the majority of New England workers had some schooling beyond high school. The proportion of the region's work force without a high school diploma has been cut in half since 1979. But for those left behind, with only a high school degree or less, the economic future is a bleak one. And even for New Englanders with a college degree, real wages and incomes have fallen since 1989.

For much of New England's working class — those families in the bottom part of the middle class, typically headed by someone with less formal education — economic disaster is only one layoff or illness away. Annual earnings for many of these workers are declining. Corporate downsizings and layoffs continue to throw thousands out of work each month. And health insurance and pension coverage rates for these workers are much lower than for workers with higher educational attainment levels.

New England is still feeling the effects of the devastating recession of the early 1990s. There are fewer people working or actively seeking work today than there were in 1989. And while in the 1980s, New England actually attracted many of the best and the brightest from around the country because of our then-booming economy, today more people are moving out of New England than are moving here from other states.

In a little noticed development, New England has become increasingly reliant on foreign immigration to offset the shrinking size of our labor force — especially in the southern tier states of Connecticut, Massachusetts, and Rhode Island. Many of these foreign immigrants come to New England highly educated

(with at least a college degree) — but the largest proportion, 49 percent, come to New England with only a high school degree or less.

The twin challenges facing New England in the coming years are to continue to raise worker productivity — and to have workers share in the rewards of those productivity

gains, so that real wages can rise. Meeting these twin challenges will be a daunting task — one that will require the efforts of policy makers, business leaders, workers and other concerned citizens from across the region. But failing to meet these challenges will leave the American Dream only a distant memory for working people across New England.

Key Findings

KEY DEFINITIONS

The Middle Class

Families with incomes in the middle 60 percent of the income distribution.

Real Incomes of Families at Various Points Along the Family Income Distribution, 1994 (in dollars)

	United States	New England	Massachusetts
10th percentile	11,000	13,200	13,217
20th percentile	17,940	21,622	22,411
30th percentile	24,513	30,000	32,692
40th percentile	31,300	38,947	41,869
50th percentile	38,820	46,990	49,949
60th percentile	47,000	55,200	59,075
70th percentile	57,000	67,282	70,550
80th percentile	69,998	81,600	84,169
90th percentile	93,179	105,314	107,875

FAMILIES ARE WORKING HARDER AND HARDER— BUT FEW HAVE EXPERIENCED MEANINGFUL GAINS IN THEIR REAL INCOMES OVER THE PAST TWO DECADES.

The real “miracle” was in the 1950s — real median incomes increased by 51 percent nationwide and 55 percent in New England. **page 23**

The 1960s produced performance almost as amazing: 36 percent real growth nationally, 39 percent in New England. Between the end of the 1940s and 1973, the average real income of families in the U.S. and New England more than doubled.

For the past 25 years, real family income growth in the U.S. has been almost flat at the national level, despite increased work effort among family members — while New England has fared somewhat better. **page 23**

From 1969 - 1994, real median incomes grew by only 7 percent nationally. Because of the boom in the 1980s, New England real median incomes have grown by 20 percent since 1969 — an uninspiring showing compared to the performance of the 1950s and 1960s.

Real median incomes have declined both nationally and in New England since 1989. **page 25**

From 1989 - 1994, they've declined 5 percent nationally and 9 percent in New England.

In New England, real family incomes have declined since 1989 for families at every educational level, including those with some postgraduate schooling. **page 28**

Real income declines vary for groups at different educational levels, ranging from a high of 24 percent for high school dropouts to only a 1 percent decline for families whose householders had some post-college educational experience. But every group is worse off today than it was in 1989, despite increased work effort by wives in married couple families.

FAMILY LIFE HAS CHANGED DRAMATICALLY. TWO INCOMES ARE NOW A NECESSITY FOR A MIDDLE CLASS LIFESTYLE. MORE WIVES ARE WORKING, AND WORKING LONGER HOURS, TO OFFSET INCOME DECLINES FOR MOST HUSBANDS.

***Two-income families are now the rule, not the exception.* page 35**

Over 70 percent of married couple families nationally and almost 75 percent in New England had both husband and wife working in 1994.

***The one-income middle class family is a thing of the past.* page 45**

Even families in the lower middle class (in the second lowest fifth of the income distribution) now work an average of over 2,600 hours per year both nationally and in New England, which adds up to substantially more than the 2,000 hours of one full-time job (50 weeks times 40 hours).

***National real wage trends for men and women are heading in opposite directions.* page 102**

Between 1974 and 1994, the median real weekly earnings of full-time employed men in the U.S. fell by 11 percent — while those of employed women rose by nearly 13 percent.

***Real wage trends in New England show large gains for women, only small gains for men.* page 103**

Between 1974 and 1994, the median real weekly earnings of full-time employed men in New England gained 7 percent — while those of full-time employed women rose by 33 percent. In the last five years, men's weekly wages have produced no gain, while women's wages improved by 12 percent.

***Married couples are staying afloat primarily because more wives have entered the workforce — and those already working are working longer hours.* page 37**

New England wives with no children under the age of 18 worked an average of 1820 hours per year in 1994 — equal to 52 weeks of work at 35 hours per week — a 40 percent jump from 1979. New England wives with children in the home worked nearly 1300 hours per year in 1994 — an average of 25 hours per week, representing an increase of 149 percent since 1979.

***New England wives and their expanded work hours were responsible for more than 60 percent of the improvement in the real incomes of married couple families over the past 15 years.* page 32**

New England real incomes improved in the 1980s while incomes nationally stagnated — producing a net increase for the past 15 years even as New England real incomes have fallen since 1989. The expanded work hours of New England wives were responsible for the lion's share of this gain.

***The wealthiest families are working extraordinary amounts to maintain their success.* page 45**

New England families in the top fifth of the income distribution worked an average of 4461 hours per year — more than two full-time, year-round jobs.

MARRIAGE IS A KEY TO ECONOMIC SURVIVAL IN TODAY'S ECONOMY. SINGLE-PARENT FAMILIES FACE AN UPHILL STRUGGLE PARTLY BECAUSE THEY CANNOT RELY ON A SECOND EARNER TO OFFSET DECLINING WAGES. WHEN SINGLE-PARENT FAMILIES ARE HEADED BY SOMEONE WITH LITTLE EDUCATION, POVERTY IS ALMOST A GUARANTEED RESULT.

Married couple families have done much better than single-parent families in good times and in bad. page 27

Married couple families in New England improved their real incomes by 26 percent in the 1980s, compared to an 8 percent gain for single-parent families. The real incomes of married couple families slid by 8 percent in the 1990s, while real incomes plunged 14 percent for single-parent families.

Poverty rates are dramatically lower for married couple families. page 54

While the poverty rate for married couple families in New England was below 4 percent in 1979, 1989 and 1994 — for female-headed households it ranged from 21 percent to 30 percent.

In 1994, the poverty rate for female-headed households was nearly 10 times higher than the poverty rate for married couple families in New England. page 54

Married couple families had a poverty rate of only 3.2 percent in 1994; female-headed households had a poverty rate of 30 percent.

An overwhelming share (42 percent) of New England families in the bottom fifth of the income distribution were female-headed, while only 3 percent of those in the top fifth were female-headed. page 48

Being born to a young, poorly educated single mother is a virtual guarantee of a child living in poverty. page 57

A staggering 98 percent of children living in female-headed households whose heads are younger than 30 and have no high school degree live in poverty in New England.

Married couple families have much higher rates of health insurance and pension coverage than do single parent families. page 111

While 92 percent of New England's married couple family householders had health insurance coverage in 1994, only 82 percent of female-headed householders and 77 percent of male-headed family householders had health insurance coverage.

EDUCATION IS MORE IMPORTANT THAN EVER BEFORE FOR LABOR MARKET SUCCESS. PEOPLE WITH HIGHER EDUCATIONAL LEVELS ARE DOING BETTER, AND PEOPLE WITH LOW EDUCATIONAL LEVELS ARE SLIDING BACKWARDS. BUT EVEN HIGHER EDUCATION IS NO GUARANTEE OF A RISING STANDARD OF LIVING.

Real family incomes declined in New England in the 1990s for families in every educational attainment level, but the declines were greater at each step down the educational attainment ladder. **page 28**

Median real incomes declined by a staggering 24 percent for New England families headed by someone without a high school degree, 15 percent for those with a high school degree, 12 percent for those with some college, 10 percent for those with a college degree, and 1 percent for those with post-college educational experience.

Families at every educational level, including those headed by persons with some post-college educations, have lost economic ground since 1989 in New England. **page 28**

New Englanders with college degrees have seen their real median incomes drop by almost 10 percent since 1989. But the losses have been less severe for the higher educated than for those with lower educational levels.

Real incomes grew for all families in New England in the 1980s, but those gains formed a stair step up at each educational attainment level. **page 27**

Median incomes grew by 6 percent for those families headed by high school dropouts, 10 percent for high school grads, 14 percent for those with some college, 28 percent for college grads, and 33 percent for those with some post-college educational experience.

Poverty rates of adults in New England increase exponentially for people with less education. **page 53**

The 1994 poverty rate was less than 2 percent for those with post-college schooling; 4 percent for those with a four-year degree; 9 percent for those with only a high school degree; and 18 percent for those with no high school diploma or GED.

The higher a person's educational attainment level, the more likely he or she is to have some form of health insurance coverage. **page 110**

In 1994, 27 percent of high school dropouts in New England had no health insurance coverage. For high school graduates, 19 percent lacked health insurance coverage, but for those with at least a bachelor's degree, only 8 percent lacked coverage.

**BOTH FAMILY INCOME AND WAGE
INEQUALITY ARE RISING. REAL INCOMES
AND WAGES ARE NOT INCREASING
DRAMATICALLY FOR THE AFFLUENT, BUT
THEY ARE RISING FOR THEM AT A TIME
WHEN REAL INCOMES AND WAGES FOR
MOST PEOPLE ARE GOING DOWN.**

The last 15 years have produced dramatically widening inequality between families at the top and bottom of the income distribution. page 39

The top fifth's share of income grew from 40 percent in 1979 to 43 percent in 1989 to 44 percent in 1994 nationally. The share of income earned by the second highest fifth has remained flat. Families in the lowest three fifths of the income distribution each suffered major losses in their share of the income pie from 1979 - 1994.

New England's income inequality has also grown wider. page 39

The top fifth's share of income grew from 39.7 percent in 1979 to 42.4 percent in 1994. Contrary to the national picture, the share of income going to families in the second highest fifth also grew, from 24.2 percent in 1979 to 24.8 in 1994. The lowest three fifths of the income distribution in New England each suffered major losses in their share of the income pie from 1979 - 1994. By 1994, the top fifth's share was as large as the bottom 70 percent combined.

Within the U.S., not even the most affluent have generated large income gains since 1979. page 40

Families in the top 10 percent of the distribution obtained the greatest gains from 1979 - 1994 — but their improvement of 15 percent over 15 years is paltry by the historical standards of the 1950s, when real median family incomes improved by over 50 percent in just 10 years.

Wage inequality has increased dramatically between groups at the top and the bottom of the wage distribution in New England and the U.S. page 105

In 1973, the weekly wages of a full-time worker in New England at the 90th percentile of the earnings distribution was 3.35 times as large as the weekly wages of a full-time worker at the 10th percentile. By 1994, this ratio had ballooned to 4.14 — a 24 percent increase in inequality.

Wage inequality has not grown as dramatically between those at the top of the income distribution and those in the middle. page 106

In 1973, the ratio for weekly wages between a full-time worker at the 90th percentile and one at the 50th percentile was 1.92 in New England; by 1994, that ratio had increased only slightly to 1.99.

INCREASINGLY, THE BROAD MIDDLE CLASS IS DIVIDING INTO TWO DISTINCT CLASSES: A MORE AFFLUENT GROUP, PRIMARILY WELL-EDUCATED, THAT IS GETTING AHEAD – AND A POORER GROUP WITH LESS EDUCATION AND FEWER TRANSFERABLE SKILLS THAT IS SLIDING BACKWARD.

The middle class is shrinking.

page 26

Using 1979's income distribution data to define the middle class as the middle 60 percent of that distribution, the size of the middle class nationally shrunk to 54 percent (from 60 percent) of families in 1989, and contracted further to 53 percent of families by 1994.

Some families are moving forward into the top income bracket, but just as many are sliding backward into the bottom portion of incomes.

page 26

The percentage of families with real incomes in the top fifth of 1979 incomes surged nationally and in New England during the 1980s, only to fall back in the 1990s. Nationally, 26 percent of families in 1989 (up from 20 percent in 1979) had incomes that would have been in the top fifth in 1979 — but that number contracted to 24 percent in 1994. New England witnessed an even greater surge of families into the top income group in the 1980s — 32 percent by 1989 — but has suffered a substantial fall since, with 25 percent of families having incomes in that top bracket in 1994.

The percentage of families nationally that slid backward into the bottom fifth of 1979 incomes grew slightly in the 1980s, then surged in the 1990s.

page 26

Nationally, 21 percent of 1989 families had incomes that would have placed them in the bottom fifth in 1979 — and by 1994, that percentage had grown to 24 percent.

New England's strong economic performance in the 1980s lifted many more families into the middle class — but the deep recession and slow recovery of the 1990s have produced a huge jump in the number of families in the bottom fifth of 1979 incomes.

page 26

By 1989, only 17 percent of New England families had incomes in what would have been the bottom fifth ten years before, a significant improvement from the 20 percent of 1979. But after the recessionary times of the 1990s, 25 percent of New England families in 1994 had real incomes that would have placed them in the bottom fifth in 1979.

The top quintile of the family income distribution in New England is increasingly dominated by families headed by college graduates.

page 48

In 1979, 48 percent of families in the top fifth were headed by a person with at least a bachelor's degree. By 1994, this ratio had increased to 64 percent.

MANY FAMILIES AT THE BOTTOM OF THE INCOME LADDER HAVE LITTLE CHANCE OF MOVING UP INTO THE MIDDLE CLASS IN THE ABSENCE OF SUBSTANTIVE INCREASES IN WORK EFFORT AND REAL WAGES.

Almost half of all families in the bottom fifth of incomes have no wage earner.

page 47

Forty percent nationally and 45 percent in New England of families in the bottom fifth of the income distribution have no earner in the household.

Families in the bottom fifth of the income distribution obtain more of their income from cash transfers than from wages and salaries — in both good economic times and bad.

page 43

Nationally, in 1994 families in the bottom fifth received 43.1 percent of their family income from wages and salaries, and 43.6 percent from cash income transfers. In New England, the bottom fifth received only 39 percent of family income from wages and salaries, while receiving 53 percent from cash income transfers.

Working families in the bottom fifth of the income distribution earn much less per hour than those in the middle or top of the income distribution.

page 46

In New England, those in the highest fifth averaged \$24.34 per hour; in the second highest, \$17.04; in the middle fifth, \$12.74; in the second to the bottom, \$10.66; and in the bottom fifth, only \$6.82.

The number of families headed by high school dropouts has been sharply reduced, but families headed by those without a high school degree are still very likely to be in the bottom fifth of family incomes.

page 48

The number of families headed by high school dropouts has plunged nationally from 31 percent in 1979 to only 18 percent in 1994. New England has cut the rate in half, from just under 30 percent in 1979 to only 14 percent today. However, nationally 40 percent of families in the bottom fifth of the income distribution are headed by a high school dropout, while in New England one family in three in that bottom fifth is headed by someone without a high school degree.

New England families headed by a person lacking a high school diploma experienced a 24 percent decline in their median real incomes between 1989 and 1994.

page 28

This decline was more than three times higher than the decline for all other New England families.

The unemployment rate of adult dropouts in New England more than tripled between 1989 and 1994, rising from 4 percent to 15 percent.

page 73

No other educational group came close to experiencing such a sharp rise in their unemployment rate. Because many high school dropouts have given up on finding a job, half of all adult high school dropouts in New England were jobless in 1994.

**WHILE WORK BY ITSELF IS NO
GUARANTEE A PERSON WILL ESCAPE
POVERTY, THERE IS NO ANTIPOVERTY
STRATEGY THAT CAN TAKE THE PLACE OF
HARD WORK.**

During 1994, approximately 5 percent of all New England families with at least one worker still remained with incomes below the poverty line. page 56

The poverty rate among working families, however, was considerably below the 31 percent poverty rate for those families with no earner in the labor market.

Poverty rates increase sharply as adults work fewer hours. page 53

Poverty rates in New England are under 2 percent for those who worked 1,800 or more hours; 6 percent for those who worked between 1,000 and 1,500 hours; 12 percent for those who worked less than 1,000 hours; and 25 percent for those adults who had no earnings in 1994.

Poverty levels are very low for those adults who work year-round in New England. page 53

The poverty rate for those adults who worked more than 1,800 hours was less than 2 percent in New England in 1994 and 3 percent nationwide.

The non-elderly poor in New England are primarily poor because either they are not employed or they work few hours. page 53

**NEW ENGLAND IS EXPORTING THE ONE PRODUCT WE
DON'T WANT TO EXPORT: PEOPLE. AS A REGION, WE
ARE GROWING INCREASINGLY RELIANT ON FOREIGN
IMMIGRATION FOR LABOR FORCE GROWTH.**

Since 1989, the New England labor force has actually shrunk. page 62

New England's labor force fell by .6 percent while the national labor force grew by 5.8 percent. This regional decline was produced by a combination of a stagnant working-age population and declining labor force participation.

Labor force participation rates have been declining for New England teenagers. page 72

The more limited employment experience of teenagers not only reduces their immediate earnings, but also has adverse long term consequences for their earnings in their young adult years because of the loss of early work experience.

Labor force participation rates are also plunging in New England for 50-54 year olds. page 72

Many older workers are losing their jobs through downsizing, finding it hard to acquire another job, and withdrawing prematurely from the labor market.

Almost 200,000 more people have moved from New England to other parts of the United States than have moved from those states to New England since 1990. page 64

Net domestic immigration was -193,900 from 1990 - 1994.

Slightly over 40 percent of the net growth in the region's civilian labor force over the past 15 years was attributable to foreign immigration. page 67

In the last seven years, New England more than offset its domestic out-migration loss with an annual average of 56,000 foreign immigrants per year.

New England's dependence on foreign immigration as a source of new labor supply was third highest in the nation. page 67

Our dependence on foreign immigration was exceeded only by the Pacific region (54 percent), dominated by the experience of California, and the Mid-Atlantic region (96 percent), including New York.

In New England's southern tier (Connecticut, Massachusetts and Rhode Island) foreign immigration has played a critical role in labor force growth. page 67

Foreign immigration has accounted for 60 percent of the rise in the Massachusetts labor force, 83 percent in Connecticut, and all of the labor force growth in Rhode Island. In each of the northern tier states (New Hampshire, Vermont and Maine), foreign immigration has accounted for less than 10 percent of their labor force growth in the past 15 years.

Foreign immigrants usually come to New England either with very high or very low educational levels. page 68

From 1985 - 1990, 49 percent of all foreign immigrants who came to New England had only a high school degree or less — while 31 percent arrived with a college degree or higher.

THE REGIONAL ECONOMY IS CHANGING. BLUE COLLAR JOBS ARE VANISHING. NEW JOBS ARE REQUIRING MORE AND DIFFERENT SKILLS.

The industrial distribution of jobs in the New England economy has been dramatically altered over the past 12 years. page 82

In 1983, the manufacturing sector was still the largest industrial employer in New England, and it accounted for one job in every four. By 1995, only one job in six was found in the manufacturing sector. Service industries now employ nearly twice as many workers as the region's manufacturing industries.

New England has added almost 1 million jobs in service and trade industries since 1983. page 82

From 1983 - 1994, the region added 679,000 jobs in service industries and 258,000 jobs in trade industries, increasing service employment levels by more than 50 percent and trade payroll employment levels by more than 20 percent.

Manufacturing jobs are vanishing. page 82

Between 1983 and 1994, New England lost one-fourth of its manufacturing jobs. New England experienced a net loss of 339,000 manufacturing jobs from 1983 - 1994.

The manufacturing jobs that remain are increasingly calling for workers with higher education levels. page 85

In 1980, about 20 percent of the region's manufacturing jobs were in the professional, managerial, technical and high level sales areas that typically require college degrees. By 1994, over 33 percent of all manufacturing workers were employed in college labor market jobs. At the same time, the proportion of manufacturing workers holding skilled and semi-skilled blue collar jobs fell from 57 percent to only 45 percent — a relative decline of 21 percent.

The overwhelming share of the net increase in regional employment has been in professional, technical, and managerial occupations. page 88

Of the 654,000 net increase in New England employment from 1983 to 1994, 635,000 — or 97 percent — occurred in professional, managerial and technical jobs.

Pension and health insurance coverage rates are lowest in the industrial sectors where New England is experiencing most of its job growth. page 118

Pension coverage rates and health insurance coverage rates are lowest in smaller firms in the region's retail trade and service industries. The lion's share of job growth in New England is taking place in exactly these same sectors.

NEW ENGLAND REAL WAGES HAVE INCREASED IN THE LAST FIFTEEN YEARS — BUT SO DID THE PRODUCTIVITY OF NEW ENGLAND WORKERS.

The real weekly wages of full-time New England workers improved considerably relative to their national counterparts over the past two decades. page 104

In 1973, the weekly wages of full-time workers in New England were 3 percent below the U.S. average. By 1994, full-time workers in New England outearned their U.S. counterparts by 17 percent.

New England labor productivity soared between 1977 and 1992. page 105

In 1977, the gross regional product per worker in the region was \$34,401, nearly \$4,000 or 10 percent below the national average. By 1986, New England's real output per worker had surpassed the national average. By 1992, real output per worker in New England had risen to \$44,132, exceeding the national average by 4 percent.

New England's labor productivity improvement was the highest for any region in the nation between 1977 and 1992. page 105

Real output per worker increased by 28 percent in New England, versus a national rate of only 10 percent. Productivity gains provided the economic foundation for higher real wages of the region's workers.

THE WORKING CLASS – THOSE IN THE BOTTOM PART OF THE MIDDLE CLASS, TYPICALLY WITH LESS FORMAL EDUCATION – FACE A BLEAK FUTURE. ANNUAL EARNINGS OF MANY SUCH WORKERS ARE DECLINING, AND THEIR HEALTH INSURANCE AND PENSION COVERAGE RATES ARE MUCH LOWER THAN FOR MORE EDUCATED WORKERS.

The median real annual earnings of New England husbands with no college education declined between 1979 and 1994. page 32

The decline was considerably greater for those lacking a high school diploma (30 percent). The steep decline in blue collar jobs, particularly since 1988, has been a key factor in this real earnings decline.

Workers with less education have a considerably lower chance of having health insurance coverage. page 110

In 1994, 27 percent of New England high school dropouts and 19 percent of high school graduates had no health insurance coverage. Only 8 percent of four year college graduates lacked health insurance coverage.

Low-education workers are losing career employment opportunities in industries that typically provided health insurance coverage, and when they find new employment, it is usually in industries with much lower coverage rates. page 110

In New England, the proportion of high school dropouts working in manufacturing industries has fallen by more than 33 percent since 1979. A growing proportion of high school dropouts and graduates became employed in the retail trade, business, repair and personal service industries — sectors that have health insurance coverage rates 10 to 17 percentage points lower than those prevailing in durable manufacturing.

The working poor and near-poor are suffering the largest losses in health insurance coverage rates. page 113

In New England, health insurance coverage rates for families in the bottom 10 percent of the income distribution have actually improved since 1979 — from 76 to 78 percent. But health insurance coverage rates for families in the second lowest decile have declined from 80 percent in 1979 to 73 percent in 1994. Lower middle class families have also lost ground: families with incomes in the third lowest decile went from 84 percent coverage in 1979 to 82 percent in 1994. Families with incomes in the fourth lowest decile saw their health insurance coverage rates drop from 93 percent in 1979 to 86 percent in 1994.

Pension coverage rates in New England are lowest for the more poorly educated and in those sectors generating most of our new job growth. page 117

Only 18 percent of employed high school dropouts were covered by a pension plan in 1994, versus 39 percent of high school graduates and 64 percent of those with some schooling beyond a bachelor's degree. Pension coverage rates in New England are lowest in smaller firms in the region's expanding retail trade and service industries. The largest share of job growth in New England is taking place in exactly these same sectors.

**UNION MEMBERSHIP IS DISAPPEARING,
ESPECIALLY FOR WORKERS WITH LOWER
EDUCATIONAL LEVELS.**

Labor union membership is plunging both nationally and in New England.
page 119

Nationally, the number of workers who were either labor union members or covered by the provisions of a union contract fell from nearly one in four in 1983 to only one in six by 1995. In 1983, nearly 27 percent of New England's workers were labor union members or were covered by a collective bargaining agreement; by 1995, the coverage rate had dropped to only 17 percent.

The least well-educated have experienced the largest drops in union membership.
page 119

Regionally, approximately 29 percent of workers who failed to complete high school and 31 percent of those with only a high school degree were union members or covered by a collective bargaining agreement in 1983; by 1995, only 16 percent of both groups were covered, a relative decline of nearly 50 percent. Union membership declines have been steepest in the private sectors, including the region's manufacturing industries.

By 1995, nearly one half (43 percent) of all the union members in New England were employed by a federal, state, or local government agency.
page 121

Implications

Time is running out on the strategy families have used to counter declining wages and incomes of male family heads over the past 20 years.

- Two income families are now the rule, rather than the exception.
- More wives are working, and those that are working are working longer hours.
- Most families simply do not have many more hours to work.

The challenge facing New England is to continue to raise worker productivity — and to have workers share in the rewards of those productivity gains so that real wages can rise.

- The challenge facing the region is not how to drive wages down, like any other cost of doing business.
- The challenge is how to keep productivity gains rising so that the wage and income gains experienced over many of the last 15 years can continue and expand.

Policy makers and the media make a fundamental error when they lump virtually all families above the poverty line together as the middle class.

- The broadly defined middle class is splintering into two distinct groups, with a more affluent, mainly well-educated group making sustained progress, and a less affluent, primarily less well-educated group losing economic ground.
- The working class — those families in the bottom part of the middle class, typically with less formal schooling — face a particularly bleak future because for many, their annual earnings are declining, and their health insurance and pension coverage rates are much lower than for more educated workers.

We must make and keep a commitment to improving the education of the region's population.

- Education is not a panacea, and having a higher education provides no guarantee of ever-rising wages and incomes.
- But education is still the best assurance of a strong economic future for individuals, their families, and the region.
- The economy is changing in fundamental ways that are creating a growing demand for more highly-educated workers.
- The economic data are clear that people with higher educational attainment levels achieve better results in both good economic times and bad.

Marriage is as important to economic survival today as it was a century ago.

- A century ago, the odds of a single man or woman succeeding on the prairie were much lower than for a married couple because of the simple strength that is generated when two people work together economically as a team.
- So today, marriage significantly increases the chances of a family's economic success, improving real income prospects and substantially reducing the risk of poverty and dependence.
- The days when a family could achieve a middle-class lifestyle with only one income earner appear to be over.
- Even families barely hanging onto a lower-middle class existence (in the second lowest income quintile) now work an average of over 2,600 hours per year — 30 percent more hours than a 40 hour per week job, 50 weeks per year.

Out-of-wedlock births to young women with limited education are an unmitigated economic and social disaster.

- The odds of a young, single mother who does not have a high school degree living in poverty and providing a disadvantaged lifestyle to her (and the father's) children are almost 100 percent.
- The growth in single-parent families has also contributed in a substantive way to the rise in family income inequality.

The impact of foreign immigration on wages, unemployment levels and other economic factors in New England deserves careful further study.

- New England has grown increasingly reliant on foreign immigrants to provide its labor force growth, and almost half of all foreign immigrants arriving here have no more than a high school education.
- Given that real wages and employment opportunities are plunging for New Englanders with the lowest educational levels, and recognizing that fully half of all high school dropouts are jobless, it is quite likely that foreign immigrants are exerting a downward pressure on the low end of the New England wage scale that is contributing to our stagnating wages and incomes and to rising wage inequality.

Many families in the bottom fifth of the income distribution have little hope of ever moving forward economically into the middle class in the absence of increased work effort, improved employability, and rising real wages.

- They have lower educational levels.
- They are coming increasingly from single-parent families.
- And they have fewer resources, in economic and social capital, to reverse their current economic position.

Income and wage inequality is rising rapidly as top wage and income earners achieve modest real gains while most others are losing ground.

- Wage inequality among full-time workers in New England has increased sharply over the past two decades, especially between the top and bottom of the wage distribution.
- These trends have occurred among both men and women.

New England should not forget the enormous economic progress that was made in the 1980s when full employment conditions were reached and maintained.

- The bitterness of public reaction to the deep recession of 1989 - 1991 has tended to obscure the high levels of economic progress that were achieved throughout New England in the 1980s.
- Real incomes rose for virtually every family group: married couples and single-parent families, the poor, the middle class, and the wealthy, high school drop-outs and college graduates.
- Poverty rates plunged, unemployment rates were very low, long-term unemployment came close to being eliminated and the region made enormous strides in comparison to our national competitors.

The growing number of two-income families and the rising amount of work done each year by both men and women in American families raise important questions about our family life, our children and our society.

- How much time do people have left to devote to and spend with their families?
- Who is taking care of our children, and are we doing all that we can to assure them the same opportunities that our parents and grandparents gave to us?
- To what degree have these changes impacted the ability of citizens to participate in the civic affairs of their state and community?

The Economic Well-Being of New England Families: 1979 to 1994

INTRODUCTION

THE FIRST SECTION of this report examines a number of critical issues related to the real incomes of families and persons in the U.S. and New England. The second section analyzes trends in labor market developments and performance, including labor force and employment growth, and the labor market problems faced by the region's residents. The third section provides an assessment of a number of other important measures of individual and family economic well-being, including the level and distribution of real weekly earnings, pension coverage rates of New England's workers and trends in health

insurance coverage rates of the region's residents.

While each section of this report will address a specific set of issues, all three sections are designed to answer a common set of general questions. First, how have economic conditions in New England changed over the past fifteen years? Second, does the New England experience differ from the experiences of persons and families nationwide and in other regions? Third, how do trends in these measures of well-being differ across demographic and socioeconomic subgroups of the region's workers and families?

FAMILY INCOMES IN THE UNITED STATES AND NEW ENGLAND

THIS FIRST SECTION provides a detailed review of developments in three major areas related to the real incomes of New England's families. The analysis begins with a review and assessment of trends in the median real incomes of families in the region and the U.S. This is followed by an examination of the distribution of family incomes. Finally, we provide an analysis of trends in the magnitude and nature of poverty problems experienced by the region's residents, families, and children.

The economic performance of any region or state can be assessed from a number of different perspectives, including its ability to produce additional output of goods and services, provide job opportunities for its working-age residents, and increase the real incomes of its residents and their families. The real (infla-

tion-adjusted) incomes of families are the most critical determinant of their purchasing power over goods and services and, thus, their annual consumption opportunities. The real income position of a family is also strongly associated with its ability to achieve core elements of the American Dream, including home ownership, financial security, and the ability to invest in the college education of their children. An analysis of changes in the real incomes of New England families during recent years will provide a solid basis for identifying the degree to which the goal of rising affluence has been achieved for all families and key demographic subgroups of families.

There are several existing sources of data on the personal incomes of the residents of the New England region and individual New England states, including the personal

income data from the U.S. Commerce Department's Bureau of Economic Analysis and the personal and family income data generated by the U.S. Census Bureau in conducting the March Current Population Survey (more popularly known as the CPS household survey).¹ The personal income data from the Bureau of Economic Analysis are available on a quarterly and annual basis and are used to provide estimates of per capita personal incomes. Unfortunately, these aggregate income data cannot be used to track trends in the economic well-being of any particular subgroup of New England residents or families. To identify trends in the real incomes of New England families, the March work experience and income supplement from the CPS survey can be used. The U.S. Census Bureau conducts March interviews with a representative sample of approximately 4,500 households in the New England region, of whom approximately 3,200 are family households; i.e., households containing two or more persons related to each other by blood, marriage, or adoption.

This study will examine and assess a number of issues related to the economic well-being of New England families as measured by their real incomes. A number of core questions will be answered. First, how well have New England families fared in improving their real incomes over the 1979-94 period, with a particular emphasis on trends in the past five years which include the recessionary years of 1989-91 and the economic recovery over the past three years? Second, how well have New England families fared in comparison to their counterparts in the United States over the same time period? How has New England's position relative to other regions changed over this time period?

Third, have trends in the real income position of New England families been uniform across key demographic subgroups of families or have they differed? How has the growth of real incomes varied by family type (married

couple, single householder), presence of children in the home, and the educational attainment of the family householder? Fourth, how have the sources of New England family income changed over time? Fifth, how have the real annual earnings of family householders and their spouses changed over time? How important have the earnings of wives become for the economic well-being of families in our region?

Trends in the Median Real Incomes of Families in the U.S. and New England

The household and family income data produced by the Current Population Survey are based on money income concepts. They include income from a comprehensive number of sources before payment of any federal, state, or local taxes, including wages and

Between 1949 and 1959, families in New England saw their real incomes grow by nearly 55 percent. . . . These growth rates in real incomes have never been matched since then.

salaries, self-employment income, dividends, interest, net rents, social security retirement, private pensions, unemployment benefits, workers compensation, AFDC benefits, other forms of cash public assistance income, child support, and alimony. The conventional CPS income measures do, however, exclude the value of in-kind transfers such as food stamps, housing subsidies, Medicare or Medicaid expenditures, the value of employer-provided health benefits, and the net capital gains and Earned Income Tax Credits of households. While exclusion of these items does not have any substantive effect on the estimated value of the median income, they do have an impact on the estimated size of the poverty population and the distribution of income. In our following discussions of trends in the distribution of family incomes and the poverty problems of persons and families in

¹ A description of these alternative sources of income estimates is provided in Appendix A.

New England in later sections, we will adjust the conventional money income measures to incorporate these other sources of income and in-kind benefits.

There are several different measures of incomes that can be used to represent the income position of families. Two of the most commonly used measures are the median and the mean incomes of families. We will focus exclusively on the median, which is the level of income that divides the family income distribution into two equal parts. Half of all families make less than the median income, and half receive an income higher than this level. Compared to the mean income measure, the median income has the advantage of not being influenced by extreme values at the upper end of the distribution. Mean incomes tend to be several thousand dollars above the estimated median incomes. Utilizing median incomes also avoids the problem of changes in the "top coding" procedures used by the Census Bureau, which can artificially alter the estimated value of the mean income.²

Viewing trends in family incomes from a longer term perspective, findings in Table 1 reveal that families in New England have historically had median incomes above their national counterparts; however, the relative size of these advantages has varied over the years. Families in both the U.S. and New England experienced an extraordinary growth in their real incomes over the decades of the 1950s and 1960s, the golden age of the American economy. Between 1949 and 1959, families in New England saw their real (inflation-adjusted) incomes grow by nearly 55 percent while families nationwide posted a 51 percent gain in their median real incomes.³ These growth rates in real incomes have never been matched since then. The

1960s was also a decade of rapid growth in real incomes, with New England families achieving a 39 percent gain over the decade and families throughout the country experiencing a 36 percent rise in their real incomes. As a result of more rapid income growth during both of these decades, the income advantages of families in New England relative to the U.S. grew moderately over the period. In 1949, families in New England had median incomes that were 5.6 percent above their national counterparts. This advantage rose to 8.3 percent in 1959 and to 10.6 percent by 1969.

The decade of the 1970s was marked by considerably poorer economic performance in many respects, but particularly as it pertained to the economic well-being of workers and families throughout our region. The year 1973 is often chosen by economists and social scientists as representing the peak or high water mark of U.S. economic performance over the post World War II period.⁴ Following this peak, oil price shocks, high inflation, the near cessation of productivity gains throughout most industries in the economy, and stagnation in the real earnings of workers characterized the remainder of the tumultuous

² The Census Bureau "top codes" or suppresses the earnings and incomes of individuals for reasons of confidentiality. In order to account for rising nominal earnings and incomes, these top codes are occasionally increased. For more information on technical changes in the CPS, see Ryscavage, Paul, "A surge in growing income inequality?", *Monthly Labor Review*, Volume 118, Number 8, August 1995, pp. 51-61.

³ Throughout this report, the Consumer Price Index for All Urban Consumers (CPI-U-X1) has been used to convert nominal dollars into their real dollar equivalents. A discussion of the CPI-U-X1 and other technical issues is presented in Appendix A. Unfortunately, the absence of regional cost of living data prevents us from converting our estimates into equivalent units of purchasing power.

⁴ See Levy, Frank, *Dollars and Dreams: The Changing American Income Distribution*, Russell Sage Foundation, New York, 1987; and Peterson, Wallace, *The Silent Depression: The Fate of the American Dream*, W.W. Norton and Company, New York, 1994.

	U.S.	New England	New England as a % of U.S.
1949	\$17,584	\$18,574	1.056
1959	\$26,545	\$28,740	1.083
1969	\$36,095	\$39,935	1.106
1979	\$39,227	\$41,572	1.060
1989	\$40,724	\$51,909	1.275
Percent Change:			
1949-59	51.0%	54.7%	
1959-69	36.0%	39.0%	
1969-79	8.7%	4.1%	
1979-89	3.8%	24.9%	

Sources: 1950, 1960, and 1970 Decennial Censuses; March 1980 and 1990 Current Population Surveys. The money income estimates for each year were converted into constant 1994 dollars via use of the CPI-U-X1 index for the U.S. Tabulations by Center for Labor Market Studies.

decade of the 1970s. Still, families in the nation as a whole experienced nearly a 9 percent gain in their median real incomes between 1969 and 1979, with nearly all of this gain taking place prior to 1973. In a break from past trends, real income growth among families in New England lagged behind the U.S. average, growing by only 4 percent over the decade. As a result of lower real income growth, the income advantage of families in New England relative to the U.S. fell to 6.0 percent by 1979, only slightly above that prevailing in 1949.

In comparison to national developments, the performance of the New England economy over the decade of the 1980s was quite phenomenal. The region outperformed the rest of the country on nearly every key indicator of economic progress. Real output growth in New England substantially outpaced growth for the nation as a whole, mainly due to impressive gains in labor productivity. Payroll employment levels in the region increased by nearly 1.2 million over the decade, outpacing payroll employment growth for the nation as a whole for the first time since these data were first collected in the 1930s. Unemployment rates in New England were the lowest of any of the nation's regions between 1983 and 1989, and were below 4 percent in each year between 1986 and 1989. Tight labor markets helped increase the real wages and earnings of New England workers, and these high earnings levels helped boost

family incomes. Median real family income in New England grew by nearly 25 percent between 1979 and 1989, compared to a gain of only 4 percent among families nationwide. As a result of these above average income gains, families in New England had median incomes in 1989 that were nearly 28 percent higher than those of families nationwide. While the bi-coastal boom helped boost real incomes in several other regions including the Middle Atlantic and South Atlantic regions, many other regions received few substantive economic benefits from the employment boom between 1983 and 1989.

The gains in real median incomes among families in New England were not uniform in each state in the region; however, every New England state enjoyed far greater gains in real median incomes than the nation as a whole. Families in Connecticut posted the largest gains in their real incomes over the 1980s, experiencing nearly a 35 percent growth in real median incomes between 1979 and 1989 (see Table 2). Families in Massachusetts, New Hampshire, and Vermont saw their real median incomes increase by approximately 23 to 26 percent over the decade. Median real family incomes in Maine increased at a lower rate (15 percent), while families in Rhode Island experienced a gain of only 6 percent. Although families in Rhode Island experienced the lowest growth in real median incomes in New England over the 1980s, they still enjoyed higher gains in income than their counterparts nationally.

As a consequence of these more rapidly growing real incomes in New England, each of the New England states improved its ranking compared to other states in the nation over the decade of the 1980s. In 1979, only one of the New England states, Connecticut, had a median family income placing it in the top ten highest states (see Chart 1). Two New England states, Vermont and Maine, ranked in the bottom half of the distribution in 1979. By 1989, Connecticut had moved up two spots in the distribution to capture the number one position, Massachusetts occupied third place,

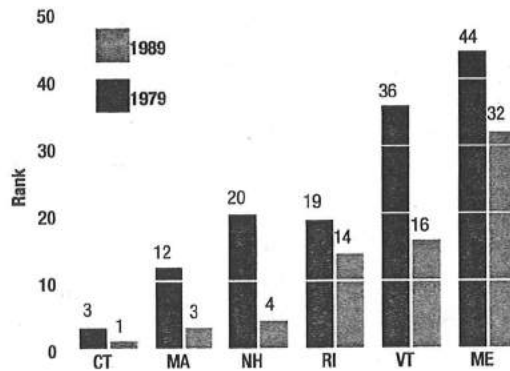
TABLE 2

MEDIAN REAL INCOMES OF FAMILIES IN THE U.S., NEW ENGLAND, AND INDIVIDUAL NEW ENGLAND STATES, 1979 AND 1989 (IN 1994 DOLLARS)

	1979	1989	Percent Change
U.S.	\$39,227	\$40,724	3.8%
New England	\$41,572	\$51,909	24.9%
Connecticut	\$45,974	\$61,854	34.5%
Massachusetts	\$42,157	\$53,330	26.5%
New Hampshire	\$40,123	\$50,659	26.3%
Vermont	\$34,653	\$42,739	23.3%
Maine	\$32,392	\$37,234	14.9%
Rhode Island	\$40,455	\$43,026	6.4%

Source: March 1980 and March 1990 Current Population Survey, tabulations by Center for Labor Market Studies.

chart 1 RANKING OF NEW ENGLAND STATES IN THE MEDIAN FAMILY INCOME DISTRIBUTION AMONG ALL 50 STATES



Between 1989 and 1994, families in New England experienced a drop in their median real incomes of over 9 percent . . . nearly double the 5 percent decline prevailing nationwide.

and New Hampshire ranked fourth highest. Vermont improved its ranking considerably, from 36th in 1979 to 16th by 1989, and Rhode Island moved up five positions to rank 14th in 1989. While families in Maine remained in the bottom half of the distribution in 1989, their position had improved from 44th in 1979 to 32nd in 1989. Thus, improvements in the relative incomes of families in New England over the decade of the 1980s were quite impressive and widespread.

The impressive and sustained performance of the New England economy over the 1980s stands in sharp contrast to the turbulence that has characterized the region since 1989. In early 1989, the region entered a lengthy period of economic decline that was accompanied by a loss in wage and salary jobs far worse than any it had experienced since the Depression of the 1930s and considerably worse than the experience of any of the nation's other regions. Large job losses occurred in several industrial sectors throughout the region, especially con-

struction and manufacturing. Slack conditions in the region's labor markets from early 1989 to mid 1992 led to mounting problems for New England's workers, like open unemployment, lengthening durations of unemployment, involuntary part-time employment, labor force discouragement, and falling real earnings — all of which are explained in a later section. The deterioration in the labor market fortunes of New England workers translated into poor family income performance since 1989. Between 1989 and 1994, families in New England experienced a drop in their median real incomes of over 9 percent, a rate of decline nearly double the 5 percent decline prevailing nationwide. The relative real income advantage of families in New England had fallen from 28 percent in 1989 to 21 percent by 1994; however, the 1994 income advantage of the region remained quite large by historical standards.

Findings in Table 3 reveal that all of the deterioration in the relative income position of families in New England occurred over the 1989 to 1991 period. Between 1989 and 1990, real median incomes in the U.S. fell by 2.1 percent, while incomes in New England fell by a far more substantial 6.7 percent. Similarly, between 1990 and 1991 real incomes in the U.S. again fell by 2.1 percent, while real family incomes in New England fell by 5.2 percent. In a span of just two years, the income advantage of families in New England fell from 28 percent in 1989 to 18 percent in 1991. Since then, family income

TABLE 3 MEDIAN REAL INCOMES OF FAMILIES IN THE UNITED STATES AND NEW ENGLAND, 1989-1994 (IN 1994 DOLLARS)

	U.S.	New England	New England as a % of U.S.
1989	\$40,724	\$51,909	1.275
1990	\$39,884	\$48,430	1.214
1991	\$39,063	\$45,927	1.176
1992	\$38,767	\$46,419	1.197
1993	\$37,880	\$45,589	1.204
1994	\$38,820	\$46,990	1.210

Sources: March Current Population Survey, 1990-1995, tabulations by Center for Labor Market Studies.

	1989	1994	Percent Change
U.S.	\$40,724	\$38,820	-4.7%
New England	\$51,909	\$46,990	-9.5%
Connecticut	\$61,854	\$51,000	-17.5%
New Hampshire	\$50,659	\$43,227	-14.7%
Massachusetts	\$53,330	\$49,949	-6.3%
Maine	\$37,234	\$35,771	-3.9%
Rhode Island	\$43,026	\$41,400	-3.8%
Vermont	\$42,739	\$44,011	3.0%

Source: March 1990 and March 1995 Current Population Survey, tabulations by Center for Labor Market Studies.

trends in New England have been favorable compared to trends occurring nationwide. Real median family incomes in New England grew by roughly 1 percent between 1991 and 1992, while falling by nearly 1 percent in the U.S. Similarly, the estimated 1.8 percent decline in real incomes between 1992 and 1993 in New England was slightly less than the 2.3 percent decline that occurred among all families in the nation. During 1994, a year of strong output and employment growth in the region and the nation, real median incomes grew at a higher rate than any time since the late 1980s. Real median family income grew by 3.1 percent in New England between 1993 and 1994, a rate of growth that moderately exceeded the 2.5 percent increase in median family incomes nationwide. By 1994, New England median family incomes were 21 percent above the U.S. average.

Within New England, the relative size of the declines in real median family incomes between 1989 and 1994 varied quite widely across each of the New England states. Three of the states with the fastest growing real family incomes over the 1979 to 1989 period (Connecticut, New Hampshire, and Massachusetts) experienced the largest percentage declines in median real family incomes

between 1989 and 1994 (see Table 4). These were the only three states in New England to experience declines in real incomes that exceeded the decline in incomes nationwide. Estimated declines in real family incomes were particularly pronounced in Connecticut and New Hampshire. Families in these states experienced a decline in real incomes of 18 percent and 15 percent, respectively, between 1989 and 1994. Families in Massachusetts, Maine, and Rhode Island experienced more moderate declines of 3 to 6 percent in their real incomes. The only state to experience growth in real family incomes over the 1989 to 1994 period was Vermont. Families in Vermont posted a 3 percent gain in real incomes between 1989 and 1994. Vermont was the only state in New England that had surpassed its 1989 wage and salary employment level by 1994.

Vermont was the only state in New England to improve its income ranking relative to all states in the nation between 1989 and 1994. In 1979, families in Vermont had a median income ranking it 36th among all states, a position that improved to 16th by 1989 and 9th by 1994 (see Table 5). Three of the other five New England states, Connecticut, Massachusetts, and Maine, dropped by only one rank. Rhode Island's position fell by two places, from 14th in 1989 to 16th in 1994. Despite the above-average real income declines that occurred in many states in New England over the 1989 to 1994 period, families in New England still have among the highest incomes in the nation. Four of the region's states had median family incomes

	1979	1989	1994
Connecticut	3rd	1st	2nd
Massachusetts	12th	3rd	4th
Vermont	36th	16th	9th
New Hampshire	20th	4th	10th
Rhode Island	19th	14th	16th
Maine	44th	32nd	33rd

Source: March Current Population Survey, 1980-1995, tabulations by Center for Labor Market Studies.

placing them in the ten highest-income states in the nation in 1994.

The Incomes of Key Subgroups of Families in New England

The preceding analysis has focused on the median real incomes of all families in the U.S. and New England. While the findings of this analysis allow one to gauge how well the average family in New England has fared over time and relative to its counterpart nationally, the aggregate nature of the analysis may mask important variations in the economic fortunes of key demographic and socioeconomic groups of families in the region.

This section of our report examines trends in the median real incomes of families in New England categorized by three key characteristics: the presence of children under 18 in the home, the type of family (married couple versus single householder), and the educational attainment of the family householder. Median real incomes for these family subgroups will be presented for the years 1979, 1989, and 1994 to assess how families in each group fared over the booming years of the 1980s and how they fared over the more turbulent and recessionary 1990s.

Findings in Table 6 reveal that families with no children under the age of 18 experienced a larger gain in their median real incomes over the 1979-1989 period than families with one or more children under 18 years of age. Families without any children experienced nearly a 30 percent gain in their median real incomes in New England, compared to the lower but still sizable 21 percent gain in incomes among families with children. Families with no children under the age of 18 made up a growing fraction of all families over the period of our study, rising from

just over 48 percent of families in 1979 to 54 percent in 1989, then falling to 52 percent in 1994. Estimates in Table 6 reveal that families with no children had higher median incomes than families with children in 1989, a finding consistent with previous analyses of income trends for the U.S. as a whole.⁵ In 1979, families in New England with no children had median incomes about 5 percent less than the median incomes of families with children. By 1989, childless families had median incomes nearly 3 percent higher than their counterparts with children.

Married couple families experienced considerably higher growth in median real incomes than female headed families (26 percent compared to less than 8 percent). As we will detail below, a substantial portion of the growth in real family incomes in the 1980s was the result of increased annual earnings of wives in married couple families.

Growth in median real family incomes between 1979 and 1989 was also strongly associated with the formal educational attainment of the householder. Families in New England who were headed by a person who failed to complete high school experienced only a 6 percent gain in real family incomes between 1979 and 1989, compared to an 11 percent gain among families headed by high school graduates and 14 percent among those

TABLE 6 MEDIAN REAL INCOMES OF FAMILIES IN NEW ENGLAND, BY SELECTED CHARACTERISTICS, 1979 AND 1989 (IN 1994 DOLLARS)

	1979	1989	Percent Change
All Families	\$41,572	\$51,909	24.9%
No Own Children Under 18	\$40,340	\$52,405	29.9%
One or More Own Children Under 18	\$42,297	\$51,069	20.7%
Married Couple	\$45,539	\$57,427	26.1%
Female Headed	\$23,804	\$25,636	7.7%
Less than High School	\$28,681	\$30,479	6.3%
High School Graduate	\$40,164	\$44,388	10.5%
Some College	\$47,903	\$54,738	14.3%
Four Year Degree	\$56,214	\$71,710	27.6%
Postbacc. Study or Degree	\$64,030	\$85,275	33.2%

Source: March 1980 and March 1990 Current Population Survey, tabulations by Center for Labor Market Studies.

⁵ Sum, Andrew; Fogg, Neal; and Neeta Fogg, "The Economic Well-Being of U.S. Families with Children: An Assessment of Recent Trends, an Exploration of Their Underlying Determinants, and Public Policy Implications," Center for Labor Market Studies, Northeastern University, Boston, Massachusetts, March 1994.

TABLE 7 MEDIAN REAL INCOMES OF FAMILIES IN MASSACHUSETTS, BY SELECTED CHARACTERISTICS, 1979 AND 1989 (IN 1994 DOLLARS)

	1979	1989	Percent Change
All Families	\$42,157	\$53,330	26.5%
No Children	\$42,357	\$55,258	30.5%
One or More Children	\$42,057	\$51,392	22.2%
Married Couple	\$47,644	\$60,760	27.5%
Female Headed	\$20,554	\$25,021	21.7%
Less than High School	\$26,840	\$27,510	2.5%
High School Graduate	\$42,079	\$46,842	11.3%
Some College	\$50,492	\$55,216	9.6%
Four Year Degree	\$58,779	\$73,658	25.3%
Postbacc. Study or Degree	\$67,411	\$88,177	30.8%

Source: March 1980 and March 1990 Current Population Survey, tabulations by Center for Labor Market Studies.

with some college. Real incomes among families headed by a person with a Bachelor's degree rose by nearly 28 percent over the decade of the 1980s, while families headed by someone with a postbaccalaureate degree experienced a 33 percent increase in their median real incomes.

As a result of these trends, the income advantages of well-educated families in New England grew considerably over the decade. In 1979, a family headed by a person with a Bachelor's degree had an income roughly 40 percent higher than the median income of families headed by a high school graduate. By 1989, this income advantage had grown to 62 percent. Similar developments took place throughout the country.

The above patterns and trends in the median real incomes of families in New England were quite similar to those observed in Massachusetts (see Table 7). Families with no own children under 18 years of age, married couple families, and families headed by persons with relatively high levels of formal educational attainment experienced more rapid growth in real incomes

than each of their respective counterparts. As was the case with families in New England, all of the family subgroups included in our analysis experienced a rise in real median incomes between 1979 and 1989. A booming state economy clearly lifted all families to higher real income levels, but did so at different rates for these varying subgroups.

The patterns in the improving economic fortunes of various families in New England and Massachusetts during the booming decade of the 1980s were exactly mirrored by patterns of family income decline over the 1989 to 1994 period. The families experiencing the highest growth in real incomes between 1979 and 1989 were the same families who experienced the lowest rates of income decline between 1989 and 1994. Overall, families in New England experienced nearly a 10 percent decline in their median real incomes between 1989 and 1994 (see Table 8). Families with one or more own children under the age of 18 experienced approximately the same decline in incomes (9.8 percent) compared to families with no children (9.3 percent).⁶ Married couple families saw their median real incomes fall by 8 percent, compared to a 14 percent decline among female headed families.

Families headed by persons with relatively low levels of formal schooling experienced

TABLE 8 MEDIAN REAL INCOMES OF FAMILIES IN NEW ENGLAND, BY SELECTED CHARACTERISTICS, 1989 AND 1994 (IN 1994 DOLLARS)

	1989	1994	Percent Change
All Families	\$51,909	\$46,990	-9.5%
No Children	\$52,405	\$47,546	-9.3%
One or More Children	\$51,069	\$46,043	-9.8%
Married Couple	\$57,427	\$52,880	-7.9%
Female Headed	\$25,636	\$22,000	-14.2%
Less than High School	\$30,479	\$23,192	-23.9%
High School Graduate	\$44,388	\$37,780	-14.9%
Some College	\$54,738	\$48,200	-11.9%
Four Year Degree	\$71,710	\$64,846	-9.6%
Postbacc. Study or Degree	\$85,275	\$84,400	-1.0%

Source: March 1990 and March 1995 Current Population Survey, tabulations by Center for Labor Market Studies.

⁶ The observed difference is not large enough to be classified as statistically significant.

substantially larger declines in median real incomes compared to their better educated counterparts. Families headed by persons failing to complete high school saw their real incomes fall by 24 percent between 1989 and 1994, followed by a 15 percent decline among families headed by a high school graduate and a 12 percent decline among families headed by a person with some college. Families headed by a Bachelor's degree recipient experienced a 10 percent decline in real incomes, while those families headed by someone with an advanced academic degree experienced only a 1 percent decline in their real median incomes.

Recent trends in median real incomes among families in Massachusetts between 1989 and 1994 were quite similar to those in New England, with nearly all types of families in Massachusetts experiencing a lower decline in real incomes compared to their regional counterparts (see Table 9). The only exception to this general pattern was families with no children under the age of 18, who experienced a 9 percent decline in real incomes between 1989 and 1994 compared to a 4 percent decline among families with one or more children under the age of 18. Real income declines were lowest among married couple families, who had the option of increasing the hours worked by wives to offset declines in husbands' earnings, and families headed by persons with the highest levels of educational attainment. Families in the Bay State headed by a person who obtained an advanced academic degree experienced virtually no change in real incomes between 1989 and 1994, compared to a 5 percent decline among families headed by a Bachelor's degree recipient, a 12 percent decline among families headed by a high school graduate and an 18 percent drop in the real incomes of families headed by

TABLE 9 MEDIAN REAL INCOMES OF FAMILIES IN MASSACHUSETTS, BY SELECTED CHARACTERISTICS, 1989 AND 1994 (IN 1994 DOLLARS)

	1989	1994	Percent Change
All Families	\$53,330	\$49,949	-6.3%
No Children	\$55,258	\$50,108	-9.3%
One or More Children	\$51,392	\$49,600	-3.5%
Married Couple	\$60,760	\$57,200	-5.9%
Female Headed	\$25,021	\$22,080	-11.8%
Less than High School	\$27,510	\$22,664	-17.6%
High School Graduate	\$46,842	\$41,336	-11.8%
Some College	\$55,216	\$49,324	-10.7%
Four Year Degree	\$73,658	\$69,652	-5.4%
Postbacc. Study or Degree	\$88,177	\$88,000	-0.2%

Source: March 1990 and March 1995 Current Population Survey, tabulations by Center for Labor Market Studies.

someone lacking a high school diploma or GED certificate.

As a result of these trends in the real incomes of families, the relative income advantages of families with the highest levels of formal schooling are greater than they have ever been. In 1994, families in Massachusetts headed by someone with some postbaccalaureate schooling had a median income that was more than two times higher than that of families headed by a high school graduate and nearly four times higher than families headed by a person lacking a high school diploma. These relative income ratios represent substantial upward shifts since 1979. Formal education is clearly becoming the "fault line" underlying the rise in family income inequality in the region.

Our review of trends in the real incomes of families in the U.S. and New England over the past fifteen years thus far has revealed three major sets of findings. First, and most importantly, nationally real median wage gains have been almost flat for over fifteen years — lagging far below the historical standards of the 1950s and 60s. Second, with the exception of income developments during the 1989-1991 period, trends in the median real incomes of families in New England have been favorable compared to trends among families nationwide. The past five years, however, have been characterized by a

decline in the real incomes of New England's families. The economic recovery of 1992-1994 has not been sufficiently strong to restore 1989 living standards. Third, the fortunes of families in New England have been far from uniform across demographic and educational attainment subgroups. Married couple families and families headed by persons with high levels of formal educational attainment have experienced the most favorable trends in real family incomes.

The Levels and Sources of Income in Married Couple Families

One interesting and important policy question concerns the underlying sources of change in the family incomes of married couple families. Ideally, growth in real family incomes would be driven by increases in the real hourly earnings of family householders. Such a development would allow family incomes to grow without the number of hours worked having to increase, and thus would

require no loss in leisure time or home output (e.g. child care, home cooking) among family members. In the absence of sustained hourly earnings gains by the householder or other family members, real family incomes can grow only if more family members work in the paid labor market or if the combined annual hours worked by family members grows.

This section of our report will examine and assess the sources of income among married couple families in the region and the nation. Since our main concern is to explore the impact of earnings from the labor market on family incomes, we have restricted our analysis to those married couple families in which the husband was under the age of 65 at the time of the survey. There were slightly under 3.5 million family households in New England in March 1995. Slightly more than 2.7 million of these families were married couple families, and 2.2 million of these families were headed by a person under the age of 65. Thus, the analysis that follows pertains to these 2.2 million families in New England in March 1995, representing about 64 percent of all families in the region.

Table 10 displays the median real family incomes of married couple families in which the husband was less than 65 years old. Estimates of median real family incomes are higher than those previously reported because we are excluding families where the husband was 65 years of age and older, and these families have lower incomes than their younger counterparts. However, the patterns of changes in real incomes for these married couple families are quite similar to those previously discussed.

Over the 1979 to 1989 period, non-elderly married couple families in New England experienced far greater increases in real incomes (29 percent) than their national counterparts (8 percent). This was true for all married couple families and for every major subgroup of married couple families. In both the U.S. and New England, married couple families with no children posted high-

TABLE 10 MEDIAN REAL FAMILY INCOMES OF MARRIED COUPLE FAMILIES, U.S. AND NEW ENGLAND, BY SELECTED CHARACTERISTICS, 1979, 1989 AND 1994 (IN 1994 DOLLARS)

	1979	1989	1994	Percent Change, 1979-89	Percent Change, 1989-94
UNITED STATES					
All Families	\$46,182	\$49,719	\$49,266	7.7%	-0.9%
No Children	\$47,364	\$52,826	\$51,500	11.5%	-2.5%
One or More Children	\$45,616	\$47,806	\$47,300	4.8%	-1.1%
Less than High School	\$34,527	\$30,716	\$27,031	-11.0%	-12.0%
High School Graduate	\$44,650	\$44,297	\$42,000	-0.8%	-5.2%
Some College	\$48,970	\$52,946	\$49,600	8.1%	-6.3%
Four Year Degree	\$59,134	\$67,527	\$67,400	14.2%	-0.2%
Postbacc. Study or Degree	\$67,307	\$80,315	\$83,000	19.3%	3.3%
NEW ENGLAND					
All Families	\$48,417	\$62,268	\$57,614	28.6%	-7.5%
No Children	\$51,469	\$67,208	\$60,635	30.6%	-9.8%
One or More Children	\$47,214	\$59,160	\$55,000	25.3%	-7.0%
Less than High School	\$38,162	\$40,750	\$36,155	6.8%	-11.3%
High School Graduate	\$46,062	\$53,412	\$47,068	16.0%	-11.9%
Some College	\$52,535	\$61,211	\$55,755	16.5%	-8.9%
Four Year Degree	\$60,027	\$78,283	\$72,290	30.4%	-7.7%
Postbacc. Study or Degree	\$66,588	\$88,177	\$89,950	32.4%	2.0%

Source: March Current Population Survey, 1980-1995, tabulations by Center for Labor Market Studies.

er gains in incomes than families with one or more children under the age of 18. Families in which the husband was well-educated also experienced far greater increases in real incomes compared to families headed by persons with less formal education. For example, in New England, married couple families headed by a person with a Bachelor's or advanced degree experienced a 30 percent or higher gain in real incomes between 1979 and 1989, compared to a 14 to 19 percent gain among such families nationwide. Among those married couple families in New England in which the husband was a high school graduate, real median family incomes grew by 16 percent, compared to a 1 percent decline among similar families nationwide. Families in New England in which the husband failed to secure a high school diploma also enjoyed the fruits of economic growth between 1979 and 1989, posting a 7 percent increase in their real incomes. Their experience stands in stark contrast to the 11 percent decline that occurred in the real incomes of these families in the U.S.

Over the 1989 to 1994 period, trends in real incomes among married couple families were less favorable in New England than in the U.S. Overall, married couple families in New England experienced an 8 percent decline in real family incomes, compared to only a 1 percent decline nationwide. Families with no children and those with children experienced roughly equal proportionate declines in real incomes, falling 7-10 percent in New England but only by 1-3 percent nationwide. Families in which the husband was well-educated again fared considerably better than their less well-educated counterparts. In the U.S. and New England, the only educational attainment group to experience an increase in real family incomes over the 1989 to 1994 period were those in which the husband had

some postbaccalaureate education. These families experienced a 2 percent rise in median real family incomes in New England and a 3 percent gain nationwide.

We now need to ask, "what lies behind these changes in family incomes?" The two major categories of income are earnings from the labor market and other sources of income, such as unemployment compensation, rent, interest, dividend income, child support, alimony, social security, and pension income. Since we are concerned only with married couple families headed by persons under the age of 65, these latter four sources of income are not likely to be of much importance. In fact, estimates in Table 11 reveal that for the median married couple family, roughly 96 percent of income was derived from the combined earnings of husbands and wives. For each family, we can compute the fraction of total family income derived from the combined earnings of the spouses simply by adding these earnings and dividing by income. If we then "line up" families in ascending order of this fraction and choose the family in the middle, the value of this fraction in the U.S. in 1994 was 96.5 percent and in New England it was 96.1 percent. This fraction has remained remarkably stable over time, in the 95 to 96 percent range for both the U.S. and New England since 1979.

Not surprisingly, given their younger ages, married couple families with children derived

TABLE 11	MEDIAN FRACTION OF THE TOTAL INCOMES OF MARRIED COUPLE FAMILIES DERIVED FROM THE COMBINED EARNINGS OF THE HUSBAND AND WIFE, 1994	
	U.S.	New England
All Families	96.5	96.1
No Children	91.8	89.5
One or More Children	98.2	98.0
Less than High School	90.7	83.4
High School Graduate	96.8	94.5
Some College	97.0	97.0
Four Year Degree	97.3	97.7
Postbacc. Study or Degree	95.9	96.3

Source: March 1995 Current Population Survey, tabulations by Center for Labor Market Studies.

a larger share of their incomes from the combined earnings of the spouses compared to families with no children under 18 in the home. With the exception of those families in which the husband had completed less than a high school education, the fraction of income derived from earnings was in the 95 to 98 percent range in the U.S. and New England. Families in the U.S. headed by someone without a high school diploma derived 91 percent of their income from the combined earnings of the spouses, while in New England this fraction was only 83 percent. Since poorly educated persons are more likely to become unemployed and are more often only intermittently employed, the receipt of unemployment benefits, cash public assistance income, and other "safety net" income likely accounts for this lower fraction.

For the typical married couple family, approximately 96 percent of income is derived from the combined earnings of the spouses. This finding clearly implies that trends in real family incomes will be driven by trends in the real earnings of both spouses. A key issue

Over 60 percent of the rise in the real median incomes of married couple families in New England over the 1979 to 1994 period was attributable to the increased earnings of wives.

then, is that of identifying the extent to which the employment and earnings of wives have been used to buoy, bolster or preserve the living standards of married couple families in the U.S. and New England.

Estimates in Table 12 provide information on the median real annual earnings of husbands in married couple families over the 1979 to 1994 period. Nationwide, the real annual earnings of husbands fell by 3 percent between 1979 and 1989, and they dropped a further 4 percent between 1989 and 1994. Between 1979 and 1989, our earlier findings indicated (see Table 10) that the median real incomes of these families rose by 8 percent, and they declined by 1 percent between 1989 and 1994. Clearly, these trends in married couple family incomes were not simply the result of changes in the real earnings of husbands. In the U.S., real family incomes of married couple families would have deteriorated by nearly 7 percent between 1979 and 1994 if wives had not increased their earnings over the same time period. In contrast to the U.S. experience, the median real earnings of husbands in New England rose by 19 percent between 1979 and 1989, a period during which real family incomes rose by 29 percent. Between 1989 and 1994, the real annual earnings of husbands fell by 9 percent, while real family incomes fell by 8 percent. Over 60 percent of the rise in the real median incomes of married couple families in New England over the 1979 to 1994 period

TABLE 12 MEDIAN REAL EARNINGS OF HUSBANDS IN MARRIED COUPLE FAMILIES, U.S. AND NEW ENGLAND, BY SELECTED CHARACTERISTICS, 1979, 1989 AND 1994 (IN 1994 DOLLARS)

	1979	1989	1994	Percent Change, 1979-89	Percent Change, 1989-94
UNITED STATES					
All Families	\$32,043	\$31,074	\$30,000	-3.0%	-3.5%
No Children	\$30,006	\$29,879	\$27,500	-0.4%	-8.0%
One or More Children	\$34,046	\$32,269	\$30,000	-5.2%	-7.0%
Less than High School	\$22,030	\$16,732	\$14,844	-24.0%	-11.3%
High School Graduate	\$31,643	\$28,086	\$25,000	-11.2%	-11.0%
Some College	\$34,487	\$33,465	\$30,000	-3.0%	-10.4%
Four Year Degree	\$41,055	\$43,026	\$42,000	4.8%	-2.4%
Postbacc. Study or Degree	\$48,065	\$52,587	\$54,505	9.4%	3.6%
NEW ENGLAND					
All Families	\$32,043	\$38,245	\$35,000	19.4%	-8.5%
No Children	\$30,041	\$35,855	\$32,542	19.4%	-9.2%
One or More Children	\$34,044	\$40,635	\$35,716	19.4%	-12.1%
Less than High School	\$24,032	\$22,746	\$16,000	-5.4%	-29.7%
High School Graduate	\$30,041	\$33,465	\$29,000	11.4%	-13.3%
Some College	\$34,046	\$39,440	\$33,000	15.8%	-16.3%
Four Year Degree	\$42,537	\$51,392	\$43,000	20.8%	-16.3%
Postbacc. Study or Degree	\$46,062	\$57,368	\$58,000	24.5%	1.1%

Source: March Current Population Survey, 1980-1995, tabulations by Center for Labor Market Studies.

was attributable to the increased earnings of wives.

Trends in the median real annual earnings of husbands follow the same patterns that we have previously identified for all family householders. In New England over the 1979 to 1989 period, husbands with no children and those with one or more children experienced an equal 19 percent increase in real earnings. The real earnings fortunes of the region's husbands were closely tied to their formal educational attainment. Men with at least a Bachelor's degree had real earnings growth roughly double that of men with only a high school diploma, and men lacking a high school diploma actually experienced a 5 percent decline in real annual earnings between 1979 and 1989.

Between 1989 and 1994, husbands with no

children present in the home experienced a 9 percent drop in their median real annual earnings while those with one or more children experienced a 12 percent decline. Husbands who failed to complete high school experienced a substantial 30 percent decline in real earnings, compared to a 13 to 16 percent decline among high school graduates and Bachelor's degree recipients. Husbands with more than a Bachelor's degree were the only group to experience an increase in their annual earnings between 1989 and 1994, and this gain was only 1 percent, an increase not statistically significant from zero.

Comparisons of trends in the real incomes of married couple families and the real earnings of husbands suggest that increased earnings of wives have been needed to counteract the declining real earnings of husbands (in the U.S.), or in some cases (notably New England during the 1980s) have been used to supplement the increased earnings of husbands. Findings in Table 13 clearly reveal that the median real earnings of wives in married couple families have indeed increased substantially over the 1979 to 1994 period, with most of this growth occurring during the decade of the 1980s. Between 1979 and 1989, the median real annual earnings of wives more than doubled in the U.S. and New England, and they increased by another 12 percent between 1989 and 1994. As will be revealed below, these substantial gains in the real earnings of wives were produced by a multiplicity of forces, including a higher fraction of wives who worked, rising hours of work among wives with work experience, and rising real wages. Our findings also reveal that wives in New England had substantially higher median earnings than their national counterparts during each of the years covered by our study.

In both the U.S. and New England, the median real annual earnings of wives with one or more own children under 18 grew at substantially higher rates than those of women with no children, although women with no children had higher median earnings at each point in time. The median real annual earn-

TABLE 13 MEDIAN REAL EARNINGS OF WIVES IN MARRIED COUPLE FAMILIES, U.S. AND NEW ENGLAND, BY SELECTED CHARACTERISTICS, 1979, 1989 AND 1994 (IN 1994 DOLLARS)

	1979	1989	1994	Percent Change, 1979-89	Percent Change, 1989-94
UNITED STATES					
All Families	\$4,005	\$8,964	\$10,000	123.8%	11.6%
No Children	\$6,803	\$10,938	\$12,000	60.8%	9.7%
One or More Children	\$2,403	\$7,290	\$9,000	203.4%	23.4%
Less than High School	\$1,047	\$2,641	\$3,000	152.2%	13.6%
High School Graduate	\$4,005	\$8,366	\$9,840	108.9%	17.6%
Some College	\$5,307	\$11,952	\$12,000	125.2%	0.4%
Four Year Degree	\$6,008	\$12,549	\$14,500	108.9%	15.5%
Postbacc. Study or Degree	\$5,007	\$12,622	\$13,000	152.1%	3.0%
NEW ENGLAND					
All Families	\$5,600	\$11,952	\$13,398	113.4%	12.1%
No Children	\$10,014	\$15,201	\$15,000	51.8%	-1.3%
One or More Children	\$3,004	\$9,561	\$12,000	218.3%	25.5%
Less than High School	\$3,405	\$8,079	\$7,500	137.3%	-7.2%
High School Graduate	\$6,008	\$11,474	\$10,200	91.0%	-11.1%
Some College	\$6,631	\$11,952	\$17,000	80.2%	42.2%
Four Year Degree	\$6,008	\$14,342	\$18,000	138.7%	25.5%
Postbacc. Study or Degree	\$6,008	\$15,537	\$14,390	158.6%	-7.4%

Note: Estimates include those wives with no reported earnings.

Source: March Current Population Survey, 1980-1995, tabulations by Center for Labor Market Studies.

ings of women with children more than tripled in the U.S. and New England over the decade of the 1980s, compared to an increase of about 50 percent among women with no children under 18 in the home. Women with children posted gains in median real annual earnings of roughly 25 percent between 1989 and 1994 in both the U.S. and New England. Women with no children under the age of 18 experienced a 10 percent gain in earnings between 1989 and 1994 nationwide, while their counterparts in the region experienced a 1 percent decline.

Table 13 also provides estimates of the median real annual earnings of wives categorized by the educational attainment of their husbands, to maintain consistency with our earlier findings on the earnings of husbands. The patterns of change in real earnings across educational attainment groups are slightly mixed. The estimates for both the U.S. and New England indicate that wives married to poorly educated and very well-educated husbands experienced the most rapid growth in earnings between 1979 and 1989. In the former case, these earnings gains were used to offset substantive earnings declines among husbands and in the latter case the earnings gains were used to supplement the increased earnings of husbands. Findings for the 1989 to 1994 period are more mixed. In the U.S., wives in married couple families with husbands who completed twelve or fewer years of schooling and those in families where the husband held a Bachelor's degree experienced a 14 to 18 percent gain in median real earn-

ings. In New England, wives with husbands in the lowest two educational groups experienced fairly sizable (7 to 11 percent) losses in median real annual earnings while those married to husbands who held a Bachelor's degree experienced a 26 percent gain.

Since highly educated men and women tend to marry each other, the annual earnings of wives whose husbands are highly educated are sharply higher than the earnings of wives who are married to men with less education. For example, in New England the median real earnings of the wives of Bachelor's degree recipients were 80 percent higher in 1994 than those of wives married to high school graduates. In 1979, the median earnings of these two groups were identical.

The main findings of the above analysis are presented graphically in Charts 2 and 3. Chart 2 refers to the 1979 to 1989 period, while Chart 3 refers to the 1989 to 1994 period. Chart 2 shows that in the U.S., the growth in real family incomes between 1979 and 1989 was due solely to the increased real earnings of wives. The increased earnings of wives were sufficiently large to offset the declining earnings of husbands. As a result, real family incomes grew. In New England during the 1980s, the rapid earnings growth of wives supplemented growth in the real earnings of husbands. As a result, real family incomes among married couple families grew quite rapidly.

Over the 1989 to 1994 period for the nation as a whole, declines in the real earnings of hus-

chart 2 REAL FAMILY INCOMES AND THE EARNINGS OF HUSBANDS AND WIVES, U.S. AND NEW ENGLAND, 1979 AND 1989

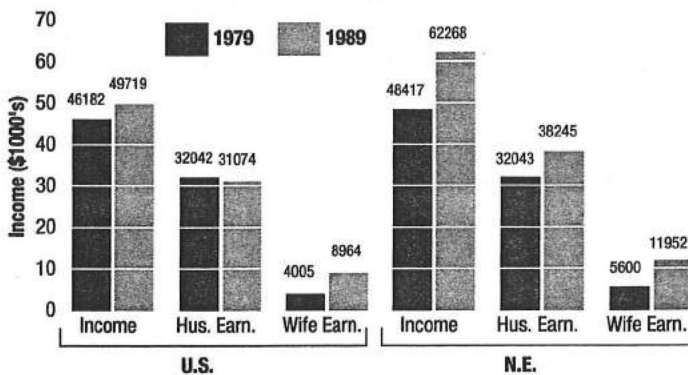


chart 3 REAL FAMILY INCOMES AND THE EARNINGS OF HUSBANDS AND WIVES, U.S. AND NEW ENGLAND, 1989 AND 1994

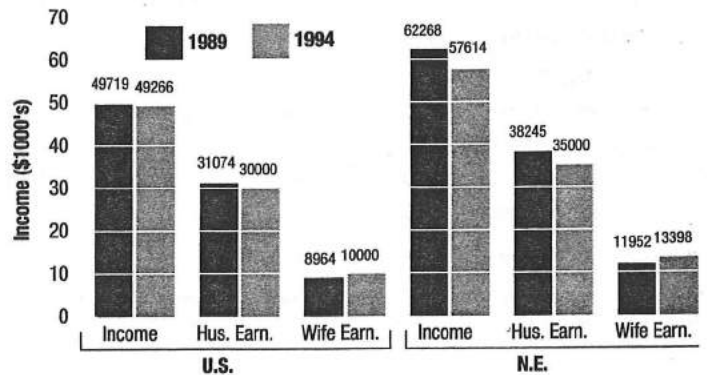
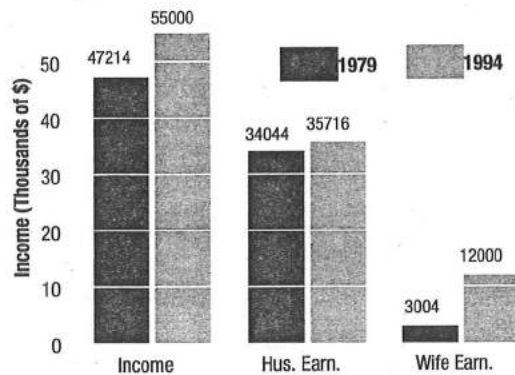


chart 4 REAL FAMILY INCOMES AND THE EARNINGS OF HUSBANDS AND WIVES, NEW ENGLAND, 1979 AND 1994



In 1994, both the husband and the wife were employed at some point during the year in over 70 percent of married couple families in the U.S. and nearly 75 percent of such families in New England.

bands were roughly offset by increases in the real earnings of wives, with little change in median real family incomes (see Chart 3). In New England, increases in the real earnings of wives were not large enough to offset the large real earnings declines of husbands. Thus, median real family incomes fell.

To illustrate the changing economic fortunes of New England's married couple families with children between 1979 and 1994, Chart 4 portrays the incomes and earnings of these families at the beginning and end of this fifteen year period. The chart reveals quite clearly that increases in real family incomes between 1979 and 1994 were driven almost exclusively by the increased earnings of wives.

Thus, the increased earnings of wives in married couple families have either offset declines in the real earnings of husbands or in some cases augmented the real annual earnings of husbands. As a result, the earnings of wives make up an increasingly important part of the total earnings and, therefore, the total

incomes of married couple families. As a consequence of the increasing real annual earnings of wives and the declining or more slowly growing real annual earnings of husbands, the fraction of the combined earnings of both spouses contributed by the wife has increased sharply over time in both the U.S. and New England. Findings in Table 14 reveal that in 1979 the earnings of wives accounted for 14-15 percent of combined earnings in the U.S. and New England. Their share of total earnings grew substantially to 25-26 percent by 1989 and increased further to the 28-29 percent range by 1994.

The final part of our story of the forces behind trends in the incomes of married couple families is related to the source of the increased annual earnings of wives. The real annual earnings of wives will increase if their real hourly earnings increase, if more wives participate in the paid labor market, or if those that do work are employed for longer hours. Our analysis of the available evidence reveals that these latter two sources have accounted for the major share of the increased earnings of wives.

In 1994, both the husband and the wife were employed at some point during the year in over 70 percent of married couple families in the U.S. and nearly 75 percent of such families in New England (see Table 15). This represents a 10 percentage point increase in the share of dual-earner families over the 1979 to 1994 period, with the bulk of the increase occurring over the decade of the 1980s. In contrast to the situation in 1979, married couple families with one or more own children in the home were more likely to have both spouses employed in the late 1980s and mid

TABLE 14	MEDIAN SHARE OF THE TOTAL EARNINGS OF HUSBANDS AND WIVES IN MARRIED COUPLE FAMILIES CONTRIBUTED BY THE WIFE, U.S. AND NEW ENGLAND, 1979, 1989 AND 1994		
	1979	1989	1994
United States	13.6%	24.8%	28.0%
New England	15.0%	25.7%	29.4%

Source: March 1980, 1990 and 1995 Current Population Survey, tabulations by Center for Labor Market Studies.

TABLE 15 FRACTION OF MARRIED COUPLE FAMILIES IN WHICH BOTH THE HUSBAND AND WIFE WERE EMPLOYED, U.S. AND NEW ENGLAND, BY SELECTED CHARACTERISTICS, 1979, 1989 AND 1994			
	1979	1989	1994
UNITED STATES			
All Families	60.7%	69.5%	70.5%
No Children	61.1%	67.5%	68.5%
One or More Children	60.5%	71.1%	72.0%
Less than High School	51.3%	52.6%	50.6%
High School Graduate	61.7%	70.8%	70.7%
Some College	66.2%	74.7%	75.5%
Four Year Degree	66.5%	74.7%	75.6%
Postbacc. Study or Degree	64.2%	73.7%	73.0%
NEW ENGLAND			
All Families	64.4%	75.0%	74.5%
No Children	66.6%	73.4%	71.9%
One or More Children	62.9%	76.4%	76.5%
Less than High School	54.4%	63.1%	54.7%
High School Graduate	66.2%	74.9%	71.7%
Some College	69.9%	79.1%	82.2%
Four Year Degree	67.5%	77.7%	76.8%
Postbacc. Study or Degree	68.1%	77.4%	78.2%

Source: March Current Population Survey, 1980-1995, tabulations by Center for Labor Market Studies.

1990s than married couple families with no children. Contrary to local and national media reports of a declining work effort among wives and a reported movement towards "down-shifting" in married couple families, we find no evidence of a reduced annual work commitment among wives in married couple families, especially those with one or more children under 18.⁷

In New England in 1994, both the husband and the wife were employed in three out of every four families with a child under the age of 18. The fraction of the region's married couple families that were dual-earner families increased with the educational attainment of the husband. In New England, only 55 percent of married couple families in which the husband did not complete high school were dual-earner families, compared to 72 percent of the families in which the husband was a high school graduate and 77 to 78 percent of the families where the husband was at least a Bachelor's degree recipient.

The increased labor market participation of wives, combined with increased annual hours of employment among those already employed, has substantially raised the median annual hours of work by wives. The median annual hours of work by wives increased by roughly 750 to 760 hours between 1979 and 1994 in the U.S. and New England (see Table 16). This represents an increase in work hours equivalent to 21 weeks of full-time work (35 hours per week). This factor has been the driving force behind trends in the real incomes of families in the U.S. and New England.

The largest absolute and relative increases in annual hours worked by wives in both the U.S. and New England between 1979 and 1994 occurred among women with children under 18 present in the home. Married women with children do, however, continue to work fewer hours than women with no own children under 18. In New England, wives with no children under the age of 18 worked on average for 1,820 hours during 1994, the equivalent of 52 weeks worked for 35 hours of work per week. Married women with children worked nearly 1,300 hours in 1994, the equivalent of 37 weeks of full-time work or 52 weeks worked for 25 hours of work per week.

As a result of substantial and sustained increases in the work effort of wives in married couple families, the fraction of total hours worked by both spouses that were attributable to the wife has increased markedly over the past fifteen years (See Table 17). In the U.S. and New England, wives' share of total hours worked rose from about 28 percent in 1979 to 41 percent by 1994. Among married couple families with no own children under 18, approximately 45 percent of the total annual hours worked by husbands and wives were due to the work effort of the wife. Thus, in married couple families without children, near gender equality has been achieved in annual hours worked by husbands and wives.

The increased annual earnings of wives, dri-

⁷ See, for example, "Time Out: Plagued by stress, a growing number of people say they think time is becoming more precious than money and they're trying to slow down," U.S. News and World Report, December 11, 1995.

The median annual hours of work by wives increased by roughly 750 to 760 hours between 1979 and 1994 in the U.S. and New England. This represents an increase in work hours equivalent to 21 weeks of full-time

work, even primarily by increased employment rates and a higher number of hours worked, have been the key to holding up family living standards throughout the nation in the face of declines in the real annual earnings of husbands. In New England, the expanded work effort of wives was responsible for more than 60 percent of the improvement in the real incomes of married couple families over the past fifteen years.

	1979	1989	1994
UNITED STATES			
All Families	28.3%	39.6%	40.9%
No Children	39.1%	44.4%	44.7%
One or More Children	20.2%	33.7%	36.8%
NEW ENGLAND			
All Families	28.8%	38.6%	41.2%
No Children	42.2%	44.4%	45.0%
One or More Children	20.7%	33.0%	37.2%

Source: March Current Population Survey, 1980-1995, tabulations by Center for Labor Market Studies.

	1979	1989	1994	Absolute Change, 1979-94	Percent Change, 1979-94
UNITED STATES					
All Families	690	1,300	1,456	766	111.0%
No Children	1,040	1,600	1,716	676	65.0%
One or More Children	480	1,040	1,248	768	160.0%
Less than High School	320	595	650	330	103.1%
High School Graduate	780	1,320	1,560	780	100.0%
Some College	875	1,560	1,664	789	90.2%
Four Year Degree	880	1,500	1,560	680	77.3%
Postbacc. Study or Degree	680	1,295	1,275	595	87.5%
NEW ENGLAND					
All Families	810	1,300	1,560	750	92.6%
No Children	1,300	1,820	1,820	520	40.0%
One or More Children	520	1,040	1,295	775	149.0%
Less than High School	600	1,280	1,080	480	80.0%
High School Graduate	832	1,300	1,400	568	68.3%
Some College	960	1,300	1,320	860	89.6%
Four Year Degree	1,020	1,260	1,320	800	78.4%
Postbacc. Study or Degree	760	1,300	1,440	680	89.5%

Source: March Current Population Survey, 1980-1995, tabulations by Center for Labor Market Studies.

THE DISTRIBUTION OF FAMILY INCOMES IN THE UNITED STATES AND NEW ENGLAND

THE PRECEDING ANALYSIS of real income developments for families in New England has focused on the economic well-being of the average family. A more comprehensive analysis of trends in family living standards requires us to examine changes in the real incomes of families at various points along the income distribution and the changing shares of the total income pie obtained by families in various segments of this distribution (bottom, middle, and top). This section of the report is, thus, devoted to a discussion and critical assessment of an array of family income distribution issues in New England and the nation.

Given the importance of family income inequality issues in recent years, this section of the report will be devoted to an assessment of key trends in the distribution of income among families in the U.S., the New England region, and Massachusetts over the 1979 to 1994 period. We have divided this fifteen year period into the following two segments: 1979 to 1989 and 1989 to 1994. The first period represents the economic expansion of the 1980s in New England while the second period encompasses both the recession of 1989-1991 and subsequent regional recovery. The strength of the New England economy during the 1980s provides a unique opportunity to examine how the movement to and persistence of full-employment labor market conditions in the region influenced the direction and size of income inequality trends among families and the growth of the region's middle income groups. Among the

questions we seek to answer are the following: Were the strong gains in the real incomes of New England families widespread across the income distribution or were they concentrated at the top of the distribution? Did the rising real incomes of New England families throughout the 1980's prevent or reduce the growing degree of income inequality found nationally?

Since 1989, a number of wrenching economic changes affecting the level and the industrial and occupational structure of jobs have swept through New England's labor markets. As a result, in 1994, the median real income of New England families was nearly \$5,000 lower than its 1989 peak level. Clearly, the living standards of the average family in New England have eroded since 1989. How did the economic changes over the 1989-1994 period alter the distribution of family incomes in the region? Did families across the entire income distribution suffer declines in real

TABLE 18 DISTRIBUTION OF FAMILY INCOMES, U.S., NEW ENGLAND, AND MASSACHUSETTS, 1979, 1989, AND 1994

U.S.			
Income Distribution Quintile	1979	1989	1994
Bottom	5.3	4.7	4.4
Second	11.8	10.8	10.5
Middle	17.8	16.9	16.7
Fourth	24.5	24.3	24.6
Highest	40.5	43.3	43.8
NEW ENGLAND			
Income Distribution Quintile	1979	1989	1994
Bottom	5.8	5.2	4.6
Second	12.4	11.6	11.1
Middle	17.9	17.5	17.1
Fourth	24.2	24.4	24.8
Highest	39.7	41.3	42.4
MASSACHUSETTS			
Income Distribution Quintile	1979	1989	1994
Bottom	5.4	4.7	4.5
Second	12.1	11.5	11.5
Middle	17.6	17.6	17.6
Fourth	23.7	24.7	24.9
Highest	41.1	41.6	41.5

incomes or were these declines concentrated in the bottom and middle quintiles? Did the recession and the ensuing recovery increase income inequality in New England and reduce the size of the "middle class?"

Our estimates of family income inequality are based on household survey data derived from the March Current Population Surveys (CPS) for the years 1980, 1990, and 1995. Families in each geographic area were ranked in ascending order by the size of their total money income and then divided into five or ten equally sized groups, known as quintiles (5) or deciles (10) of the family income distribution. Estimates of family income inequality are based on the shares of total family income received by family households in each quintile or decile of the distribution. These shares of family income represent each group's relative share of the income pie. We also analyze the real mean family income within each quintile or decile, which represents the average size of the dollar income received by families in those quintiles or deciles. Finally, we examine the income levels that demarcate each quintile or decile of the family income distribution to represent the income level of families at different points along the family income distribution.

Trends in the Distribution of Family Income

During the past fifteen years, the degree of inequality in the distribution of family incomes increased nationwide as well as in New England and Massachusetts (see Table 18). Over the entire fifteen year period, there was a move in the direction of increased inequality, particularly between the bottom three quintiles and the top quintile of the income distribution. Nationally, the income shares of the bottom three quintiles declined between 1979 and 1994 while the second highest quintile held its own and the most affluent one-fifth sharply increased its share

from 40.5 percent to 43.8 percent.⁸ For the U.S. as a whole, the rich got considerably richer in both an absolute and relative sense, the incomes of middle income groups stagnated, and the bottom fifth got poorer both absolutely and relatively.

Similar developments occurred in New England and Massachusetts where families in the highest and the second highest quin-

For the U.S. as a whole, the rich got considerably richer in both an absolute and relative sense, the middle income groups stagnated, and the bottom fifth got poorer both absolutely and relatively.

tiles witnessed increases in their share of aggregate family income. The income shares of families in the bottom three quintiles in New England declined over the entire fifteen year period including the decade of the 1980s when median real family income in the region increased by 25 percent. In Massachusetts, the growth in family income inequality was not as pervasive as that experienced throughout the region and the nation. In fact, since 1989 there has been little net change in family income inequality within the state.

Historically, periods of strong economic growth have been accompanied by declining inequality in the distribution of family incomes in the nation. However, during the seven years of strong economic and employment growth following the end of the recession of 1981-82, the degree of inequality in the distribution of family incomes continued to grow in the nation as well as the New England region.⁹ By 1989, families in the top quintile (one-fifth) of the income distribution in the U.S. had increased their share of the money income pie to 43.3 percent (up from 40.5 percent in 1979) while those in the bottom quintile witnessed a further erosion in their share from 5.3 percent in 1979 to 4.7 percent in 1989.

⁸ The estimates of the mean incomes of families are sensitive to changes in the topcoding procedures of the U.S. Census Bureau. In March 1986, the Census Bureau altered its coding procedures for recording the personal earnings of household members on the public use tape. Prior to this survey, the maximum individual earnings figure coded by the Census Bureau was \$99,999. In March 1986, this upper limit was raised to \$299,999. The effect of raising the upper earnings limit was to increase the estimated share of total family income received by families in the top quintile of the distribution by 0.6 percentage points. Thus, part of the estimated rise in family income inequality between 1979 and 1989 is attributable to a change in the Census Bureau's coding procedures.

⁹ For an earlier assessment of family income inequality in New England in the 1980s, See: Andrew M. Sum, and Neeta Fogg, "Family Income Distribution in the U.S., New England, and Massachusetts During the Miracle Decade," Center for Labor Market Studies, Northeastern University, October 1991.

TABLE 19

REAL INCOMES OF FAMILIES AT VARIOUS POINTS ALONG THE FAMILY INCOME DISTRIBUTION, U.S., NEW ENGLAND, AND MASSACHUSETTS, 1979, 1989, AND 1994

U.S.	Percent Change					
	1979	1989	1994	1979-89	1989-94	1979-94
10	12,447	11,950	11,000	-4.0%	-7.9%	-11.6%
20	19,689	19,125	17,940	-2.9%	-6.2%	-8.9%
30	25,879	26,290	24,513	1.6%	-6.8%	-5.3%
40	32,479	33,460	31,300	3.0%	-6.5%	-3.6%
50	39,213	40,718	38,820	3.8%	-4.7%	-1.0%
60	46,033	48,756	47,000	5.9%	-3.6%	2.1%
70	53,576	58,555	57,000	9.3%	-2.7%	6.4%
80	63,269	71,168	69,998	12.5%	-1.6%	10.6%
90	81,198	93,373	93,179	15.0%	-0.2%	14.8%
NEW ENGLAND						
10	14,121	15,885	13,200	12.5%	-16.9%	-6.5%
20	21,961	25,487	21,622	16.1%	-15.2%	-1.5%
30	29,056	34,982	30,000	20.4%	-14.2%	3.3%
40	35,854	43,204	38,947	20.5%	-9.9%	8.6%
50	41,578	51,902	46,990	24.8%	-9.5%	13.0%
60	48,481	61,203	55,200	26.2%	-9.8%	13.9%
70	56,084	72,059	67,282	28.5%	-6.6%	20.0%
80	66,700	86,757	81,600	30.1%	-5.9%	22.3%
90	84,126	111,445	105,314	32.5%	-5.5%	25.2%
MASSACHUSETTS						
10	13,534	14,072	13,217	4.0%	-6.1%	-2.3%
20	20,557	25,274	22,411	22.9%	-11.3%	9.0%
30	28,445	35,850	32,692	26.0%	-8.8%	14.9%
40	35,862	44,625	41,869	24.4%	-6.2%	16.8%
50	42,163	53,323	49,949	26.5%	-6.3%	18.5%
60	50,075	63,575	59,075	27.0%	-7.1%	18.0%
70	58,321	74,568	70,550	27.9%	-5.4%	21.0%
80	68,855	89,625	84,169	30.2%	-6.1%	22.2%
90	86,530	116,513	107,875	34.7%	-7.4%	24.7%

Sources: March Current Population Surveys, 1980-1995, tabulations by Center for Labor Market Studies.

During the recession of the early 1990s, families at the top of the income distribution in the U.S. actually experienced proportionately greater income losses than their counterparts in the middle and lower quintiles. As a consequence, the income share of the top quintile fell by nearly one-half of a percentage point between 1989 and 1991. During the recovery, however, an above average share of income gains has gone to families in the top quintile. As a result, in 1994, the share of all money income received by U.S. families in the top fifth of the distribution increased to 43.8 percent, while the income share of the poorest

fifth of all families declined further to 4.4 percent.

We have analyzed two additional dimensions of the family income distribution. First, we will analyze changes in the level of the entire distribution, that is, the average income around which the distribution is centered. This dimension was earlier put forth by Frank Levy and was analyzed extensively in the previous section.¹⁰ We have used the median income to represent the average level of family income. Additionally, we have used eight indicators of the level of income at different points on either side of the median. These income levels demarcate the income of families at the boundary of each decile of the family income distribution.

Second, we will analyze trends in the real average income of families in each quintile of the income distribution: The average family income in each quintile represents the actual average pre-tax real income of families in that income quintile. It is possible for families in a quintile to experience a decline in their share of the aggregate family income pie yet obtain an increase in their real income at the same time. These seemingly contradictory events could occur simultaneously if there is rapid growth in the size of the total "income pie." As a result, some families may lose their "relative" share of income at the same time as they gain in "absolute" purchasing power. All groups are growing more affluent, but some groups may be growing "richer" at higher than average rates, thereby increasing their relative share of the total income pie.

Our estimates of median real family incomes (50th percentile) between 1979 and 1989 reveal that real median family income grew by 25 percent in New England and 27 percent in Massachusetts versus only 4 percent nationwide (see Table 19). Thus, the family income distribution in each of these three areas moved to a higher level over the decade of the 1980s. By the end of the decade, however, the median real family income was much higher in New England and

¹⁰ See Levy, Frank, "Dollars and Dreams: The Changing American Income Distribution," Russell Sage Foundation, New York, 1987.

Massachusetts than it was nationwide. In contrast to these positive developments, median incomes of families in all three areas declined between 1989 and 1994. Nationally, families saw their median incomes decline by 4.7 percent, whereas median family incomes in New England and Massachusetts deteriorated more considerably at rates of 9.5 and 6.3 percent, respectively.

Analysis of changes in the levels of family income along the entire distribution reveals that the rates of increase between 1979 and 1989 were consistently higher among families in the upper income levels in each of the three areas. In the U.S., the real income level marking the upper boundary of the bottom two deciles decreased by 4 and 3 percent, respectively, while the income levels marking the boundaries of the remaining deciles increased, with the largest absolute and relative increases occurring at the upper decile boundaries (see Table 19). In contrast, the level of real incomes in New England and Massachusetts increased over the entire distribution during the economic boom of the 1980s, although the rates of increase were greater at the upper end of the distribution. For example, income levels marking the boundaries of the highest two deciles in New England and Massachusetts increased by 30 to 35 percent between 1979 and 1989. The rising tide of real family incomes in the New England region and Massachusetts raised living standards for families along the entire distribution.

Over the 1989-1994 period, the real value of family income at the boundary of each decile declined in the U.S., New England, and Massachusetts. The entire distribution shifted downward in each area; however, in the U.S. and New England, families in the bottom half of the distribution witnessed larger declines in their income levels than their counterparts in the top half of the distribution. Nationally, the 1994 income boundary of the highest decile remained quite close to its 1989 level (\$93,000), whereas the level of income marking the boundary of the lowest decile declined by nearly \$1,000 or 8 percent

between 1989 and 1994. Similar income declines, albeit of larger magnitudes, occurred across the family income distribution in New England. The net result of the income changes over the entire 1979 to 1994 period was a decline in the level of real incomes demarcating the lowest five deciles in the U.S., with the size of these declines ranging from 1 percent to 12 percent. Clearly, the U.S. findings support the 1995 statement of the American Catholic Bishops that:

"The power and productivity of the U.S. economy sometimes seems to be leading to three nations living side by side, one growing more prosperous and powerful, one squeezed by stagnant incomes and rising economic pressures, and one left behind in increasing poverty, dependency, and hopelessness."¹¹

In New England, these developments resulted in declines in the real income level demarcating the boundaries of the lowest two deciles and a 20 to 25 percent increase in the income boundaries of the three highest deciles. Similar developments occurred in Massachusetts; however, only the bottom ten percent of families lost economic ground over the past fifteen years.

Trends in the average (mean) incomes of families within quintiles of the income distribution in the U.S., New England, and Massachusetts are presented in Table 20. Between 1979 and 1989, with the exception of families in the lowest quintile in the U.S., mean incomes increased across income quintiles in all three areas. The rising real income tide did indeed lift all boats, albeit to quite different levels. Growth in real mean incomes was highest among families at the top of the income distribution. Between 1989 and 1994, families in every quintile in all three areas witnessed an erosion in their average real incomes, with the relative size of these declines being larger for lower income families. All of these family subgroups became poorer between 1989 and 1994, but the rich became poorer at a slower rate than middle and low income families. Over the entire fifteen year period, average family incomes in New England and Massachusetts

¹¹ See David Briggs, "Bishops See Poor Losing to Politics," *The Boston Globe*, November 13, 1995, p. 3.

increased in all quintiles of the distribution except the bottom. Nationally, families in the two highest quintiles experienced an increase in average incomes over this fifteen year period, whereas families in the middle, second lowest, and lowest quintiles witnessed a decline in their average real family incomes. These groups lost economic ground in both an absolute and a relative sense.

The net result of these changes in average incomes and income levels over the family income distribution during the two time periods (1979-89 and 1989-94) was to increase income inequality in all three areas. In New England and Massachusetts, families across the income spectrum experienced real income gains during the 1980s and real income declines during the 1990s. Findings presented in Tables 19 and 20 bear evidence to the fact that the benefits of the region's economic prosperity of the 1980s were distributed prin-

cipally to more affluent families and the burdens of the steep economic downturn of the early 1990s were primarily borne by families at the lower end of the income distribution.

Regional Differences in the Family Income Distribution

Due to a greater degree of heterogeneity in the economic position of families in different parts of the nation than in New England, the family income distribution is expected to be more unequal in the U.S. than in New England. A comparison of New England's income inequality with that of other geographic regions in the nation might provide a better yardstick to measure New England's recent performance in the area of family income inequality. Findings of our estimates of the income shares of families within quintiles of the family income distribution in each of nine regions in the nation are presented in Table 21. The last column in Table 21 presents the ratio of the income share of families in the highest quintile to that of their counterparts in the lowest quintile. We have used the size of this ratio as a proxy for the degree of income inequality in each region of the nation during 1994.

The ratio of the income share of the highest quintile to the bottom quintile was just under 10 for the U.S. as a whole. Three of the nine regions had a higher degree of income inequality than the U.S. on this inequality measure. Family income inequality was most severe among families in the West South Central region (Arkansas, Louisiana, Oklahoma, and Texas) where families in the highest quintile received 45 percent of aggregate family income while their counterparts in the lowest quintile received only 4 percent of the family income pie, yielding a top to bottom ratio of 11.3. Income inequality among families in the Pacific and the Mid-Atlantic regions also was more severe than that of the nation. The ratio of the top to bottom income shares in these two regions exceeded 10.5. Although the income distribution in the remaining six regions was also highly unequal, their degree

TABLE 20 REAL MEAN INCOME OF FAMILIES IN EACH QUINTILE OF THE INCOME DISTRIBUTION, U.S., NEW ENGLAND, AND MASSACHUSETTS, 1979, 1989 AND 1994 (IN 1994 DOLLARS)

Quintile	1979	1989	1994	Percent Change		
				1979-89	1989-94	1979-94
U.S.						
All Families	43,975	48,411	46,611	10.1%	-3.7%	6.0%
Bottom	11,764	11,271	10,341	-4.2%	-8.3%	-12.1%
Second	25,931	26,280	24,568	1.3%	-6.5%	-5.3%
Middle	39,179	40,843	38,797	4.2%	-5.0%	-1.0%
Fourth	53,904	58,809	57,359	9.1%	-2.5%	6.4%
Highest	89,088	104,771	101,960	17.6%	-2.7%	14.4%
NEW ENGLAND						
All Families	46,664	59,573	54,638	27.7%	-8.3%	17.1%
Bottom	13,494	15,421	12,568	14.3%	-18.5%	-6.9%
Second	28,901	34,569	30,251	19.6%	-12.5%	4.7%
Middle	41,804	52,021	46,920	24.4%	-9.8%	12.2%
Fourth	56,507	72,849	67,468	28.9%	-7.4%	19.4%
Highest	92,526	122,911	115,909	32.8%	-5.7%	25.3%
MASSACHUSETTS						
All Families	47,355	61,105	56,690	29.0%	-7.2%	19.7%
Bottom	13,040	14,185	12,797	8.8%	-9.8%	-1.9%
Second	28,215	35,123	32,510	24.5%	-7.4%	15.2%
Middle	42,559	53,692	49,931	26.2%	-7.0%	17.3%
Fourth	58,243	75,286	70,634	29.3%	-6.2%	21.3%
Highest	94,532	126,995	117,261	34.3%	-7.7%	24.0%

Sources: March Current Population Surveys, 1980-1995, tabulations by Center for Labor Market Studies.

TABLE 21

DISTRIBUTION OF FAMILY INCOMES IN THE U.S. AND EACH OF THE NINE CENSUS DIVISIONS, 1994

Area	(A) Bottom Quintile	(B) Second Quintile	(C) Middle Quintile	(D) Fourth Quintile	(E) Highest Quintile	(F) Ratio (Highest/Lowest)
U.S.	4.4%	10.5%	16.7%	24.6%	43.8%	9.96
New England	4.6%	11.1%	17.1%	24.8%	42.4%	9.22
Mid Atlantic	4.2%	10.4%	16.6%	24.7%	44.2%	10.52
E.N. Central	4.7%	11.1%	17.1%	24.8%	42.3%	9.00
W.N. Central	5.4%	11.7%	17.1%	23.8%	42.0%	7.78
South Atlantic	4.6%	10.6%	16.5%	24.5%	43.8%	9.52
E.S. Central	4.5%	10.6%	16.2%	24.2%	44.5%	9.89
W.S. Central	4.0%	9.8%	16.3%	24.8%	45.0%	11.25
Mountain	5.0%	11.2%	16.9%	24.2%	42.7%	8.54
Pacific	4.1%	10.0%	16.7%	25.2%	44.0%	10.73

Source: March 1995 Current Population Survey, tabulations by Center for Labor Market Studies.

of inequality was less than that of the nation. A ranking of the nine regions based on the degree of inequality placed the New England region at fourth lowest. The midwest region (East North Central and West North Central) had the lowest degree of family income inequality among all regions in the nation.

Sources of Family Incomes at Various Points Along the Income Distribution

In order to identify the array of factors contributing to increased family income inequality over time, we have broken down family income into its different sources and estimated the proportion of family income that originates from each of these sources for families in each quintile of the income distribution. We have primarily focused on three sources of family income: wages and salaries (including income from self-employment), property income, and public cash income transfers. Property income includes income from rents, dividends, and interest, while public cash income transfers include social security retirement benefits, unemployment benefits, workmen's compensation, and cash public assistance income (AFDC, general relief, and Supplemental Security Income for the blind, the aged, and the disabled).

An examination of the shares of total family income accruing from each of these three

sources in 1994 reveals that on average families in the New England area derive 73 percent of their total money incomes from wages and salaries, another 16.6 percent from cash income transfers, and about 4 percent from property income. Property incomes are known to be the most seriously under-reported by respondents in the CPS household survey. Only about one-third of interest, rent, and dividends are reported by household members, according to recent U.S. Census Bureau studies. The proportions of income obtained from each of these three sources exhibited considerable variability across the income quintiles. New England families in the highest quintile of the income distribution obtained almost 88 percent of their combined family income from wages and salaries and a mere 2 percent from cash transfers whereas families in the lowest quintile obtained a considerably higher fraction of their family incomes from cash transfers than from wages and salaries (52.6 percent versus 39.1 percent) (see Table 22). Similar patterns prevailed in both the U.S. and Massachusetts.

The heavy reliance of low-income families on non-wage sources of income, particularly public cash transfers, indicates a weaker capacity for many of the families in the bottom of the income distribution to take advantage of the rising employment and real wage opportunities during economic expansions like the 1980s. Many elements of public cash transfer incomes (except Social Security retirement benefits that are annually indexed to the Consumer Price Index) did not keep pace with inflation and, thus, suffered an erosion in real value. Although some of the increased reliance on public assistance income in 1994 among families in the bottom quintile does reflect the consequences of the steep regional economic downturn of the early 1990s, the relatively high degree of reliance on cash public assistance income among families in the bottom quintile of the income distribution in New England was also present in 1989 when the region was at its peak in terms of wage and salary employment and real wage growth.

TABLE 22

SHARES OF TOTAL FAMILY INCOME RECEIVED FROM WAGES AND SALARIES, PROPERTY INCOMES, AND INCOME TRANSFERS, BY QUINTILE OF THE INCOME DISTRIBUTION, U.S., NEW ENGLAND, AND MASSACHUSETTS, 1994

Source of Income and Area	All	Bottom Quintile	Second Quintile	Middle Quintile	Fourth Quintile	Highest Quintile
Wages and Salaries						
U.S.	72.4	43.1	64.9	79.7	87.0	86.9
New England	73.1	39.1	68.1	82.1	88.5	87.8
Massachusetts	73.3	40.1	67.2	82.4	89.3	87.3
Property Income						
U.S.	3.9	2.7	3.7	3.6	3.6	6.1
New England	4.3	3.6	4.0	3.9	3.5	6.3
Massachusetts	4.2	2.9	3.7	4.0	3.4	7.0
Income Transfers						
U.S.	16.0	43.6	21.3	8.9	4.0	2.4
New England	16.6	52.6	18.1	6.8	3.3	2.4
Massachusetts	15.4	46.3	19.0	6.9	3.4	1.7

Source: March 1995 Current Population Survey, tabulations by Center for Labor Market Studies.

Among all families in New England, only 4 percent of family income was obtained from property assets in the form of interest bearing accounts, stocks, bonds, and real estate. Realized capital gains also can be an impor-

TABLE 23

DISTRIBUTION OF FAMILY INCOMES IN THE U.S., NEW ENGLAND, AND MASSACHUSETTS, BEFORE AND AFTER ADJUSTING FAMILY INCOMES FOR THE VALUES OF FOOD STAMPS, EITC, HOUSING SUBSIDIES, AND NET CAPITAL GAINS, 1994

Income Distribution Quintile	Before Adjustment	After Adjustment	Absolute Change	Relative Change
U. S.				
Bottom	4.4	4.9	+0.5	+11.4
Second	10.5	10.4	-0.1	-1.0
Middle	16.7	16.2	-0.5	-2.9
Fourth	24.6	23.9	-0.7	-2.8
Highest	43.8	44.6	+0.8	+1.8
New England				
Bottom	4.6	4.9	+0.3	+6.5
Second	11.1	10.7	-0.4	-3.6
Middle	17.1	16.6	-0.5	-2.9
Fourth	24.8	23.8	-1.0	-4.0
Highest	42.4	43.9	+1.5	+3.5
Massachusetts				
Bottom	4.5	4.9	+0.4	+8.9
Second	11.5	11.1	-0.4	-3.5
Middle	17.6	17.1	-0.5	-2.8
Fourth	24.9	24.2	-0.7	-2.8
Highest	41.5	42.7	+1.2	+2.9

Source: March 1995 Current Population Survey, tabulations by Center for Labor Market Studies.

tant source of the annual income of some families; however, the standard money income concepts of the CPS do not include estimates of capital gains. Among families in the highest quintile, on average only about 6 percent of family income came from property and 88 percent came from wages and salaries (see Table 21). Most families in the top 20 percent of the distribution obtained the overwhelming share of their income from wages and salaries. Similar patterns also prevailed in the U.S. and Massachusetts during 1994.

One of the critiques of the CPS money income concepts is the exclusion of certain sources of cash incomes and in-kind transfers from the money incomes of families. Some critics argue that due to the exclusion of non-cash benefits received by families such as housing subsidies or allowances, Medicare or Medicaid expenditures, food stamps, and cash tax rebates received under the Earned Income Tax Credit legislation, the CPS money income concepts will considerably understate the actual purchasing power of low income families. The actual incomes of affluent families also are understated in the CPS money income concepts due to the exclusion of net capital gains (capital gains minus capital losses).

Although the CPS money income concepts have not been redefined, the Census Bureau has provided estimated dollar values of food stamps, housing assistance, Earned Income Tax Credits (EITC), and annual capital gains and capital losses of families on the CPS public use data files since 1991. Using these additional income measures, we have re-estimated the distribution of family incomes in the U.S., New England, and Massachusetts after adjusting the total money income of each household by adding in the cash values of food stamps, housing subsidies and allowances, EITC credits, and net capital gains. Findings are presented in Table 23. As expected, after the above mentioned adjustments, the income share of families in the bottom quintile of the New England income distribution increased by 3/10ths of a

percentage point, from 4.6 to 4.9, which amounts to a relative increase of 6.5 percent in their share. Due to the inclusion of net capital gains, the income share of families in the highest quintile also increased from 42.4 percent to 43.9 percent. The income share of the region's families in the remaining three quintiles declined after making these adjustments to the CPS money income. This finding is not surprising, since few of these families received food stamps or housing subsidies, only a small fraction are eligible for an EITC credit, and they obtain few capital gains from the sale of assets. Capital gains are highly concentrated in the upper 1 percent of the U.S. income distribution. Similar patterns were observed in Massachusetts and the U.S., although the adjusted income measures for the U.S. resulted in a larger increase at the bottom of the distribution (0.5 percentage points or 11.4 percent) and a smaller increase at the top (0.8 percentage points or 1.8 percent).

Trends in the Distribution of Family Earnings

An examination of the distribution of 1994 family earnings (wages, salaries and self-employment income) by income quintile revealed a greater degree of inequality than that exhibited by family incomes. Nationally, a family in the top quintile earned on average \$17.70 for every \$1 earned by families in the bottom quintile of the income distribution in 1994 (see Table 24). In New England, the mean earnings of families in the highest quintile were 18.5 times as large as the earnings

In 1994, the mean hourly earnings of New England families in the top quintile were approximately 3.5 times as high as the hourly earnings of the employed members of families in the lowest quintile.

that accrued to families in the lowest quintile of the income distribution. The distribution of family earnings has grown more unequal over the last fifteen years, even among non-elderly families. In 1979, the ratio of the share of earnings received by the top quintile to that received by the bottom quintile was 13 to 1 in New England and 15 to 1 in the U.S. Growth in this earnings ratio has occurred in both the region and the nation over the past fifteen years and has contributed in an important way to rising family income inequality.

The substantial disparities in real family earnings by quintile position in the family income distribution in the U.S., New England, and Massachusetts may stem from large differences in total annual hours of labor supply or from large gaps in the mean hourly earnings of employed family members in different quintiles of the income distribution. In 1994, the mean annual hours of labor supplied by all family members in the most affluent one-fifth of all families in New England was 4,461 hours, or 2.5 times as high as those supplied by families in the bottom quintile of the distribution with at least one employed member (see Table 25). Combining these findings with the high fraction of families in the bottom quintile with no paid earner (45 percent in New England in 1994), the mean annual hours of labor supplied by all New England families (including zero earners) in the top quintile was 4.5 times larger than that supplied by all families in the bottom quintile (4,413 versus 982).

The employed members of the region's afflu-

TABLE 24 DISTRIBUTION OF EARNINGS AMONG FAMILIES BY QUINTILE OF THE INCOME DISTRIBUTION FOR THE U.S., NEW ENGLAND, AND MASSACHUSETTS, 1994

Income Distribution Quintiles	U.S.	New England	Massachusetts
Bottom Quintile	2.6	2.4	2.5
Second Quintile	8.5	9.3	9.6
Middle Quintile	16.4	17.2	17.7
Fourth Quintile	26.4	26.7	27.0
Highest Quintile	46.1	44.3	43.2

Source: March 1995 Current Population Survey, tabulations by Center for Labor Market Studies.

ent families also enjoyed very large mean hourly earnings advantages over their less affluent counterparts. In 1994, the mean hourly earnings from all hours of labor supplied by New England families in the top quintile were \$24.34 or approximately 3.5 times as high as the hourly earnings of the employed members of families in the lowest quintile of the family income distribution in the region (\$6.82). Similar large differences in mean hours of labor supply and mean hourly earnings existed between the top and bottom quintiles in the U.S. and Massachusetts. The dual impact of fewer hours of paid employment and sharply lower hourly earnings has depressed the combined earnings of families in the lowest quintile of the income distribution in all three areas.

The Economic Fate of the Middle Class in New England

In recent years, frequent concerns have been expressed about the economic well-being of the nation's "middle class." Questions have

Between 1979 and 1989, the proportion of New England families that achieved 1989 incomes above the "middle class" level swelled from 20 percent to nearly 32 percent.

been raised by economic analysts and other social scientists as to whether the nation's "middle class" is shrinking, whether families are experiencing increasing difficulty in securing a "middle class" standard of living, or whether the "middle class" has been caught in an "economic squeeze." While the "middle class" is a somewhat elusive concept that defies a standard widely-accepted definition, several attempts have been made by previous studies to define it on the basis of subjective measures including the perceptions of a "middle class" standard of living by the population or the self identification of families as "middle-class," or by more objective measures based on certain annual income ranges or an income band around the median family income.

We have addressed one key question concerning the fate of the region's "middle class" in this report. This question pertains to changes in the size of the "middle class" over the 1979 to 1994 period. We have used the 1979 real income of families at the top and the bottom of the three middle income quintiles to define "middle class" membership. These are families with incomes between the 20th and 80th percentiles of the family income distribution. We then examined the distribution of families in 1989 and 1994 within income quintiles based on the real (inflation-adjusted) values of the 1979 income quintile boundaries. Our findings, presented in Table 26, indicate that on the

TABLE 25 MEAN TOTAL HOURS OF EMPLOYMENT AND HOURLY WAGES OF FAMILIES WITH SOME EMPLOYMENT DURING THE YEAR, BY INCOME DISTRIBUTION QUINTILES, U.S., NEW ENGLAND, AND MASSACHUSETTS, 1994

U.S.	Mean Annual Hours	Mean Hourly Wage
All Families	3,309	14.09
Bottom Quintile	1,762	7.49
Second Quintile	2,628	9.16
Middle Quintile	3,297	11.67
Fourth Quintile	3,826	14.72
Highest Quintile	4,309	23.52
New England		
All Families	3,397	15.22
Bottom Quintile	1,775	6.82
Second Quintile	2,641	10.66
Middle Quintile	3,406	12.74
Fourth Quintile	3,874	17.04
Highest Quintile	4,461	24.34
Massachusetts		
All Families	3,416	15.81
Bottom Quintile	1,788	6.77
Second Quintile	2,623	11.07
Middle Quintile	3,479	13.13
Fourth Quintile	3,977	17.36
Highest Quintile	4,345	25.76

Source: March 1995 Current Population Survey, tabulations by Center for Labor Market Studies.

TABLE 26 DISTRIBUTION OF FAMILIES IN 1989 AND 1994 WITHIN INCOME DISTRIBUTION QUINTILES OF 1979 (INFLATED TO 1989 AND 1994 DOLLARS) IN THE U.S., NEW ENGLAND, AND MASSACHUSETTS

1979 Income Distribution			
Quintiles (In 1989 Dollars)	U.S.	New England	Massachusetts
Bottom	20.7	17.0	16.6
Second	18.1	16.6	15.5
Middle	17.9	15.3	17.0
Fourth	17.6	19.2	18.9
Highest	25.6	31.8	32.0
1979 Income Distribution			
Quintiles (In 1994 Dollars)	U.S.	New England	Massachusetts
Bottom	23.4	22.2	17.9
Second	19.2	18.6	20.3
Middle	17.1	15.2	17.3
Fourth	16.6	19.5	17.9
Highest	23.7	24.5	26.6

Sources: March Current Population Surveys, 1980 - 1995, tabulations by Center for Labor Market Studies.

basis of such measures the “middle class” shrunk between 1979 and 1989 in all three geographic areas. The proportion of families with real incomes in the middle of the 1979 distribution declined between 1979 and 1989 from 60 percent to 53.6 percent in the U.S. and to only 51.1 percent in New England. Did these former members of the “middle class” exit the class by attaining higher incomes or lower incomes? In New England, between 1979 and 1989, members of the middle income class gained substantial economic ground. The proportion of New England families that achieved 1989 incomes above the “middle class” level swelled from 20 percent to nearly 32 percent. Nationwide, while most families exiting from the “middle class” between 1979 and 1989 moved up to higher income levels, a small fraction of the “middle class” lost economic ground and moved down from the “middle class” levels to lower income levels. Interpreting these findings requires some caution since we are not tracking the same family households over time. The size of the family pool is rising over time and compositional changes are occurring. More newly formed families may be experiencing greater difficulties in achieving middle class status.

Between 1989 and 1994, “middle class” mem-

bership declined further to 52.9 percent in the U.S., while New England witnessed a slight increase in the “middle class” from 51.1 percent to 53.3 percent. During these five years, many of the region’s families lost important economic ground. In the U.S., the decline in the “middle class” was accompanied by a decline in the proportion of families with incomes above the 1979 “middle class” level. Downward mobility, thus, produced the observed change. Similar downward income mobility was observed in New England. The decline in the proportion of the region’s families with higher income levels was accompanied by an increase in the proportion of families with incomes below the 1979 “middle class” standard of living. Substantial downward mobility occurred between 1989 and 1994 in the region, twice as much as observed nationally.

Changing Family Structure and the Demographic Composition of Families in Different Segments of the Income Distribution

Several different hypotheses have been offered as explanations of the widening income gaps between the “rich” and the “poor.” One frequently cited source of increasing inequality has been changing family structure and demographics, including the growth of single parent families and the rising immigrant population. To shed some insights on this issue, we examined the demographic and socioeconomic composition of families in different quintiles of the income distribution in the U.S., New England, and Massachusetts in 1979 and 1994. Our findings, which are displayed in Table 27, reveal that the poorest one-fifth of all families in each area are increasingly made up of a group of families with characteristics that are likely to increase the likelihood of their remaining in the bottom of the income distribution over time. For example, while only 1.2 percent of all families in the highest quintile reported zero earners during 1994, 45 percent of all New England families in the bottom quintile had no paid earners in the labor market during all of 1994. As revealed earlier, the

TABLE 27

CHARACTERISTICS OF FAMILIES WITHIN INCOME DISTRIBUTION QUINTILES, IN THE U.S., NEW ENGLAND, AND MASSACHUSETTS, 1979 AND 1994

	Total	1979 Bottom	Top	Total	1994 Bottom	Top
U. S.						
H.S. Dropouts	31.3	57.6	12.0	18.3	40.4	3.7
College Grads	18.2	4.3	40.9	23.6	6.3	54.4
With Children	52.2	48.8	51.9	49.5	56.0	47.0
Zero Earners	12.7	40.3	1.7	14.9	40.4	2.4
Female-Headed	14.6	35.7	2.4	17.6	43.5	3.0
New England						
H.S. Dropouts	29.5	55.4	10.7	14.1	32.7	2.4
College Grads	21.8	6.1	47.5	30.8	8.6	63.6
With Children	51.7	47.3	49.2	47.8	50.1	45.9
Zero Earners	10.9	40.4	1.5	13.8	44.7	1.2
Female-Headed	15.3	36.0	4.1	17.2	42.4	2.8
Massachusetts						
H.S. Dropouts	29.0	57.4	8.3	13.6	33.6	2.3
College Grads	20.5	7.1	45.7	32.0	9.0	67.7
With Children	53.4	52.4	50.5	48.8	51.8	48.7
Zero Earners	11.3	42.4	1.9	13.8	45.5	1.4
Female-Headed	16.9	42.3	5.0	18.7	47.4	3.1

Sources: March Current Population Surveys, 1980 and 1995, tabulations by Center for Labor Market Studies.

A growing proportion of the region's families in the bottom quintile of the distribution consist of single-parent families, mainly female-headed with no husband present.

income position of families is strongly associated with the number of potential earners in the family. Families that have multiple earners (such as married-couple families) have managed to improve their living standards or hold their economic ground despite declining earnings of the primary breadwinner. On the other hand, families with zero earners, especially non-elderly families, are very likely to remain with low incomes, including many with incomes below the poverty line.

A growing proportion of the region's families in the bottom quintile of the distribution consist of single-parent families, mainly female-headed with no husband present. In 1994, 42 percent of the region's families in the bottom quintile were single parent families, versus 36 percent in 1979. The increasing share of

births in New England taking place out-of-wedlock has contributed substantially to this trend, and the findings would be even more pronounced if subfamilies (those families that reside in the households of others) were included in our analysis of the family income distribution. These families lack the added earnings potential from the double-earner situation that is now the norm among married-couple families. As noted earlier, a large and increasing proportion of the family labor supply in married-couple families has been supplied by the work of spouses. Single parent families are, thus, less able to take advantage of the job growth that occurred in the region over the past several years.

While the formal educational attainment of the region's family heads, including those in the bottom quintile, has risen over the last fifteen years, many of the heads of families in the bottom quintile of the distribution remain poorly educated. The large disparities in the levels of educational attainment between family householders at the top and the bottom of the income distribution account for a

large portion of the earnings differences between them. In 1994, nearly 64 percent of all New England family heads in the top quintile were four year college graduates, while only 2 percent lacked a high school diploma. Thus, the earnings potential of the region's families in the top quintile was magnified by a twofold effect. First, the overwhelming proportion of families in the top quintile were married couple families, a majority of whom have two or more earners in the labor market and the wives in such families have substantially increased their labor supply over the past fifteen years. Secondly, a majority of family householders in the top quintile have relatively high levels of educational attainment. College educated workers in the region and nation have achieved substantial earnings advantages

over their less educated counterparts.

Clearly, the composition of families at the top and the bottom quintiles of the income distribution has been changing over time. Increasing numbers of those at the bottom of the distribution in our region and the nation are families with limited future earnings potential, given recent trends in the returns to various forms of human capital. The increasing concentration of such families at the bottom of the income distribution will likely reduce what Frank Levy has previously called "the mobility of families within the income distribution" and may lead, in the absence of innovative policy changes and real wage changes, to the creation of what some observers have called an "underclass" of families.

POVERTY PROBLEMS IN THE UNITED STATES AND NEW ENGLAND

AMONG ECONOMISTS, social scientists, and policymakers, one of the more frequently cited measures of the economic well-being of persons and families is the poverty rate.

The poverty rate simply represents the fraction of a given population (whether households, families, or persons) with money incomes below a given poverty line. Poverty lines or "thresholds" vary by type of household (family versus non-family), the age of the householder in non-family households, and the number of persons in the family. With the exception of Alaska and Hawaii, there are no state or regional variations in the size of these poverty thresholds. The poverty thresholds used in this report are based on the definitions of poverty of the federal government as annually updated by the Office of Management and Budget.

All estimates of the poverty population for a nation, region, or state are based upon a specific definition of poverty. Different definitions will yield different estimates of the size and composition of the problem. The federal

government's poverty measures are based on an absolute income approach to poverty rather than a relative income approach.¹² The annual amount of income needed by a family of a given size and composition to avoid being poor is fixed in absolute terms. The dollar value of this minimum income (or poverty threshold) is updated each year by the federal government to take into consideration changes in the cost of living as measured by the Consumer Price Index for All Urban Consumers, more generally referred to by its acronym, the CPI-U index.

Given the absolute income measure of poverty, one would expect that the number of poor persons and poor families would be critically influenced by the rate of growth in median real incomes and the changing distribution of incomes among persons and families. During periods of strong growth in median family incomes, a greater number of families should be able to obtain incomes above the poverty threshold and the poverty rate should fall. The opposite situation should occur during periods of economic recession. A decline in

¹² For a discussion of conceptual issues surrounding the definition of poverty, see Duncan, Greg J., "Years of Poverty, Years of Plenty," Institute for Social Research, University of Michigan, Ann Arbor, 1984; Schiller, Bradley R., "The Economics of Poverty and Discrimination," 6th Edition, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1995.

In New England during the 1980s, rising real family incomes brought a higher fraction of the region's families above the poverty line while the share of income going to families in the top quintile of the income distribution continued to grow.

family living standards should push an increasing number of persons and families below the poverty line, and the poverty rate will rise even further if these recessionary conditions are accompanied by an increase in income inequality.

Poverty problems in a nation or region will be related to the degree of inequality in the income distribution, but the two measures are far from synonymous. Poverty problems in a region can decline over time even though the degree of inequality in the income distribution rises over time. Such a development occurred in New England during the 1980s as rising real family incomes brought a higher fraction of the region's families above the poverty line while the share of income going to families in the top quintile of the income distribution continued to grow.¹³ On the other hand, reduced income inequality and declining poverty problems can go hand in hand as was the case for the U.S. during the decade of the 1960s, the decade in which major, sustained progress was achieved for both economic objectives.

The 1994 poverty thresholds for different size households are presented in Table 28. Poverty thresholds ranged from \$7,108 for an unrelated individual aged 65 and over to \$30,300 for a family containing nine or more persons. The poverty thresholds represent a benchmark against which a family's income is compared in order to determine its poverty status. For example, a three person family would be classified as poor in 1994 if its total money income was less than \$11,821. In-kind benefits such as food stamps, housing subsidies, and Earned Income Tax Credits, are not counted as income in determining the poverty status of individuals or families. A

revised set of poverty estimates will be provided below for the U.S. and New England, taking these in-kind benefits and Earned Income Tax Credits into consideration.

We will begin our analysis of poverty problems by examining poverty rates for four groups of persons and families in the U.S. and New England over the period of 1979 to 1994. First, we will examine trends in the number and percent of all persons who were poor. Second, in order to assess the impact of educational attainment and work effort on the incidence of poverty problems, we will analyze the poverty rates of persons aged 16 to 64. Third, trends in family poverty rates will be reviewed and assessed. The unit of observation here is the family, not the individual. Family poverty rates will be analyzed for all families and selected subgroups of families, including those classified by the presence of children, the type of family, the educational attainment of the householder, and hours of work effort supplied by all family members. We will also analyze the impact of using alternative definitions of poverty on the estimated number of poor families and the family poverty rate. Finally, we examine trends in the poverty rates of children (under 18 years of age), broken down by a number of characteristics of the family in which the children reside.

TABLE 28 WEIGHTED AVERAGE POVERTY THRESHOLDS IN 1994

One person (unrelated individual)	\$7,547
Under 65 years	\$7,710
65 years and over	\$7,108
Two persons	\$9,661
Householder under 65 years	\$9,976
Householder 65 years and over	\$8,967
Three persons	\$11,821
Four persons	\$15,141
Five persons	\$17,900
Six persons	\$20,235
Seven persons	\$22,923
Eight persons	\$25,427
Nine persons or more	\$30,300

Source: U.S. Census Bureau.

¹³ Sum, Andrew and Neeta Fogg, "Poverty Amidst Plenty: Family Poverty Problems in New England and Massachusetts," Center for Labor Market Studies, Northeastern University, Boston, MA, October 1991; and Sum, Andrew and Neeta Fogg, "Family Income Distribution in the U.S., New England, and Massachusetts," Center for Labor Market Studies, Northeastern University, Boston, MA, October 1991.

Our findings are designed to address the following questions. First, how has the magnitude of poverty problems in New England changed over the fifteen year period, 1979 to 1994? In particular, how successful had New England been in reducing the incidence of poverty problems among persons and families during the booming 1980s and how did it fare during the more turbulent 1989 to 1994 period, including the deep recession of 1989-1991 and the recovery since then? Second, how have New England poverty developments compared to the U.S. as a whole and how did we fare in comparison to other regions in the nation? Third, how does the incidence of poverty problems in New England vary across key demographic and socioeconomic subgroups of the population? Finally, what impact does the use of an alternative poverty definition, including non-cash income and EITC credits, make on the estimated number and percent of poor families in our region?

Poverty Among Persons in New England

Our analysis of poverty developments will begin by examining trends in the incidence of poverty problems among all persons in New England over the period of 1979 to 1994. Table 29 presents estimates of the number of persons, the number of poor persons, and the poverty rate among persons in New England for selected years between 1979 and 1994. Findings appearing in the table reveal that both the number of poor persons and the poverty rate are quite sensitive to the business cycle, with the number of poor persons and the poverty rate rising during periods of economic recession and falling during periods of sustained economic growth. The poverty rate in New England rose from 8.6 percent in 1979 to 11.1 percent in the recession year of 1982, a rise of 2.5 percent-

age points. The number of poor persons in the region rose from 1.036 million to 1.382 million over this period, an increase of over 346,000 persons or 33 percent. During the remainder of the boom decade of the 1980s, the poverty rate fell continuously in New England, reaching a low of 7.3 percent in 1989. This rate of poverty was 1.3 percentage points lower than that attained in 1979. The number of poor persons also declined continuously, dipping below the 1 million mark in 1989, or 348,000 fewer poor persons compared to the recession year of 1982. The strong labor market environment of the mid to late 1980s had truly produced great economic progress for New England on the anti-poverty front. Of the nearly 13 million persons residing in the region in 1989, only 0.9 million were classified as having money incomes below the federal government's poverty thresholds.

Consistent with our earlier findings on trends in the median real incomes of families in New England, the number of poor persons and the incidence of poverty in the region increased sharply between 1989 and 1993. Between 1989 and 1991, the estimated poverty rate in New England rose from 7.3 percent to 10.4 percent, an increase of 3.1 percentage points in just two years. After falling slightly (though not significantly) in 1992, the poverty

TABLE 29

NUMBER OF PERSONS, NUMBER OF POOR PERSONS, AND POVERTY RATES OF PERSONS (ALL AGES) IN NEW ENGLAND, SELECTED YEARS, 1979-1994

	Number of Persons (000s)	Number of Poor Persons (000s)	Percent Poor
1979	12,052.6	1,035.5	8.6%
1982	12,429.2	1,381.6	11.1%
1986	12,598.1	1,104.5	8.8%
1988	12,910.5	1,019.2	7.9%
1989	12,837.2	943.5	7.3%
1990	12,931.3	1,193.0	9.2%
1991	13,002.5	1,357.5	10.4%
1992	13,052.7	1,344.1	10.3%
1993	13,229.4	1,408.2	10.6%
1994	13,101.5	1,289.5	9.8%

Sources: March 1995 Current Population Survey, 1980-1995, tabulations by Center for Labor Market Studies.

The ability of New England's adults to avoid poverty is strongly tied to their formal educational attainment and to their annual hours of work effort.

rate rose further to 10.6 percent in 1993. There were over 1.4 million poor persons in New England in 1993, an increase of nearly 465,000 persons or almost 50 percent compared to 1989.

The year 1994 marked a return to progress in reducing the incidence of poverty problems in New England. The overall poverty rate fell to 9.8 percent, and the number of poor persons declined to under 1.3 million. Still, the number of poor persons and the poverty rate in 1994 were well above those experienced at the end of the 1980s. In the absence of strong economic growth, little progress can be expected on the anti-poverty front in the region.

These trends in the poverty rates of persons in New England were quite consistent with those observed nationally over the 1979 to 1994 period. The national poverty rate rose sharply over the course of the 1980 and 1981-82 recessions, declined continuously from 1983 through 1989, and then increased sharply over the 1989 to 1993 period before falling in 1994 (see Table 30). Findings in

Table 30 also reveal that the poverty rate in New England was significantly lower than the U.S. average each year since 1979. Over the entire 1979 to 1994 period, New England's poverty rate was only 57 to 73 percent as high as the national average. The peak period of relative performance for New England in terms of reducing poverty problems was reached in the mid to late 1980s, when the poverty rate in New England was only 57 to 60 percent as high as that observed for the nation as a whole. New England's relative success in combating poverty can also be seen by the fact that, in each year since 1979, New England has ranked lowest in poverty rates among all nine Census divisions.

New England also achieved the lowest non-elderly adult (16 to 64 year olds) poverty rate among the regions. Since we are excluding children, the most poverty prone group in the region and nation, from the analysis, poverty rates are lower among 16 to 64 year olds than they are among the total population. The poverty rate among 16 to 64 year olds in the region fell from 6.5 percent in 1979 to 5.5 percent in 1989. Following 1989, the poverty rate among this group rose sharply to 8.5 percent in 1993, before falling back to 7.8 percent in 1994.

Like many other indicators of personal economic well-being, the ability of New England's adults to avoid poverty is strongly tied to their formal educational attainment and to their annual hours of work effort. Findings in Table 31 reveal that the 1994 poverty rates for non-elderly adults in the U.S. and New England declined steadily as we move up the educational attainment distribution. In New England, the poverty rate among persons who failed to obtain a high school diploma was 18 percent in 1994, roughly double the 9 percent poverty rate among high school graduates in the region. Persons with a Bachelor's degree had a poverty rate of only 4 percent in 1994, while those with some postbaccalaureate schooling experienced a poverty rate of less than 2 percent in 1994.

TABLE 30

POVERTY RATES OF PERSONS (ALL AGES) IN THE U.S. AND NEW ENGLAND, SELECTED YEARS, 1979-1994

Year	U.S.	New England	New England as a Percent of U.S.	New England's Rank
1979	12.0%	8.6%	72%	Lowest
1982	15.9%	11.1%	70%	Lowest
1986	14.4%	8.8%	61%	Lowest
1988	13.1%	7.9%	60%	Lowest
1989	12.9%	7.3%	57%	Lowest
1990	13.6%	9.2%	68%	Lowest
1991	14.3%	10.4%	73%	Lowest
1992	14.6%	10.3%	71%	Lowest
1993	15.3%	10.6%	70%	Lowest
1994	14.7%	9.8%	67%	Lowest

Sources: March Current Population Survey, 1980-1995, tabulations by Center for Labor Market Studies.

Adult poverty rates also decline continuously as annual hours of work increase. New Englanders who did not work at all during the year had a poverty rate of 25 percent in 1994, compared to 12 percent among those who worked less than 1,000 hours, and 6 percent among those who worked between 1,000 and 1,500 hours. The poverty rate among those who worked more than 1,800 hours during the year (roughly a year-round, full-time

Problems of the working poor are clearly less intense in New England than in the nation as a whole. A higher fraction of New England's poverty problems are concentrated among the dependent poor.

job) was under 2 percent in New England in 1994, suggesting that the region has nearly eliminated poverty problems among those workers able to secure year-round, full-time employment.

With the exception of Bachelor's degree recipients, poverty rates were lower in New England than in the U.S. for each of our educational attainment and work experience subgroups. Persons with less than a high school education fared particularly well in New England compared to their U.S. counterparts,

experiencing a poverty rate more than 10 percentage points below the national average. Due to a relatively high entry wage level in New England, persons with a substantial level of personal annual work effort experienced poverty rates only about half as high as the national average. Persons in New England who worked between 1,000 and 1,500 hours had a poverty rate of 6 percent, compared to a 13 percent rate among their counterparts nationwide. Similarly, New Englanders who worked between 1,500 and 1,800 hours had a poverty rate of only 4 percent, compared to 9 percent for their counterparts nationwide. Those workers who were able to secure at least 1,800 hours of employment in New England had a poverty rate of only 1.6 percent, compared to 3.1 percent among all such workers in the U.S. Problems of the working poor are clearly less intense in New England than in the nation as a whole. A higher fraction of New England's poverty problems are concentrated among the dependent poor.

Poverty Among New England's Families

New England has also fared quite favorably relative to the U.S. and to all other regions in reducing poverty problems among families. The family poverty rate, which measures the fraction of all families with a combined money income below the poverty line, is also quite sensitive cyclically. The poverty rate among families in New England rose from 7.1 percent in 1979 to 8.5 percent in the recessionary environment of 1982 (see Table 32). Over the next seven years of strong economic growth, the family poverty rate in New England fell steadily and sharply, reaching a low of 5.6 percent in 1989. Over the course of the economic boom, the family poverty rate in New England fell by nearly 3 percentage points or 34 percent, a remarkable economic achievement. By 1989, the family poverty rate in New England was only half the national average.

Unfortunately, nearly all of those gains were wiped out in the next few years. The family

TABLE 31

POVERTY RATES OF PERSONS AGED 16 TO 64 IN THE U.S. AND NEW ENGLAND, BY EDUCATIONAL ATTAINMENT AND HOURS OF WORK, 1994

	U.S.	New England	Absolute Difference
All	12.2%	7.8%	-4.4
Less than High School	27.9%	17.6%	-10.3
High School Graduate	12.0%	8.8%	-3.2
Some College	8.3%	5.7%	-2.6
Four Year Degree	4.0%	4.3%	0.3
Postbacc. Study/Degree	2.2%	1.8%	-0.4
Zero Hours	31.6%	24.6%	-7.0
1-999 Hours	19.1%	11.9%	-7.2
1000-1499 Hours	13.2%	6.4%	-6.8
1500-1799 Hours	8.9%	3.6%	-5.3
1800 or More Hours	3.1%	1.6%	-1.5

Sources: March 1995 Current Population Survey, tabulations by Center for Labor Market Studies.

poverty rate rose quite sharply during the severe regional recession of 1989-1991, rising by 2.6 percentage points from 5.6 percent in 1989 to 8.2 percent in 1991. The family poverty rate reached 8.7 percent in 1993. The poverty rate among the region's families did decline moderately in 1994, but the incidence

of family poverty problems remains well above those experienced in the mid to late 1980s.

Despite the sharp increase in the incidence of family poverty problems in New England since 1989, the region remains a strong performer relative to other regions in the nation. In each year since 1979, New England has ranked lowest among the nine regions in terms of family poverty. Relative to the U.S. average, the family poverty rate in New England was about 70 percent as high as that observed nationally throughout the 1990s. The relative size of the New England advantage was not as great as that prevailing in 1989, when families in New England experienced a poverty rate only 54 percent as high as that observed for the nation as a whole.

The poverty rate advantages of New England's families improved considerably during the 1980s as a consequence of the region's success in maintaining full employment conditions in its labor markets and boosting the real wages of workers, including those lacking any postsecondary schooling. While national poverty rates did fall during the mid to late 1980s, the poverty rate among families nationwide in 1989 was still 1.2 percentage points higher than it was in 1979. In New England, the family poverty rate in 1989 was 1.5 percentage points lower than it was in 1979 and was the lowest it had ever been since the poverty data were first collected for the region in 1969.

Success in reducing poverty problems among New England's families over the decade of the 1980s and the increases in family poverty problems since 1989 have not been uniform across various types of families. Findings in Table 33 reveal that families with no own children under 18 experienced more favorable trends compared to families with children over the entire 1979 to 1994 period. Between 1979 and 1989, the poverty rate among childless families fell by 1.6 percentage points, compared to a decline of only 0.5 percentage points among families with children. Families with no children in New England in

TABLE 32

POVERTY RATES AMONG FAMILIES IN THE U.S. AND NEW ENGLAND, SELECTED YEARS, 1969-1994

	U.S.	New England	New England as a Percent of U.S.	New England's Rank
1969	10.7%	6.7%	62%	Lowest
1979	9.1%	7.1%	78%	Lowest
1982	12.2%	8.5%	70%	Lowest
1986	10.9%	7.1%	65%	Lowest
1988	10.4%	6.0%	58%	Lowest
1989	10.3%	5.6%	54%	Lowest
1990	10.7%	7.4%	69%	Lowest
1991	11.5%	8.2%	71%	Lowest
1992	11.7%	8.3%	71%	Lowest
1993	12.2%	8.7%	71%	Lowest
1994	11.6%	8.2%	71%	Lowest

Sources: 1970 Decennial Census; March Current Population Survey, 1980-1995, tabulations by Center for Labor Market Studies.

TABLE 33

POVERTY RATES AMONG FAMILIES IN NEW ENGLAND, BY PRESENCE OF CHILDREN, TYPE OF FAMILY, EDUCATIONAL ATTAINMENT OF HOUSEHOLDER, AND HOURS OF WORK BY ALL FAMILY MEMBERS, 1979-94

	1979	1989	1994	Absolute Change, 1979-89	Absolute Change, 1989-94
All	7.1%	5.6%	8.2%	-1.4	2.5
No Children	4.0%	2.4%	3.9%	-1.6	1.5
One or More Children	9.9%	9.4%	12.8%	-0.5	3.4
Married Couple	3.6%	2.8%	3.2%	-0.8	0.4
Male Headed	6.9%	3.1%	11.0%	-3.8	7.9
Female Headed	25.6%	21.4%	30.1%	-4.2	8.7
Less than High School	13.8%	11.3%	17.9%	-2.5	6.5
High School Graduate	6.9%	7.4%	10.0%	0.5	2.5
Some College	2.7%	3.5%	7.5%	0.9	4.0
Four Year Degree	0.7%	0.6%	3.2%	-0.1	2.5
Postbacc. Study/Degree	1.2%	1.3%	0.8%	0.1	-0.5
Zero Hours	27.3%	23.5%	30.6%	-3.8	7.1
1-875 Hours	31.5%	29.3%	34.7%	-2.2	5.4
876-1750 Hours	15.9%	13.3%	16.7%	-2.6	3.4
1751-2625 Hours	3.2%	3.1%	4.6%	-0.1	1.5
2626-3500 Hours	2.4%	0.9%	1.5%	-1.5	0.6
3501 or More Hours	1.1%	0.4%	0.5%	-0.7	0.1

Sources: March Current Population Survey, 1980, 1990 and 1995, tabulations by Center for Labor Market Studies.

1989 experienced a poverty rate of only 2.4 percent, a rate only about one-fourth as high as the 9.4 percent poverty rate among families with children. The poverty rate among families with no children under 18 rose less

In 1994, families headed by an individual who did not obtain a high school diploma were 22 times more likely to be poor than the most highly educated families in the region, and families headed by a high school graduate were 13 times more likely to be poor than families headed by a person with some schooling beyond the Bachelor's degree.

in absolute terms (1.5 percentage points) than the poverty rate among families with children (3.4 percentage points) between 1989 and 1994.

Family poverty rates in New England have also varied considerably across types of families over the past fifteen years. In each of the years included in our study, married couple families had considerably lower poverty rates than other families, especially single parent families. The poverty rate among married couple families was below 4 percent in 1979, 1989 and 1994. New England achieved a fairly high degree of success in reducing poverty problems among female-headed families between 1979 and 1989, as the poverty rate for this group fell from nearly 26 percent in 1979 to 21 percent in 1989. Since 1989, however, family poverty rates among female-headed families have increased dramatically, more than wiping out all of the gains made during the 1980s. In 1994, the poverty rate among female-headed families in the region was 30 percent, nearly 9 percentage points higher than in 1989. During that year, the poverty rate among female-headed families was nearly 10 times higher than the poverty rate among married couple families in New England. Unfortunately, the share of families consisting of single parent families has been rising over the past fifteen years, complicating the task of reducing family poverty

in the future.

The incidence of poverty among families in New England also varies considerably by the formal educational attainment of the householder. Family poverty rates were highest in 1994 and rose the most over the 1989 to 1994 period among those families headed by a person who failed to complete high school. In 1994, almost 18 percent of these families were classified as poor, compared to only 10 percent among families headed by a high school graduate and

only 3 percent among families headed by an individual with a Bachelor's degree. The poverty rate among families headed by a person with a postbaccalaureate degree was under 1 percent in 1994. Thus, in 1994, families headed by an individual who did not obtain a high school diploma were 22 times more likely to be poor than the most highly educated families in the region, and families headed by a high school graduate were 13 times more likely to be poor than families headed by a person with some schooling beyond the Bachelor's degree.

In order to see how the incidence of poverty among families varies by the number of hours of work effort supplied by all family members, we have classified all families into one of six groups based on the combined number of annual hours worked by all family members during the year. These six groups are: zero hours worked, 1 to 875 hours worked, 876 to 1,750 hours worked, 1,751 to 2,625 hours worked, 2,626 to 3,500 hours worked, and 3,501 or more hours worked. If an individual works for 50 weeks during the year and for 35 or more hours per week (a year-round, full-time job), this individual will have accumulated at least 1,750 hours of work annually. Thus, our family work effort groups correspond to zero full-time equivalents, 0 to 0.5 full-time equivalents, 0.5 to 1.0 full-time equivalents, 1.0 to 1.5 full-time equivalents, 1.5 to 2.0 full-time equivalents, and 2.0 or

more full-time equivalents. Put simply, this last group of families had the equivalent of two or more persons employed year-round, full-time during the year.

Findings in Table 33 reveal that the highest poverty rate among our six groups of families occurred among those families with a combined work effort between 1 and 875 annual hours of employment. The poverty rate among this group of families in 1994 was 35 percent, compared to 31 percent among families with no earners in the labor market. This latter group, however, contains many elderly families who are retired but are able to avoid poverty through Social Security retirement and pension incomes. Many poor families that have part-time workers earn enough income in the labor market to disqualify them from many cash public assistance programs, but not enough income to raise their families above the poverty line. Part-year work is not sufficient to raise them above the poverty line.

Family poverty rates clearly diminish sharply as the total amount of work effort supplied by the family increases. Families in New England with combined hours of work between 876 and 1,750 experienced a poverty rate of 17 percent in 1994, roughly half the rate among families with less than 876 hours

of work. Families working between 1,751 and 2,625 hours (the equivalent of 1 to 1.5 full-time workers) experienced a poverty rate of 5 percent in 1994. Those families with a combined work effort of more than 2,625 hours, or the equivalent of 1.5 or more full-time workers, had a poverty rate of less than 2 percent in 1994. Clearly, if enough family members are employed or those who are employed are able to secure enough hours of employment annually, wage levels in New England are sufficient to raise most such families out of poverty.

Poverty Developments Among the Region's Children

Child poverty problems in the nation have received considerable attention over the past ten years, primarily as a result of the fact that child poverty rates are the highest among all age groups in the U.S. and New England populations.¹⁴ Trends in child poverty rates are frequently used by policymakers and child advocacy organizations as a key standard against which economic and social progress should be gauged.

Table 34 presents estimates of the official poverty rates among children under 18 years of age in the U.S. and New England for selected years over the 1979 to 1994 period. As expected, patterns over time in these child

poverty rates exactly mirror the patterns uncovered earlier in our discussions of individual and family poverty rates. After all, children are not poor, instead the family unit in which they reside is poor. In both the U.S. and New England, the child poverty rate rose sharply between 1979 and the recession year of 1982. Poverty rates among children then fell continuously over the decade of the 1980s, bottoming out in 1989 at a rate slightly above that prevailing in 1973. Child

TABLE 34 POVERTY RATES OF CHILDREN IN THE U.S. AND NEW ENGLAND, SELECTED YEARS, 1973-1994

	U.S.	New England	New England as a Percent of U.S.	New England's Rank
1973	13.3%	10.3%	77%	2nd Lowest
1979	15.2%	11.7%	77%	2nd Lowest
1982	20.6%	15.4%	75%	Lowest
1986	19.1%	12.2%	64%	Lowest
1988	18.4%	10.9%	59%	Lowest
1989	18.3%	10.6%	58%	Lowest
1990	19.5%	15.3%	78%	Lowest
1991	20.7%	16.7%	81%	Lowest
1992	20.6%	16.7%	81%	Lowest
1993	21.6%	16.9%	78%	Lowest
1994	20.7%	14.6%	71%	Lowest

Sources: March Current Population Surveys, 1974-1995, tabulations by Center for Labor Market Studies.

¹⁴ See, for example, Johnson, Clifford, and Andrew Sum, "Vanishing Dreams: The Growing Economic Plight of America's Young Families," Children's Defense Fund, Washington, D.C., 1988; Sum, Andrew; Fogg, Neal; and Neeta Fogg, "The Economic Well-Being of U.S. Families with Children: An Assessment of Recent Trends, an Exploration of Their Underlying Determinants, and Public Policy Implications," Center for Labor Market Studies, Northeastern University, Boston, Massachusetts, March 1994.

poverty rates rose in 1990 and 1991, leveled off in 1992, then rose slightly again in 1993 before falling in 1994.

Changes in child poverty rates over the past fifteen years were particularly pronounced in New England. Reflecting the cyclical sensitivity of family poverty problems, the poverty rate among children in New England rose by 3.7 percentage points between 1979 and 1982, then fell by 4.8 percentage points over the course of the economic boom. By 1989, the child poverty rate had fallen to 10.6 percent, but then soared to 16.7 percent by 1991, during the depths of the regional recession. Thus, the gains in reducing child poverty during the economic boom decade in New England were completely reversed in just two years. Poverty rates among children remained high in New England through 1993, when the child poverty rate reached almost 17 percent. During 1994, the region succeeded in reducing poverty problems among children, as the child poverty rate fell by 2.3 percentage points. The 14.6 percent child poverty rate of 1994 was four percentage points higher than the rate prevailing in 1989.

For each year between 1979 and 1994, the child poverty rate in New England was considerably lower than the poverty rate among children nationwide, with the biggest differences occurring in the late 1980s. New England's child poverty rate also ranked lowest among the nine regions with the exception of 1979, when the West North Central region (Minnesota, Iowa, Missouri, the Dakotas, Nebraska, and Kansas) had the lowest child poverty rate. In 1989, New England's child poverty rate was 10.6 percent, while the next lowest region (West North Central) had a child poverty rate of 16.3 percent, or nearly 6 percentage

points higher than New England's. Strong economic growth and full employment in the region's labor markets were primarily responsible for these favorable developments.

The likelihood of a child being poor continues to be strongly associated with a number of characteristics of the family and the householder, including the type of family (married couple versus single parent), the educational attainment and academic skills of the householder, and the age of the householder. To illustrate the magnitude of some of these differences, Table 35 displays child poverty rates across a range of family types. In order to obtain a sufficient number of sample observations for this analysis, we have combined the March 1994 and March 1995 CPS data to derive the average of poverty rates among children in 1993-1994. The table lists child poverty rates ranked in descending order among types of families in New England.

Findings displayed in this table reveal that children in young, poorly educated female-headed families were overwhelmingly more

TABLE 35

POVERTY RATES OF CHILDREN IN THE U.S. AND NEW ENGLAND, BY SELECTED CHARACTERISTICS OF FAMILY AND HOUSEHOLDER, AVERAGE, 1993-1994

	U.S.	New England
Female Head, Under 30		
HS Dropout	91.6%	97.9%
HS Graduate	71.6%	77.4%
Some College	58.8%	67.1%
Female Head, Over 30		
HS Dropout	79.9%	78.8%
HS Graduate	49.9%	48.7%
Some College	33.7%	29.2%
College Graduate	11.0%	17.9%
Married Couple, Under 30		
HS Dropout	42.8%	13.8%
HS Graduate	18.2%	10.5%
Some College	11.1%	7.0%
College Graduate	5.1%	3.7%
Married Couple, Over 30		
HS Dropout	34.8%	18.0%
HS Graduate	10.3%	6.1%
Some College	6.0%	3.0%
College Graduate	2.4%	1.4%

Source: March Current Population Survey, 1994 and 1995, tabulations by Center for Labor Market Studies.

Nearly half of all children in female-headed families headed by a high school graduate were poor in both the U.S. and New England, but this fraction drops to less than one-third if the mother attended some college or received an associate's degree.

likely to be poor than any other group of children. Nearly 98 percent of such children were poor on average during 1993-94 in New England, and 92 percent of the children in such families were poor nationwide. The next highest poverty rates were registered by children in older female-headed families in which the householder had not completed high school, with roughly 80 percent of such children being poor in 1993-1994. The next four highest poverty rates also occurred among children in female-headed families, with the rates decreasing markedly as the age and educational attainment of the householder increased. Nearly half of all children in female-headed families headed by a high school graduate were poor in both the U.S. and New England, but this fraction drops to less than one-third if the mother attended some college or received an associate's degree.

Children in married couple families were much less likely to be poor than their counterparts residing in female-headed families. The highest poverty rates among children in married couple families occurred among children in families headed by high school dropouts. In New England, 14 to 18 percent of children in married couple families headed by high school dropouts were poor. These rates were substantially below those for the nation as a whole. As the educational attainment of the householder in married couple families rises, the poverty rate of children drops markedly. Only 4 percent of New England's children in young married couple families in which the householder was a college graduate were poor

in 1993-1994, and only 1.4 percent of children in older married couple families headed by a college graduate were poor.

An Alternative Definition of Poverty and its Impact on the Incidence of Poverty Among Families with Children

The poverty concepts currently used to classify families as "poor" or "not poor" have been in existence since the mid-1960s when the nation initially began to wage its War on Poverty. These concepts have been criticized by an increasing number of social scientists and analysts. Many conservative critics frequently cite their objection to poverty measures as currently defined since all in-kind benefits are excluded as income in determin-

When we add the value of the EITC, food stamps, and housing assistance to the money incomes of families with children, the number of poor families falls from 5.9 million to 4.7 million, a decline of nearly 1.2 million families or 20 percent.

ing an individual's or family's poverty status. Among these in-kind benefits are food stamps, Medicaid, and housing allowances. The March 1995 Current Population Survey public use tape allows us to place a monetary value on two of the most important sources of non-cash income, namely food stamps and housing subsidies, and to include the Earned Income Tax Credit in the family's income. To assess the impact of these sources of non-cash benefits and EITC tax credits on the number of poor families and the family poverty rate, we have recomputed the poverty status of families after including each of these sources of in-kind benefits and tax credits. The analysis is restricted to families with one or more children under the age of 18. Our findings are summarized in Table 36.

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TABLE 36

OFFICIAL AND SIMULATED FAMILY POVERTY RATES AND NUMBER OF POOR FAMILIES USING ALTERNATIVE DEFINITIONS OF INCOME AND POVERTY THRESHOLDS, FAMILIES WITH CHILDREN, U.S. AND NEW ENGLAND, 1994

	Poverty Rate	Difference from Official Estimate	Number of Poor Families (thousands)	Difference from Official Estimate
U.S.				
Official Definition	17.2%		5,897.0	
EITC	16.0%	-1.2	5,490.9	-406.1
Food Stamps	16.1%	-1.1	5,510.1	-386.9
Housing Assistance	16.7%	-0.5	5,734.3	-162.7
All 3 Combined	13.8%	-3.4	4,734.1	-1,162.9
NEW ENGLAND				
Official Definition	12.9%		214.8	
EITC	12.1%	-0.8	202.1	-12.7
Food Stamps	12.5%	-0.4	208.2	-6.6
Housing Assistance	12.4%	-0.5	206.2	-8.6
All 3 Combined	9.5%	-3.4	158.0	-56.8

Sources: March Current Population Surveys, 1980, 1990 and 1995, tabulations by Center for Labor Market Studies.

Income Tax Credit to family income reduced the 1994 poverty rate among families with children from 17.2 percent to 16.0 percent, a reduction of 1.2 percentage points. The EITC tax credits reduced the number of poor families from 5.9 million to 5.5 million, or by about 400,000 families. The impact of counting the value of food stamps as cash income received during the year was of a similar magnitude, reducing the poverty rate to 16.1 percent and the number of poor families to 5.5 million. The impact of including the value of housing assistance (subsidies, allowances) as income was slightly less than half that of the EITC and food stamps. Adding the cash value of housing assistance to the family's income reduced the estimated poverty rate by 0.5 percentage points and the number of poor families by 163,000 in 1994. When we simultaneously add the value of the EITC, food stamps, and housing assistance to the money

incomes of families with children, the poverty rate falls by 3.4 percentage points to 13.8 percent. The number of poor families falls from 5.9 million to 4.7 million, a decline of nearly 1.2 million families or 20 percent, a substantial drop.

In New England, our simulations reveal that the EITC had the biggest impact on reducing the poverty rate and the number of poor families, while the impact of counting food stamps and housing assistance as income had roughly the same effects on poverty rates and the number of poor families. The EITC reduced the estimated family poverty rate by 0.8 percentage points and the number of poor families by 13,000. Although the absolute size of these differences in poverty rates were lower in New England than in the U.S., the base is also lower in New England. Thus, the proportionate impacts of EITC tax credits on poverty rates and the number of poor families were roughly equal in New England and the U.S. In both areas, counting the EITC credits as income reduced the poverty rate and the number of poor families by 6 to 7 percent.

Including the EITC, the value of food stamps, and the value of housing assistance in the incomes of families reduced the family poverty rate in New England by 3.4 percentage points, an impact identical in absolute magnitude to the U.S. average, but representing a higher proportionate decline since the poverty base in New England was lower. Of the 215,000 families with children counted as poor under the federal government's "official" definition of poverty, 57,000 would not be counted as poor if we included the EITC, food stamps, and housing assistance as income, a relative decline of more than one-quarter.

Labor Market Changes and Their Impact on the Economic Well-Being of People in New England

THE NEW ENGLAND LABOR FORCE

THE LABOR FORCE behavior of the region's working-age population (16+) has a number of important implications for New England's potential economic growth and the living standards of its residents. First, the employment growth of a region will be dependent in part upon the number of its working-age residents who choose to actively participate in the labor market. The slower the growth rate of a region's labor force, the lower will be its potential employment, a key determinant of its underlying real output growth. The quality of those labor inputs, including the formal schooling, literacy proficiencies, training, and work experience backgrounds of the employed labor force, will also determine the growth potential of the region. Thus, the human capital characteristics of a region's workers will independently influence its output growth. Second, the incidence and intensity of the labor force attachment of a region's residents will influence the level of its personal incomes. The higher the share of a region's people that work, and the more hours they work, the higher that region's per capita personal incomes will be.¹⁵ Previous studies of the historical per capita income advantages of New England have revealed that higher labor force participation rates (meaning more of our working-age people worked) have contributed in an important way to the region's higher per capita incomes.¹⁶

Third, the incomes of married couple families in the region and the nation have become increasingly dependent on the joint participation in the labor market of the husband and wife. Multiple earner families have become the norm for most middle income and upper

income families in the region in recent years. Fourth, poverty rates of the region's families are strongly associated with the work behavior of the family head. Only 1 per cent of the region's families with a householder employed year-round, full-time have been unable to avoid poverty in recent years. Limited labor force attachment among family heads tends to substantially raise the likelihood of their being economically disadvantaged and dependent on cash public assistance income to support themselves and their families.

Recent Growth Trends in the Region's Labor Force

During the decade of the 1980s, the New England labor force increased from 6.1 million to 7.0 million, a growth rate of nearly 15% (See Table 37). This relatively high rate of growth was achieved through a combination of a rising working-age population and an increased labor force participation rate (more working-age people worked). During 1989, on average, nearly seven of every ten working-age residents in New England were actively participating in the civilian labor force each month, i.e., they were either employed or actively seeking work. The region's overall participation rate in 1989 was the highest among the nation's nine geographic regions.¹⁷ The growth rate of the region's labor force during the 1980s was only three percentage points below that of the nation (15% versus 18%) despite the fact that the U.S. working-age population (16+) increased at a higher rate than in New England (12% vs. 8%). As we will demonstrate below, rising labor force participation rates and increased in-migration of working-

¹⁵ These relationships hold true provided that the other determinants of per capita income, including the utilization of the labor force and the productivity of labor, are held constant. For a more detailed review of the relationships between the labor force behavior of state residents and their per capita income performance,

See: Andrew Sum and Neeta Fogg, "Analyzing the Labor Force: The Use of Labor Force Concepts, Measures, Data Sources, and Applied Research Techniques," Center for Labor Market Studies, Northeastern University, Boston, 1995.

¹⁶ For an assessment of the role of the region's labor force behavior in influencing New England's higher per capita income position in previous decades,

See: (i) Robert W. Eisenmenger, *The Dynamics of Growth in New England's Economy, 1870-1964*, Wesleyan University Press, Middletown, Connecticut, 1967; (ii) Andrew M. Sum and Neeta Fogg, "Prosperity and Affluence: The Per Capita Personal Incomes of New England Residents During the Miracle Decade of the 1980s," Center for Labor Market Studies, Northeastern University, 1991.

¹⁷ For a more detailed review of regional labor market developments during the 1980s,

See: Andrew M. Sum, Paul Harrington, and Neeta Fogg, "New England Labor Markets During the Miracle Decade," Center for Labor Market Studies, Northeastern University, November 1991.

TABLE 37

TRENDS IN THE CIVILIAN LABOR FORCE OF THE U.S. AND NEW ENGLAND, 1979-1994 (NUMBERS IN 1,000'S)

	New England	U.S.	New England as a Percent of the U.S.
1979	6,095	104,962	5.81
1989	7,001	123,869	5.65
1993	7,037	128,040	5.50
1994	6,958	131,056	5.31
Percent Change			
1979-89	14.9	18.0	
1989-94	-6%	5.8%	

age adults facilitated this rise in New England's labor force during the 1980s.

Since 1989, however, the New England labor force has actually diminished, falling to 6.958 million in 1994, a decline of 43,000 or .6% over the 1989-94 period (Table 37). During this same five year period, the U.S. labor force grew more slowly than it did during the 1980s, but there were nearly 7.2 million more persons (16+) in the nation's civilian labor force in 1994 than there were in 1989. Between 1989 and 1994, New England's share of the national civilian labor force declined from 5.65% to 5.31%, a relative drop of nearly 6%.

The behavior of the New England labor force during the past five years is somewhat puzzling. During the steep regional economic recession of 1989-91, the region lost a considerable number (9-10%) of its wage and salary jobs. The unemployment rate (seasonally adjusted) in New England rose from 3.5% in the first quarter of 1989 to a peak of 8.4% in the fourth quarter of 1991. During the recession, the region's labor force grew, rising by nearly 124,000 or just under 2% through the fourth quarter of calendar year 1991. (See Table 38). Since then, however, the civilian labor force has declined considerably, falling by 234,000 between the fourth quarter of 1991 and the second quarter of calendar 1995. The region's civilian labor force plummeted sharply during calendar year 1994 despite a

TABLE 38

TRENDS IN THE SIZE OF THE NEW ENGLAND CIVILIAN LABOR FORCE, 1989-1994, SELECTED TIME PERIODS (NUMBERS IN 1000'S)

Time Period	Change in Labor Force (Seasonally Adjusted)	Absolute Change	Percent Change
1989 I to 1991 IV	6,998 to 7,122	+124	+1.8%
1991 IV to 1995 II	7,122 to 6,888	-234	-3.3%
1989 I to 1995 II	6,998 to 6,888	-110	-1.6%

Between 1980 and 1990, the region's working-age population increased by slightly more than 8 percent. Over the past five years, however, the region's civilian non-institutional working-age population has barely increased, rising by only 1.2%.

resurgence in the estimated number of wage and salary jobs in the region. The estimated decline in the civilian labor force during the past year allowed the region's unemployment rate to fall under 6% in 1994, slightly below the national unemployment rate for the first time since 1989.

The drop in the region's civilian labor force during the past four years, particularly during 1994 when job growth was the largest it had been since the beginning of the decade, needs to be carefully explained. There are two general variables that can account for a decline in the civilian labor force of the region: a drop in the size of the resident working-age population or a reduction in the region's civilian labor force participation rate. The latter variable measures the fraction of the resident working-age population that is either employed or unemployed. If fewer working-age individuals enter the labor force or if participants reduce the intensity of their attachment to the labor force, the labor force participation rate will drop. We will begin our analysis of the changing size of the resident labor force with an overview of recent population developments in the region over the past five years.

An even more ominous development was the actual decline in the size of the population ages 20-64 in New England over the past five years (1989-94).

The population group that matters most for the growth of the civilian labor force is the civilian non-institutional population (16+). Between 1980 and 1990, the region's working-age population increased by slightly more than 8 percent, or not quite one percent per year. Over the past five years, however, the region's civilian non-institutional working-age population has barely increased, rising by only 120,000 or 1.2% over the entire five year period (See Table 39). Our rate of population growth for this age group was only

Geographic Area	(A)	(B)	(C)	(D)
	1989	1994	Absolute Change	Percent Change
U.S.	186,393	196,814	10,421	5.6
New England	10,099	10,219	120	1.2
Middle Atlantic	29,205	29,507	302	1.0
East North Central	31,966	32,658	692	2.2
West North Central	13,379	13,509	130	1.0
South Atlantic	32,592	35,472	2,880	8.8
East South Central	11,516	12,091	575	5.0
West South Central	19,550	20,996	1,446	7.4
Mountain	9,791	11,239	1,448	14.8
Pacific	28,315	31,123	2,808	10.0

one-fifth as high as that of the nation, and our region ranked third lowest on this measure. Only the Middle Atlantic region (1.0%) and the West North Central region (1.0%) fared worse than New England on this key population growth measure.

An even more ominous development was the actual decline in the size of the population ages 20-64 in New England over the past five years (1989-94). This age group provides the bulk of the civilian labor force of the nation and the region. Between 1980 and 1989, this

Year	(A)	(B)
	U.S.	New England
1980	129,116	7,091
1989	144,782	7,941
1994	152,228	7,919
Percent Change		
1980-89	12.1%	12.0%
1989-94	5.1%	-3%

Source: U.S. Census Bureau, population estimates for states and regions, 1980-94.

population group grew at a very healthy rate (12%) in the region and nearly matched the growth rate of the nation. (See Table 40). The entry into adulthood of the tail end of the baby boom generation and the in-migration of many young well-educated workers from other regions and abroad allowed New England to expand its 20-64 year old population at a rate identical to that of the nation. Since 1989, however, the number of 20-64 year olds in New England is estimated by the U.S. Census Bureau to have declined by 22,000 or .3%. At the same time, this age group was expanding by nearly 7.5 million in the U.S., a growth rate of 5 percent. Since New England's teenage population (16-19) was also declining sharply over this time period, our working-age population managed to grow as a consequence of a rapidly rising number of elderly persons (65+), whose labor force participation rate is typically quite low. Between 1989 and 1994, the number of elderly persons in New England increased by 105,000. Only one of every eight elderly persons in the civilian non-institutional population of the U.S. was active in the labor force during 1994.¹⁸ Their rate of participation is only one-seventh as high as that of adults ages 20-64. The changing age composition of New England's population, thus, would be expected to exert a depressing effect on the growth of the region's civilian labor force.

The growth of a region's working-age population over time is also dependent on its migra-

¹⁸ See: U.S. Bureau of Labor Statistics, Employment and Earnings, January 1995, Table 3, p. 164.

tion performance. The net flow of immigrants is equal to the difference between the number of persons who come into the region during a given time period and the number of persons who leave the region over the same time period. The March CPS surveys contain a set of migration questions that obtain information from each member of the household on their residence during the prior year.

Responses to these questions can be used to generate annual estimates of the

number of people who moved into New England from either another region of the country or from abroad, including Puerto Rico and the outlying possessions of the U.S. Out-migration from the region can also be estimated; however, all estimates of out-migration are confined to other regions of the nation. Since the CPS is not conducted outside of the 50 states and the District of Columbia, we cannot identify individuals who migrated abroad. Other analyses of Massachusetts' migration experiences between 1990 and 1994 indicate that the outflow of immigrants to nations abroad was equal to approximately one-fourth of the inflow during the same time period. Since our estimates of out-migration include only those residents leaving New England for other regions, they are likely to be biased downward by 10,000 to 15,000 during a typical year.

Findings in Table 41 provide estimates of the annual flow of migrants ages 16 and older into and out of New England between 1987 and 1994. Between 1987 and 1990, the region received a high flow of migrants from both other regions in the U.S. and abroad that substantially exceeded the outflow of residents to other regions. From March 1987 through March 1990, the region received approximately 715,000 migrants ages 16 and

Year	(A)	(B)	(C)
	Net Immigration	Net Domestic Immigration	Foreign Immigration
1987 to 1988	87,600	+24,300	63,300
1988 to 1989	63,500	-8,300	71,800
1989 to 1990	47,000	-11,600	58,600
1990 to 1991	-78,800	-122,100	43,300
1991 to 1992	29,500	-16,600	46,100
1992 to 1993	-7,200	-67,200	60,000
1993 to 1994	62,000	+12,000	50,000
Net immigration 1987-90	198,100	+4,400	+193,700
Net immigration 1990-94	5,500	-193,900	+199,400

Note: Data are estimates for March of each year.

older while losing 517,000 former residents to other regions, yielding a net immigration of 198,100 over this three year period. During the past four years, however, the annual average number of migrants into New England has declined while the flow of out-migrants increased, particularly in the years characterized by substantial job loss and rising unemployment. Over the March 1990 to March 1994 period, net migration was equal to only +5,500. Including migration abroad would likely have changed the net migration number to a negative 50,000 to 60,000. Clearly, the declining relative performance of the New England economy from 1989-1993 has had a dramatic effect on the net migration performance of the region and reduced the rate of growth of the region's working-age population.

Given the fact that the elderly participate in the civilian labor force at a very low rate (12 to 14 percent) and that many teens either do not actively participate in the labor market or seek only part-time employment while in school, we have re-analyzed the migration data for New England focusing only on the experiences of 20-64 year olds. Findings reveal that New England was quite successful in attracting additional numbers of 20-64 year olds into the region between 1987 and 1990 (See Table 42). Net migration over this

three-year period was nearly +204,000, or 68,000 per year; however, the region has fared substantially worse over the past four years. Between March 1990 and March 1994, the region experienced net out-migration of at least 16,000 and perhaps as much as 70,000 to 80,000 if we had been able to track those persons leaving New England to reside abroad. The turnaround in the region's ability to attract and retain people in the 20-64 age group was quite substantial. The

TABLE 42 TRENDS IN THE MIGRATION OF PERSONS AGE 20-64, IN NEW ENGLAND, 1987 TO 1994

Year	Migrated to New England	Migrated from New England to Other Region	Net Migration
1987 to 1988	233,200	128,000	105,200
1988 to 1989	216,100	148,400	67,700
1989 to 1990	209,800	179,100	30,700
1990 to 1991	151,000	222,800	-71,800
1991 to 1992	186,400	160,700	25,700
1992 to 1993	180,900	186,800	-5,900
1993 to 1994	158,700	122,500	36,200
Net Migration, 1987-90	+203,600		
Net Migration, 1990-94	-15,800		
Net Change in Net Migration Between the Above Two Time Periods	-219,400		

Without the continued inflow of foreign immigrants over the 1990-94 period, New England's working-age population would have declined by nearly 200,000.

only good news in these findings is that the region's improved economic performance in 1993 and 1994 allowed it to curtail out-migration from the region. As a consequence, between 1993 and 1994, net migration of 20-64 year olds into the region became positive, exceeding 36,000. Improved job prospects for residents and lower unemployment undoubtedly played key roles in producing this favorable outcome.

The migration flows into and out of New England can be further disaggregated by source: from other regions of the nation or from abroad. For five of the seven years covered by our analysis, net domestic migration was negative; i.e., New England lost more residents (16+) to other regions than we gained. The two exceptions to this pattern were 1987-88 and 1993-94. The negative net domestic migration flows for the entire period were more than offset by the inflows of foreign immigrants with an annual average flow of 56,000 immigrants (16+) into the region over this seven year period. Without the con-

tinued inflow of foreign immigrants over the 1990-94 period, New England's working-age population would have declined by nearly 200,000. Given the critical importance of foreign immigration in boosting the working-age population of the region, let us more fully examine the contribution of foreign immigration to the growth of the New England labor force over the past 15 years.

Immigrant Labor and the New England Labor Force

The role of foreign immigration as a source of labor force growth in the U.S. has increased considerably in the past 15 years, and the debate over the economic and social benefits of this immigration has become more rancorous, particularly in California and other western and southwestern states that have been most heavily impacted by foreign immigration. The role of foreign immigration in New England has been only casually assessed in recent years despite growing informal evidence and anecdotes that it has become a more important source of population and labor force growth in our region since the early 1980s.¹⁹ In recent years, the U.S. Census Bureau has expanded the CPS household survey questionnaire to include questions on the nativity status of respondents and the timing of the arrival of the foreign born into the United States. The availability

¹⁹ For early studies of the role of foreign immigration as a source of population growth in the state of Massachusetts and New England,

See: (i) Andrew Sum, Neeta Fogg, and Jackie Sum, "Growth and Diversity in the Massachusetts Population, 1980-1990," Census Monograph Series, Report Number One, Center for Labor Market Studies, Northeastern University, Boston, 1992; (ii) Andrew Sum, Jackie Sum, Alice Winkler, and Neeta Fogg, "One Hundred Years of Population and Economic Changes: The Massachusetts Experience, 1890-1990," Census Monograph Series, Report Number Two, Center for Labor Market Studies, Northeastern University, Boston, 1995.

of these CPS data allows us to generate more recent updates of the role of foreign immigration as a source of labor in New England.

At the time of the March 1995 CPS survey, there were 131.1 million persons (16+) in the civilian labor force in the United States. Of this group, 13.8 million or 10.6% were foreign born (See Table 43).²⁰ Thus, in early 1995, approximately 1 of every 9 members of the U.S. labor force had been born abroad. The contribution of foreign immigration to the size of the resident labor force in the U.S. varies markedly by geographic region. During March 1995, foreign immigrants' share of the civilian labor force across the nine geographic regions varied from a low of 1.1% in the East South Central region (Alabama, Mississippi, Kentucky, and Tennessee) to a high of nearly 24% in the Pacific region (Table 43) which is dominated by the experiences of California. Within New England, the foreign born accounted for just under 10% of the resident labor force. Our region ranked fourth highest on this measure,

Region	Percent
U.S.	10.6
Pacific	23.8
Mid-Atlantic	14.1
West South Central	9.8
New England	9.7
South Atlantic	8.8
Mountain	8.1
East North Central	5.0
West North Central	2.3
East South Central	1.1
New England Rank	4th Highest

Note: ⁽¹⁾ The foreign born in this table include persons born in Puerto Rico and the outlying possessions of the U.S.

Source: March 1995 Current Population Survey, tabulations by Center for Labor Market Studies.

²⁰ Our definition of those "born abroad" includes persons born in Puerto Rico or one of the outlying possessions of the United States (American Samoa, Guam, Virgin Islands). If we include such individuals as native born, then the foreign born share of the New England labor force would decline from 9.7% to 8.7%. In relative terms, the New England and Middle Atlantic regions were the largest recipients of immigrants from Puerto Rico and the outlying possessions.

Nativity Status/Year of Arrival	(A)	(B)
	Number	Percent
Born in the U.S.	6,282,500	90.3
Foreign Born	673,100	9.7
Arrival before 1980	359,300	5.2
Arrived 1980-89	221,200	3.2
Arrived 1990-95	92,700	1.3
Total	6,955,600	100.0

Source: March 1995 CPS survey, tabulations by Center for Labor Market Studies.

falling only .1 percentage point below the West South Central region, which is dominated by the foreign immigrant experiences of Texas. Over the past 15 years, immigrants have increased their share of the region's civilian labor force. At the time of the 1980 census, foreign born workers (including immigrants from Puerto Rico and outlying possessions) represented only 8.5% of the New England civilian labor force.

To identify the contribution of more recent foreign immigration to the growth of the New England labor force, the timing of the arrivals into the U.S. of the region's foreign born must be examined and compared to the net growth of the region's labor force. In March 1995, there were 673,000 foreign born individuals in the civilian labor force of the region (See Table 44). Of this group, approximately 314,000, or nearly half of them, had migrated to the United States between 1980 and the time of the March 1995 survey, including 93,000 who had migrated to the U.S. between 1990 and 1995. The findings in Table 45 suggest a recent slowdown in the growth of the immigrant labor force in New England. During the 1980s, the average annual increase in the number of net new foreign immigrants into the New England labor force was 22,100; however, during the first half of the 1990s, the annual average size of this increase in foreign immigration has been only 18,000. Given the considerably weaker performance of the New England economy over this time period, the slowdown in foreign immigration is not sur-

TABLE 45

FOREIGN IMMIGRATION'S CONTRIBUTION TO CIVILIAN LABOR FORCE GROWTH IN NEW ENGLAND, 1980 TO MARCH 1995⁽¹⁾

Area	(A)	(B)	(C)	(D)	(E)
	CLF ⁽²⁾ 1980	CLF ⁽³⁾ March 1995	Change in CLF	Number of Foreign Born Participants Arriving Between 1980 and 1995	D as % of C
New England	6,175,000	6,955,600	780,600	313,900	40.2%
Connecticut	1,594,000	1,683,800	89,800	74,700	83.2%
Maine	507,000	613,500	106,500	3,600	3.4%
Massachusetts	2,876,000	3,200,500	324,500	190,300	58.6%
New Hampshire	472,000	631,600	159,600	12,000	7.5%
Rhode Island	473,000	496,300	23,300	30,800	132.2%
Vermont	253,000	329,900	76,900	2,400	3.1%
Southern Tier	4,943,000	5,380,600	437,600	295,800	67.6%
Northern Tier	1,232,000	1,575,000	343,000	18,000	5.2%

Note:
⁽¹⁾ Foreign born total include those arriving from Puerto Rico and outlying possessions of the United States.
⁽²⁾ The 1980 civilian labor force estimates for each of the New England states are annual averages based on the CPS household surveys.
⁽³⁾ The March 1995 civilian labor force estimates are not seasonally adjusted. They are based on the March 1995 Current Population Surveys for each of the states rather than the Local Area Unemployment Statistics System (LAUS).

prising.

Between 1980 and March 1995, the New England labor force increased from 6.175 million to 6.955 million, a gain of 780,000 over this 15 year period (See Table 45). Yet as noted above, the estimated number of foreign born civilian labor force participants who arrived in the U.S. between 1980 and 1995 was equal to nearly 314,000. Thus, slightly over 40 percent of the net growth in the region's civilian labor force over the past 15 years was attributable to foreign immigration.²¹ For the U.S. as a whole, approximately one-third of the nation's civilian labor force growth was due to foreign immigration. New England's dependence on foreign immigration as a source of new labor supply was third highest in the nation, exceeded only by the Pacific (54%) and Mid-Atlantic (96%) regions. Without rising foreign immigration, the New England civilian labor

force would have declined by nearly 180,000 between 1990 and 1994.²²

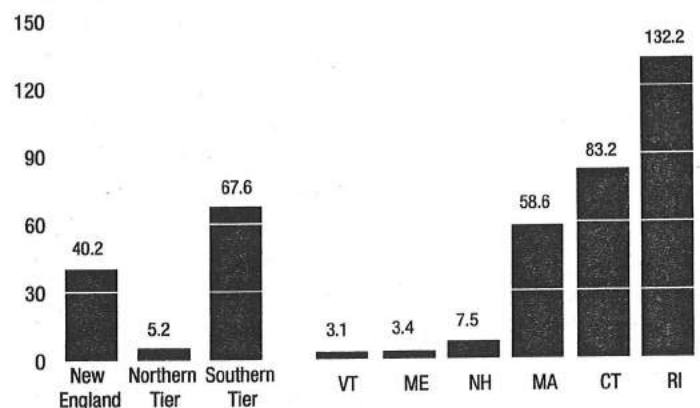
Foreign immigrants' contribution to labor force growth in the region over the past 15 years varied markedly by state. In the three southern tier states (Connecticut, Massachusetts, and Rhode Island), foreign immigration has played a critical role in labor force growth, accounting for nearly 60% of the rise in the Massachusetts labor force, 83% in Connecticut, and all of the labor force growth in Rhode Island (See Table 45 and Chart 5). For the three southern tier states combined, two-thirds of the growth in the labor force over the past 15 years was due to foreign immigration. A substantially different story prevails in the northern New England states. Foreign immigration played a considerably reduced role in the growth of the labor force in New Hampshire (8%), Vermont (3%), and Maine (3%). For these three states combined, whose labor force grew far more rapidly than the Southern tier of states, foreign immigration represented only 5% of their labor force growth between 1980 and 1995.

Clearly, the New England region, especially the southern tier of states, has become increasingly dependent on foreign immigration to obtain its labor supply. This situation is likely to prevail over the remainder of this decade unless the region substantially improves its job generating performance and improves relative real earnings for young residents. The immigrant work force in the

²¹ A similar analysis for the time period 1980 to March 1994 revealed that nearly 43% of the net growth in the region's labor force was attributable to foreign immigration, the third highest ratio among the nation's nine geographic divisions.

²² Between 1990 and 1994, the annual average size of the New England civilian labor force declined by about 75,000. The net growth in the foreign immigrant labor force over the same time period was nearly 100,000. Thus, without increased foreign immigration, the region's labor force would have dropped by nearly 180,000 over the 1990-94 period. As noted earlier, net foreign immigration helped stem the large out-migration of the native born from New England during the first half of the 1990s decade.

chart 5 THE SHARE OF NET GROWTH IN THE CIVILIAN LABOR FORCE (16+) ACCOUNTED FOR BY FOREIGN IMMIGRANTS, NEW ENGLAND, 1980 TO MARCH 1995



region is quite heterogeneous with respect to its educational attainment and occupational characteristics, containing an above average share of workers (49%) with limited formal schooling (no more than 12 years of school) and with Bachelor's or more advanced academic degrees (31%).

In the future New England needs to give careful and serious consideration to the role of foreign immigration as a source of future labor supply and identify strategies for retaining the best educated and most skilled native born and foreign born workers to improve its competitive position in the years ahead.

Trends in the Labor Force Participation Behavior of New England Residents

The growth of New England's labor force is dependent upon the labor force attachment of New England residents as well as on the number of working-age residents. Historically, New Englanders, especially women, have participated in the labor force at a higher rate than their national counterparts. This situation has prevailed in recent years; however, the size of the participation rate advantages of New Englanders has diminished considerably in the 1990s.

At the end of the decade of the 1970s, approximately 66 percent of all working-age New England residents (16+) were actively participating in the labor force; i.e., either working or actively seeking work (See Table 46).²³ New England's labor force participation rate during 1979 was 2.2 percentage points above that of the U.S., and New England ranked second highest in the nation. During the 1980s, the booming regional economy attracted an increasing fraction of the region's working-age population into the labor force.²⁴ By 1989, the

annual average participation rate of the region had risen to 69.3 percent, a gain of 3.4 percentage points over the decade. During 1989, the labor force participation rate of New England exceeded that of the U.S. by 2.8 percentage points, and the region ranked first among the nine geographic divisions. New England's labor force participation rate in 1989 exceeded that of all major OECD nations, including Canada and all of Western Europe, and New England women participated more intensively in the labor force than Swedish women, the former international leader on this measure.²⁵

New England's labor force participation rate peaked at 69.5% in 1990 and has declined steadily since then, falling to 68.1% in 1994 and averaging only 68.0% (seasonally adjusted) during the first seven months of 1995 despite continuing job growth in the region. During 1994, the size of New England's labor force participation advantage over the rest of the nation had declined to 1.5 percentage points, and the region ranked only third highest among the nine geographic divisions. The West North Central region (Minnesota, North Dakota, South Dakota, Iowa, Kansas, Nebraska) and the Mountain region had surpassed New England by 1994 (See Table 47 and Chart 6). Over the entire 1989-94 period, New England's relative performance deteriorated substantially, with the region experi-

²³ This 66 percent estimate is an annual average. Over the year, the number of persons who enter the labor force will exceed the monthly average number of participants.

²⁴ For further details on New England labor force growth during the 1980s, see: Andrew Sum, Paul Harrington, and Neeta Fogg, "New England Labor Markets During the Miracle Decade," Center for Labor Market Studies, Northeastern University, Boston, 1991.

²⁵ For a review of international findings on the time use of adult men and women, including the U.S. and Sweden, see: Thomas F. Juster and Frank P. Stafford, "The Allocation of Time: Empirical Findings, Behavioral Models, and Problems of Measurement," Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, February 1990.

	(A)	(B)	(C)	(D)
Year	New England	U.S.	N.E. - U.S.	N.E. Rank Among 9 Regions
1979	65.9	63.7	+2.2	2nd
1988	68.8	65.9	+2.9	2nd
1989	69.3	66.5	+2.8	1st
1990	69.5	66.4	+3.1	2nd
1991	69.2	66.0	+3.2	2nd
1992	69.2	66.3	+2.9	2nd
1993	68.9	66.2	+2.7	2nd
Change				
1979-89	+3.4	+2.8	+6	1st Tied
1989-93	-4	-3	-1	7th Tied

chart 6 LABOR FORCE PARTICIPATION RATES, BY DIVISIONS, 1994 ANNUAL AVERAGE
NEW ENGLAND RANK: 3RD

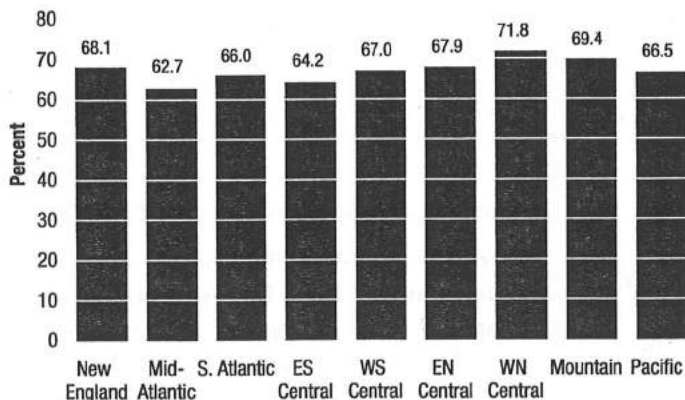


TABLE 48 TRENDS IN AGGREGATE CIVILIAN LABOR FORCE PARTICIPATION RATES OF PERSONS (16+) IN NEW ENGLAND STATES, 1989, 1990, 1994 (ANNUAL AVERAGES, IN PERCENT)

State	(A)	(B)	(C)	(D)
	1989	1990	1994	Absolute Change 1990-94
Connecticut	70.0	71.2	68.8	-2.4
Maine	66.3	67.6	64.3	-3.3
Massachusetts	68.9	68.5	67.9	-.6
New Hampshire	72.9	74.0	72.2	-1.8
Rhode Island	68.2	66.9	65.6	-1.0
Vermont	71.5	70.8	71.1	+3

encing the second largest decline in its overall labor force participation rate, exceeded only by the Pacific region, which was dominated by declining labor force participation rates in the economically depressed state of California. During the first seven months of calendar year 1995, the gap between New England's participation rate and that of the nation has continued to narrow, falling to only 1.2 percentage points.

With the exception of Vermont, each of the New England states' labor force participation rates declined between 1990 and 1994 (See Table 48). While the region's overall labor force participation rate peaked in 1990, Massachusetts, Rhode Island, and Vermont achieved their peak participation rates in 1989. Between 1990 and 1994, the participa-

tion rates of five New England states declined to varying degrees, ranging from a .6 percentage point decline in Massachusetts to a 3.3 percentage point drop in Maine. While Vermont's 1994 participation rate was slightly above that of 1990, it has not yet returned to its peak rate of 71.5% in 1989. Vermont is the only New England state that has regained its previous peak wage and salary employment level.

A continuation of the job growth experienced in the past few years might well facilitate a rise in the region's participation rate. Given the increased numbers of elderly individuals in the region, future improvements in the region's participation rate will be somewhat harder to obtain unless the region substantially improves its net migration performance, especially with respect to highly educated young workers.

TABLE 47 TRENDS IN THE CIVILIAN LABOR FORCE PARTICIPATION RATES OF PERSONS (16+), BY GEOGRAPHIC REGION, 1989-1994 (ANNUAL AVERAGES, IN PERCENT)

Region	(A)	(B)	(C)
	1989	1994	Absolute Change 1989-94
New England	69.3	68.1	-1.2
Middle Atlantic	63.4	62.7	-.7
East North Central	67.3	67.9	+6
West North Central	69.2	71.8	+2.6
South Atlantic	66.2	66.0	-.2
East South Central	62.4	64.2	+1.8
West South Central	66.4	67.0	+6
Mountain	67.6	69.3	+1.7
Pacific	67.9	66.5	-1.4
New England Rank	1st	3rd	2nd Lowest

Changing Participation Behavior of Demographic Subgroups in New England

The shifting trends in the overall labor force participation rate of New Englanders need to be examined at a more disaggregated level in order to understand the sources of growth and decline over the past 15 years. Different demographic and socioeconomic subgroups of the New England working-age population may be altering their labor force behavior at different rates over time. The recent decline in the region's aggregate participation rate may, thus, be attributable to the behavior of

Between 1989 and 1991, employment of men in New England declined at a rate nearly four times as high as that of women, influenced to a considerable degree by the concentration of men in construction and durable manufacturing, the two industrial sectors most impacted by the regional economic downturn in the early 1990s.

only a few population subgroups rather than to uniform declines across all subgroups of the working-age population. To identify the changing patterns of participation, we will examine trends in the labor force behavior of men, women, teens, selected age groups, and key educational attainment subgroups in New England.

Men in New England have participated in the civilian labor force at rates slightly above those of their counterparts in the U.S. During 1979, nearly 79% of males (16+) in New England were active in the civilian labor force, a participation rate only one percentage point higher than the U.S. (See Table 49). New England ranked in the middle of the distribution among the nine geographic regions that year. During the decade of the 1980s, males in New England maintained their participation rate while declining participation rates prevailed among men nationally, especially among males 50-64 and less educated men. By 1989, males in New England enjoyed a 2.5 percentage point participation advantage over their national counterparts, and New England ranked highest among the nine geographic regions. Full employment labor market conditions and below average rates of worker dislocation were effective in

keeping more males active in the labor force.

Since 1989, however, the labor force participation rate of New England males has dropped sharply, falling by three percentage points between 1989 and 1994 while the participation rate of men in the U.S. fell by only one percentage point over the same time period. By 1994, the labor force participation rate of men in New England had fallen to 75.7 percent, exceeding the national average by only one-half of a percentage point and ranking only fourth highest among the nine regions.

The decline in the labor force attachment of men in New England over the past five years appears to be attributable to a number of different factors, including the aging of our adult male population, the loss of young adults to out-migration, and the deteriorating employment prospects of men during the steep recession. Between 1989 and 1991, employment of men in New England declined at a rate nearly four times as high as that of women (5.8% vs. 1.6%), influenced to a considerable degree by the concentration of men in construction and durable manufacturing, the two industrial sectors most impacted by the regional economic downturn in the early 1990s. The higher rates of job displacement

among men and their lengthening durations of unemployment have led to continued higher rates of unemployment among men than women in our region, and these higher open unemployment rates may have discouraged some men from actively seeking employment, thereby depressing their labor force participation rate. Evidence

Year	(A)	(B)	(C)	(D)
	New England	U.S.	N.E. - U.S.	N.E. Rank Among 9 Regions
1979	78.9	77.8	+1.1	5th
1989	78.7	76.2	+2.5	1st
1993	76.8	75.2	+1.6	2nd
1994	75.7	75.1	+0.6	4th
1979-89	-2	-1.6	+1.4	
1989-94	-3.0	-1.2	-2.1	8th

TABLE 50 TRENDS IN THE CIVILIAN LABOR FORCE PARTICIPATION RATES OF WOMEN IN THE U.S. 1979, 1989, 1993, 1994 (ANNUAL AVERAGES, NUMBERS IN PERCENT)

Year	(A)	(B)	(C)	(D)
	New England	U.S.	N.E. - U.S.	N.E. Rank Among 9 Regions
1979	54.3	50.9	+3.4	1st
1989	60.9	57.4	+3.5	1st
1993	61.6	57.9	+3.7	2nd
1994	61.2	58.8	+2.4	3rd
1979-89	+6.6	+6.5	+1	
1989-94	+3	+5	+2	

on a growing pool of New England men who desire immediate employment but are not actively seeking work will be presented below; however, the continued decline in the labor force participation rate of men during 1994 (a further one percentage point drop) when overall job opportunities were rising still remains a puzzle.

Women in New England historically have participated in the labor force at higher rates than their U.S. counterparts, and these higher rates of participation have contributed in important ways to the higher per capita and family incomes of New England residents. At the end of the decade of the 1970s, 54% of New England women (16+) were actively participating in the labor markets of the region. This participation rate was 3.4 percentage points above that of the nation, and New England ranked first among the nine regions on this labor force activity measure (See Table 50). During the regional economic boom of the 1980s, a considerably greater number of women entered the labor force of New England, pushing up their participation rate to just under 61% by the end of the decade and maintaining first place among the nine regions. The participation rate of New England women continued to rise moderately through the early 1990s before declining slightly in 1994. The labor force partic-

ipation advantage of New England women has declined over the past five years, and New England's rank among the nine regions has fallen from first to only third highest in 1994. The steep drop in the participation rate of men in New England between 1989-1994 combined with a substantial slowing in the rate of participation among women have contributed to the decline in the aggregate labor force participation rate of New Englanders over the past five years.²⁶

Teens (16-19) in New England also have been more strongly attached to the labor market than their national counterparts. At the end of the 1970s, 64 of every 100 teenagers in New England were either working or actively looking for work, a participation rate that was nearly six percentage points higher than that of the U.S. and third highest among the nine geographic regions (See Table 51). During the 1980s, the participation rate of New England teens actually fell, a development similar to that of the U.S. This decline was not attributable to deteriorating employment prospects for teens in the region since unemployment rates among the region's teens were the lowest in the nation in the late 1980s. A rising college enrollment rate among young high school graduates was partly responsible. While more college students have been seeking work over the past 15 years, their overall labor force participation rate is considerably below that of young high school graduates who do not enroll in college.²⁷

During the early 1990s, the labor force partic-

TABLE 51 TRENDS IN THE CIVILIAN LABOR FORCE PARTICIPATION RATES OF TEENS (16-19) IN THE U.S. 1979, 1989, 1993 (ANNUAL AVERAGES, NUMBERS IN PERCENT)

Year	(A)	(B)	(C)	(D)
	New England	U.S.	N.E. - U.S.	N.E. Rank Among 9 Regions
1979	63.9	58.1	+5.8	3rd
1989	59.7	55.9	+3.8	4th
1993	53.7	51.5	+2.2	4th
1994	56.8	52.7	+4.1	
1979-89	-4.2	-2.2	-2.0	
1989-94	-2.9	-3.2	+3	

²⁶ For other findings on the labor force participation behavior of women in New England,

See: (i) Catherine Bradbury and Lynn Browne, "The Postwar Evolution of New England Employment," in *Connection: New England's Journal of Higher Education and Economic Development*, Winter 1995, pp. 14-17; (ii) Robert Eismenger, *The Dynamics of Growth in New England's Economic...*; (iii) Andrew Sum, Paul Harrington, and Neal Fogg, *New England Labor Markets During the Miracle Decade*.

²⁷ The CPS survey does not count as residents of a state those college students temporarily residing in the state. For example, if a Boston College student from New York were interviewed during the CPS survey in Massachusetts, he or she would not be included in the population or labor force statistics for Massachusetts, regardless of their employment status. Instead, such students would be included in the resident working-age population of New York. Given the high concentration of college students in the Greater Boston area, many of whom only temporarily reside in the state, the civilian labor force of Massachusetts is clearly underestimated by the CPS survey.

icipation rate of New England teens plummeted sharply, falling by six percentage points between 1989 and 1993 before rising in 1994 due to improved employment prospects for teens, particularly in the retail trade sector. Earlier analyses of the declining participation rates of teens in New England have revealed that high school students, especially economically disadvantaged students, were most adversely affected by these developments. The more limited employment experience of teenagers not only reduces their immediate earnings, but also has adverse long-term consequences for their earnings in their young adult years due to reduced work experience.²⁸

Changing Patterns of Labor Force Participation by Age and Educational Attainment Subgroup

Declines in labor force participation in New England since 1989 have occurred among men and teens. To determine whether these declines were pervasive across all age subgroups or concentrated among the young and the elderly, the March 1989 and March 1994 labor force participation rates of five key age subgroups were examined. Over this six year period, the overall civilian labor force participation rate of New Englanders fell by 1.6 percentage points (See Table 52). Each of our five age subgroups experienced declines in their participation rates over this period; however, the extent of these declines was clearly far more severe among teenagers (-3.9 percentage points) and 50-54 year olds (-2.1 percentage points). The labor force behavior of teens traditionally has been cyclically sensitive, declining during periods of economic recession and rising during periods of economic expansion. Nationally, older workers, particularly males in the 50-59 age group, have been characterized by declining participation rates, with dislocation problems often leading to premature withdrawals from the

Age Group	(A)	(B)	(C)
	March 1989	March 1995	Absolute Change
All 16+	69.4	67.8	-1.6
16-19	58.0	54.1	-3.9
Under 50	82.4	81.5	-.9
50-54	83.2	81.1	-2.1
55-64	62.7	61.8	-.9
65+	14.4	13.4	-1.0

labor force.²⁹ Workers in the prime-aged 20-49 age group experienced a much more moderate decline (.6 percentage points) in their participation rate over this six year period.

At the same time that participation rates for all age subgroups were declining, the age structure of the New England population was changing, with the elderly population (65+) experiencing a large increase while the non-elderly population (16-64) declined, with teens experiencing the largest relative decline. Since only a small fraction of the elderly of New England participate in the labor force (13 to 14 percent), an increase in the elderly share of the region's working-age population would be expected to depress the overall labor force participation rate of the region. The overall change in the region's labor force participation rate between March 1989 and March 1995 can be broken down into the following two sources using a variant of shift-share analysis: the change in the age composition of the working-age population (5 age subgroups) and the changing participation rates within each age subgroup.³⁰

Findings of our shift-share analysis revealed that approximately 38% of the decline in the region's participation rate was attributable to a shifting age composition, particularly the rise in the elderly's share of the population. Changing demographics influenced in part by out-migration from the region, thus, played a role in depressing the region's labor force participation rate over the 1989-1995 period.

²⁸ For a recent analysis of the long-term earnings effects of high school work experience for selected subgroups of young adults,

See: Christopher Ruhm, "The Extent and Consequences of High School Employment," *Journal of Labor Research*, Summer 1994, pp. 293-314.

²⁹ See: (i) Steven Sass, "End Games: Planning for the End of One's Career," *Regional Review*, Boston, Federal Reserve Bank, Spring 1995, pp. 6-11; (ii) Andrew M. Sum and Neal Fogg, "Labor Market Turbulence and the Older Worker," *Turbulence in the American Workplace*, Oxford University Press, New York, 1991.

³⁰ The shift-share analysis allows us to estimate the effect of the changing age structure of the population by multiplying the 1995 labor force participation rates for each age subgroup by their share of the working-age population as of 1989. In other words, if the age structure of New England's working-age population had not changed between 1989 and 1995, the technique allows us to estimate how much higher the March 1995 labor force participation rate would have been.

TABLE 53

TRENDS IN THE LABOR FORCE STATUS OF 22-65 YEAR OLD PERSONS IN NEW ENGLAND BY EDUCATIONAL ATTAINMENT, MARCH 1989 TO MARCH 1994 (NUMBERS IN PERCENT, NOT SEASONALLY ADJUSTED)

	(A)	(B)	(C)	(D)
Years of Schooling Completed	March 1989	March 1994	Absolute Difference	Relative Difference (in Percent)
Civilian Labor Force Participation Rate				
<12 Years	65.9	59.0	-6.9	-10.4%
12 Years	79.9	80.0	0.0	0.1%
13-15 Years	81.6	82.9	1.2	1.5%
16+ Years	89.7	88.3	1.4	-1.6%
Employment to Population Ratio				
<12 Years	63.0	50.5	-12.5	-19.9%
12 Years	76.6	74.5	-2.2	-2.8%
13-15 Years	79.6	78.0	-1.6	-2.0%
16+ Years	87.4	84.9	-2.5	-2.9%

The Impact of Education

The steep regional economic downturn between 1989-1991 and the slow pace of job growth in the early stages of economic recovery might well be expected to differentially affect the labor supply behavior and employability of educational subgroups of the working-age population. To identify trends in the labor force behavior and employment rates of the region's non-elderly adult population, we examined the labor force status of 22-65 year olds in four educational attainment subgroups at the time of the March 1989 and March 1994 CPS surveys. These four educational subgroups were the following:

- Persons lacking a high school diploma or GED
- Persons completing 12 years of schooling
- Persons completing 13-15 years of school
- Persons completing 16 or more years of schooling³¹

Between March 1989 and March 1994, the civilian labor force participation rate of the entire group of 22-65 year olds was basically unchanged at 81%. Those adults lacking a high school diploma, however, were considerably less likely to be active in the labor force, with a 10% decline in their participation rate

The unemployment rate of adult dropouts (22-65) more than tripled between March 1989 and March 1994, rising from 4% to 15%. . . . Those adult dropouts who remained employed in the region also experienced the steepest real earnings declines over the 1989-94 period.

over this five year period (See Table 53). In March 1994, the labor force participation rates of 22-65 year olds in New England ranged from 59% for high school dropouts to 80% for high school graduates to a high of 88% for persons holding a bachelor's or more advanced academic degree. The reduced labor market attachment of adults lacking a high school diploma has been accompanied by a rise in the number of cash public assistance recipients, including AFDC recipients and those receiving disability payments under the Supplemental Security Income Program (SSI). The latter public assistance program has been characterized by explosive growth in caseloads in New England, with the number of SSI disability recipients rising by nearly 70% since early 1989.

The labor market problems of adult dropouts in New England go well beyond their declining labor force participation rates.³² The unemployment rate of adult dropouts (22-65) more than tripled between March 1989 and March 1994, rising from 4% to 15%. No other educational group came close to experiencing such a sharp rise in their unemployment rate. As a consequence of the declining participation rate of adult dropouts and their rising unemployment rate, the fraction of adult dropouts who were employed fell from 63% in 1989 to 50% in 1994, a relative decline of 20%. The employment/population ratios of

³¹ In 1994, the academic degree status of working-age respondents with some post-secondary schooling can be identified on the CPS public use tapes, including associate and bachelor degree holders. The degree reciprocity status of respondents cannot be identified with the 1989 CPS data.

³² The term "adult dropout" is used to refer to all 22-65 year olds who failed to obtain a high school diploma or a GED. Some of these individuals will have completed only primary schooling while others will have attended as many as four years of high school without obtaining any degree.

³³ The value of the employment/population ratio is obtained by dividing the number of employed in a given educational subgroup by the size of the civilian noninstitutional population for that subgroup. Its value is influenced by both the labor force participation rate and the unemployment rate.

³⁴ Not all of the unemployed have to meet the active job search test. Persons on temporary layoff with a scheduled recall date or who expect to be recalled to their former jobs within six months do not have to meet the active job search test, but they must be available for work.

³⁵ Prior to January 1994, these questions were only asked of one-fourth of sample respondents, those in the two out-going rotation groups. Today, the questions on job desires of persons not in the labor force are asked of all respondents, yielding a substantially larger sample size for analysis of the findings.

³⁶ Prior to 1994, discouraged workers were those members of the labor force overhang who cited the following types of reasons for not actively seeking work: could not find a job, believes no work is available, believes that he or she is too old, too young, or too poorly educated to be hired by a local employer. Since January of 1994, to be classified as a discouraged worker, an individual must meet the following four criteria:

(i) A member of the labor force overhang, (ii) Actively searched for a job at some point in the past 12 months; (iii) Available for work at the time of the survey; (iv) Cites economic or personal discouragement reasons as the main reason for not actively seeking work.

For a more detailed review of the methodological issues involved in measuring the labor force overhang and the pool of discouraged workers,

See: (i) Andrew Sum, Neeta Fogg, and Neal Fogg, "Analysis of State and Local Labor Market Problems," Center for Labor Market Studies, Northeastern University, Boston, 1995; (ii) T. Aldrich Finegan, "The Measurement, Behavior, and Classification of Discouraged Workers," National Commission on Employment and Unemployment Statistics, Washington, D.C., 1979.

the other three educational subgroups fell by only two to three percentage points over the same time period.³³ Those adult dropouts who remained employed in the region also experienced the steepest real earnings declines over the 1989-94 period. The real (inflation-adjusted) annual earnings of adult dropouts (20-62) fell by 11% over this five-year period versus a decline of only 4% for all employed adults. A combination of declining employment opportunities and falling real earnings pushed a higher fraction of adult dropouts and their families into poverty in New England.

Hidden Unemployment Problems in New England

To be classified as an active labor force participant, an individual respondent must be either employed or actively seeking work.³⁴ Jobless respondents who are not actively seeking work or who are not currently available for work are classified as "not in the labor force". Some of these individuals not in the labor force may desire immediate employment but are not classified as unemployed since they do not meet the active job search criteria. To identify the job interests of persons not in the labor force, the Current Population Survey includes a series of questions on their desire for an immediate job, their most recent job search activities, their availability for work, and their reasons for not actively seeking work.³⁵ Those persons expressing a desire for a "job now" will be considered to be members of the "labor force overhang." A small subset of these individuals will be classified as discouraged workers, a group frequently cited by the media but not very well understood. Knowledge of the size and characteristics of the labor force overhang in New England is important for determining the pool of potential labor force participants and identifying "hidden unemployment" problems in the region.

During the late 1980s, the labor force participation rates of New England residents reached all time highs. Given the low rates of open unemployment prevailing in early 1989,

TABLE 54

TRENDS IN THE NUMBER OF NON-PARTICIPANTS (16+) WANTING IMMEDIATE EMPLOYMENT IN NEW ENGLAND, MARCH 1989 TO MARCH 1994

Time Period	Number
March 1989	157,000
March 1991	237,000
March 1993	268,000
March 1994	292,000
March 1995	252,400

TABLE 55

PERCENT OF NON-LABOR FORCE PARTICIPANTS (16+) IN NEW ENGLAND WANTING A JOB AT THE TIME OF THE CPS SURVEYS, 1994 (5 MONTH AVG.)

Group	Percent
All	7.6
Gender	
Men	8.4
Women	7.1
Age	
16-19 Years	14.8
20-61 Years	12.5
61+ Years	2.4
Educational Attainment	
High School Dropout	7.5
High School Graduate	7.2
Some College	9.5
College Graduate	6.4
Household Type	
Family Head	6.9
Non-Family Head	4.4
Spouse	6.4
Other Relative	12.4
Unrelated Individuals	18.0
Race/Ethnic	
White, non-Hispanic	7.2
Black, non-Hispanic	16.4
Hispanic	9.3
Other, non-Hispanic	7.1

the number of persons not active in the labor force who indicated a desire for employment was fairly low (157,000), and only a small fraction of these individuals cited "discouragement factors" as their reasons for not actively seeking work (See Table 54).³⁶ In comparative terms, the relative number of discouraged workers in New England was only 25% as high as that for the nation as a whole in early 1989.

During the first two years of the regional

recession, the number of persons in the labor force overhang increased markedly, rising by 80,000 to a level of 237,00 by March 1991. The size of the region's labor force overhang continued to rise through early 1994, with just under 300,000 individuals citing a desire for immediate employment even though they were not actively seeking work. Nearly 9 of every 100 persons (16+) not active in the regional labor force in March 1994 expressed an interest in immediate employment. The labor force overhang had nearly doubled in size between 1989 and 1994. During the following year, the number of persons in the labor force overhang in New England had diminished somewhat, falling to 252,000 by March 1995, but still representing nearly 8% of all persons not active in the civilian labor force.

From a human resource planning perspective, one would desire information on the incidence of job desires among different demographic and socioeconomic subgroups of the inactive working-age population. To provide findings on the incidence of job desires among key subgroups of the population not active in the labor force during 1994, we analyzed the findings of the February, March, June, October, and November CPS surveys. Key findings of our analysis are displayed in Table 55.

On average, just under 8% of all persons (16+) not active in the labor force in 1994 expressed an interest in immediate employment. Men were slightly more likely than women to cite an interest in employment (8.4% vs. 7.1%). Younger persons, especially teens and young adults (20-24), were the most likely to cite an interest in obtaining jobs while older persons (60+) were the least likely to do

so. Nearly 7% of family heads indicated an interest in a current job versus 6% of the spouses and 12% of other family members, primarily the sons and daughters of the family head. Blacks (16%) were the most likely to express an interest in employment, followed by Hispanics (9%) and then Whites and Asians (7%).

A profile of the demographic and socioeconomic characteristics of the region's labor force overhang also can be produced with the 1994 CPS data. The composition of the labor force overhang will be influenced by both the fraction of the inactive population that each group represents and the incidence of job desires among each group. For example, only a small fraction of the inactive elderly (62+) express an interest in employment; however, the elderly represent a major share of the region's inactive population. During 1994, there were approximately 250,000 persons in the labor force overhang during a typical month (See Table 56). Women represented just under 60% of the labor force overhang.

TABLE 56

DEMOGRAPHIC AND SOCIOECONOMIC CHARACTERISTICS OF THE NEW ENGLAND LABOR FORCE OVERHANG, 1994

Group	(A) Number	(B) Percent of Total
All	248,238	100.0
Gender		
Men	100,610	40.5
Women	147,627	59.5
Age		
16-19	46,941	18.9
20-61	160,928	64.8
61+	40,368	16.3
Educational Attainment		
High School Dropouts	77,755	31.3
High School Graduate	81,607	32.9
Some College	59,777	24.1
College Graduate	29,099	11.7
Household Type		
Family Head	64,263	25.9
Non-Family Head	31,085	12.5
Spouse	56,487	22.8
Other Relative	78,915	31.8
Unrelated Individuals	17,488	7.0
Race/Ethnic		
White, non-Hispanic	209,647	84.5
Black, non-Hispanic	20,163	8.1
Hispanic	12,827	5.2
Other, non-Hispanic	5,600	2.3

TABLE 57

PERCENT OF NON-PARTICIPANTS, 16+, IN
NEW ENGLAND, (BY STATE) WANTING A JOB
AT THE TIME OF THE CPS SURVEYS, 1994
(FIVE MONTH AVERAGES)

Group	Percent
Maine	
All	9.0
Men	9.4
Women	8.7
New Hampshire	
All	10.4
Men	9.4
Women	11.1
Vermont	
All	10.1
Men	10.9
Women	9.7
Massachusetts	
All	7.3
Men	8.9
Women	6.3
Rhode Island	
All	9.4
Men	10.1
Women	9.0
Connecticut	
All	5.9

Five of every six members of the labor force overhang were under age 62, and nearly one of five were teenagers. Many high school and college students express a desire for employment even though they are not actively seeking work. Approximately two-thirds of the members of the labor force overhang had completed 12 or fewer years of school; however, another 89,000 members had completed some post-secondary schooling. Nearly one-half of the labor force overhang were family heads or the spouses of the family householder, and approximately four out of ten were the heads of their household. While Blacks and Hispanics had a higher incidence of job desires, a substantial major-

ity of the members of the region's labor force overhang in 1994 were White, non-Hispanics.

Estimates of the incidence of job desires among the inactive population were generated for each state in the region. With the exception of Connecticut, which had a below average incidence of job desires, seven to ten percent of the inactive population in the other New England states reported a desire for current employment in 1994 (See Table 57). The incidence of these job desires were highest in the northern tier of states (Maine, New Hampshire, and Vermont) in which 9 to 10 percent of the inactive population voiced an interest in paid employment. In four of the six New England states, males were somewhat more likely than women to express a desire for a job.

Overall, the findings on the job desires of the economically inactive population in New England during 1994 indicate the existence of a substantial pool of individuals who may be enticed into joining the labor force if the right job opportunities were made available. The size of this labor force reserve (248,000 persons) was quite considerable, being equivalent to 60% of the annual average number of unemployed in the region during that year or 2.5% of the resident civilian labor force.

THE CHANGING INDUSTRIAL AND OCCUPATIONAL STRUCTURE OF EMPLOYMENT IN NEW ENGLAND

OVER THE PAST 15 years, the New England economy has been characterized by extraordinary cyclical volatility as well as by important changes in the industrial and occupational structure of available employment opportunities. Between 1979 and 1989, the real output of the New England economy increased without interruption, rising by 49% over the decade versus a growth rate of only 30% for the nation. Yet, in 1989, the regional economy entered a recession, well before the nation, with real output declining by 4.5% over the next two years. Real output growth resumed in the region in 1992, but our rate of growth (1.2%) remained well below that of the U.S. (2.5%). As a consequence, the region experienced deep job losses during the recession from which we have not yet recovered.

The cyclical and structural changes in employment opportunities have had far reaching implications for the economic well-being of New England workers and the economic rewards to workers in different educational and occupational subgroups. Our assessment of the New England labor market will focus on three time periods that were characterized by sharply distinctive trends in employment developments in the region. These three time periods include the 1983-1988 "New England economic boom," the 1989-1992 regional economic recession, and the current regional economic recovery. Taken together these three periods of extraordinary labor market turbulence have generated substantive changes in the job content of the regional economy. These job changes in turn have altered the role of basic academic skills, formal educational attainment, and training in allocating jobs among residents as well as the levels and distribution of wages and earnings among workers in the region.

1983 to 1988: The New England Economic Boom

Wage and salary employment levels in New England typically have grown at rates well below those observed for the nation over most of the post-World War II period. During the 1950s, New England was viewed as something of an economic backwater with high shares of regional employment concentrated in traditional, non-durable manufacturing industries (apparel, textile, leather and shoes) that were experiencing long-term secular declines. Although labor market conditions in New England improved considerably by the late 1960s, New England's payroll employment growth rates remained about one-third below those observed for the nation as a whole. However, during the 1980s, for the first time since the payroll employment series was developed in the 1930s, the increase in New England's wage and salary employment levels actually outpaced the rate of job growth observed for the nation. Although the regional rate of job growth in the 1980s was only slightly above the national rate (21.9% vs. 20.6%), by historical standards our region's job gains were truly impressive.³⁷

A closer look at the New England payroll employment data reveals that the bulk of the boom decade's job growth actually occurred over a five year period: 1983 to 1988. In fact, 85 percent of the net job creation in New England over the entire decade of the 1980s occurred in just those five years. Payroll employment in New England increased by 990,000 jobs or nearly 18 percent between 1983 and 1988, yielding an annual average growth rate of 3.5 percent (See Table 58).³⁸ Employment in the northern tier of New England states grew at a substantially more rapid pace than in southern New England. Payroll employment in Maine, New Hampshire, and Vermont increased by more than 25% in just this five year period. New

³⁷ See: Andrew Sum, Paul Harrington, and Neeta Fogg, "New England Labor Markets During the "Miracle Decade," Center for Labor Market Studies, Northeastern University, November 1991.

³⁸ The wage and salary employment data reported in this section are derived from the Current Employment Statistics Survey, a monthly survey of business establishments conducted by State Employment Security agencies in cooperation with the U.S. Bureau of Labor Statistics. The survey is limited in scope to wage and salary workers in non-agricultural industries. Self-employed persons and unpaid family workers are excluded from these counts of the employed.

See: U.S. Bureau of Labor Statistics, Employment and Earnings, January 1995.

TABLE 58

TRENDS IN NON-AGRICULTURAL PAYROLL EMPLOYMENT AMONG STATES IN NEW ENGLAND, 1983-1988 (ANNUAL AVERAGES IN 1000'S)

	(A) 1983	(B) 1988	(C) Absolute Change	(D) Relative Change
New England	5579.8	6569.0	990.2	17.7
Connecticut	1446.2	1667.3	221.8	15.3
Maine	425.1	527.0	101.9	24.0
Massachusetts	2696.2	3130.3	434.1	16.1
New Hampshire	409.5	528.9	119.4	29.2
Rhode Island	396.3	459.4	63.1	15.9
Vermont	206.4	256.1	49.7	24.0

Hampshire led the region in job growth with employment levels increasing by 29 percent over this time period. Such job generating performance did not go unnoticed in the nation as Business Week proclaimed New England to be the "in spot" for business.

The rapid growth of the New England economy in the mid-1980s was accompanied by substantial shifts in the industrial structure of wage and salary employment in the region. Findings in Table 59 can be used to identify the specific industry sources of new job creation in New England during the 1983 to 1988 period. These data reveal a substantially varied pattern of job growth across major industrial sectors of the region.

The private services industry, which includes professional services such as education,

health, engineering, business services (accounting, advertising, temporary help, computer software services) as well as personal services industries (ranging from amusements to beauty salons), generated the largest share of net new jobs in New England. Total services industry employment increased by 388,000 or by 29 percent in this five year period. Wholesale and retail trade establishments also accounted for a large share of the region's employment gains between 1983 and 1988. Trade employment increased by more than 306,000 jobs or nearly 25 percent over this period. Together the services and trade industries accounted for

Even as New England labor markets moved to full employment conditions the region's manufacturing sector actually experienced job losses. Employment levels within the region's manufacturing sector declined by more than 73,000 between 1983 and 1988.

seven out of ten net new jobs created in the New England region.

The record of job generation in the region's goods producing industries was much more mixed than that of service-oriented industries over this period. The region's construction industries experienced explosive growth in payroll employment levels during the 1980s, fueled first by a commercial construction boom, then by a residential construction boom. Total wage and salary construction employment increased by more than 130,000 or by two-thirds over the 1983-1988 period, improving construction workers' wages and earnings.

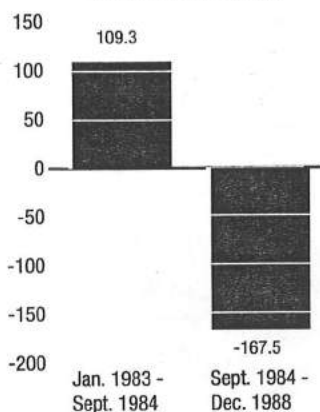
Even as New England labor markets moved to full employment conditions with rates of payroll expansion not seen since World War II, the region's manufacturing sector actually experienced job losses. Employment levels within the region's manufacturing sector declined by more than 73,000 between 1983

TABLE 59

TRENDS IN NON-AGRICULTURAL PAYROLL EMPLOYMENT IN NEW ENGLAND, BY MAJOR INDUSTRIAL SECTOR (ANNUAL AVERAGES, IN 1000'S)

	(A) 1983	(B) 1988	(C) Absolute Change	(D) Relative Change
Industrial Sector				
Construction	200.5	330.9	130.4	65.0
Manufacturing	1418.6	1344.8	-73.8	-5.2
Transportation, Communication & Utilities	235.3	272.2	36.9	15.6
Trade	1241.4	1548.0	306.6	24.7
Finance, Insurance & Real Estate	359.2	470.7	111.5	31.0
Services	1331.2	1719.6	388.4	29.2
Government	789.0	877.0	88.0	11.1

chart 7 TRENDS IN MANUFACTURING EMPLOYMENT IN NEW ENGLAND 1983 TO 1988 (SEASONALLY ADJUSTED)



and 1988. However, even this relatively short period of time was characterized by dramatic fluctuations in manufacturing payroll levels. For example, in the 20 month period between January 1983 and September 1984, New England manufacturing payrolls grew by leaps and bounds, adding nearly 110,000 jobs (See Chart 7). This employment expansion was heavily concentrated in high technology manufacturing especially computer equipment and electronic components industries located in Massachusetts and New Hampshire.³⁹ Following this dramatic expansion in employment within the manufacturing sector generally and high technology equipment producers in particular, the region's manufacturing sector fell into a prolonged and sustained period of job loss. Over the next three and one-half years, manufacturing employment fell by 167,000 or 11 percent. Thus, the 1983-1984 high technology manufacturing employment boom collapsed in a matter of months into a dramatic job market bust. The pressures of technological changes and increased competition from both foreign and domestic producers resulted in substantial high technology manufacturing industry layoffs. Due to very high rates of productivity growth over this period, however, real output of the manufacturing sector increased while employment levels fell.

The Recession of 1989-1991 in New England

The region's employment boom of the 1980s was unfortunately not to last through the end of the decade. By early 1989, New England began to enter the worst economic recession (as measured by job loss) that it had experienced since the Great Depression of the 1930s. Between 1989 and 1991, the New England economy experienced a steep economic recession characterized by high losses in real output and even more extraordinary levels of job loss that affected each of the major industrial sectors of the economy. Moreover, the 33 months between the February 1989 regional employment peak and the subsequent trough in regional employment in December of 1991 was the

longest period of sustained job loss ever experienced by any region in the nation up to that time.⁴⁰ The steep job losses that occurred resulted in sharp increases in regional unemployment rates, eventual declines in the size of the region's labor force, out-migration, and increases in hidden unemployment problems. Every state in New England experienced sharp increases in open unemployment over this time period, and median real family incomes in the region were estimated to have fallen by more than 9 percent over the 1989-1991 period.

The recent regional recession was characterized by substantial deterioration in payroll employment levels within New England's goods producing industries. The unprece-

In June of 1988, construction payroll employment stood at 336,000 jobs. By August 1992, more than 157,000 construction jobs were lost.

dent expansion in construction payroll employment in the mid-1980s was followed by a virtual collapse in the demand for construction workers starting in mid-1988 as the construction boom wound down. In June of 1988, construction payroll employment stood at 336,000 jobs. Over the following 50 months, the New England construction industry shed an extraordinary number of jobs. By August 1992, more than 157,000 construction jobs were lost, representing a relative decline of 47 percent in the industry's payroll employment levels.

As noted earlier, the region's manufacturing sector had already entered into a period of sustained job loss prior to the onset of the regional recession in early 1989. However, job losses in New England's manufacturing sector accelerated dramatically over the 1989-1991 period. Over the 33 month duration of the regional recession, manufacturing employment fell by an additional 209,000

³⁹ Harrington, Paul E., Boyle, Marilyn and Vinson, Robert, "High Technology Careers in Massachusetts," Massachusetts Department of Employment and Training, Boston, 1987.

⁴⁰ Harrington, Paul E. and Sum, Andrew M., "The Economic Recession in Massachusetts: Its Impact on Labor Markets and Workers," U.S. Senate Committee on Education and Labor, July 1991.

TABLE 60

TRENDS IN INDUSTRY EMPLOYMENT DURING THE 1989-1991 ECONOMIC RECESSION IN NEW ENGLAND (SEASONALLY ADJUSTED NUMBERS IN 1,000'S)

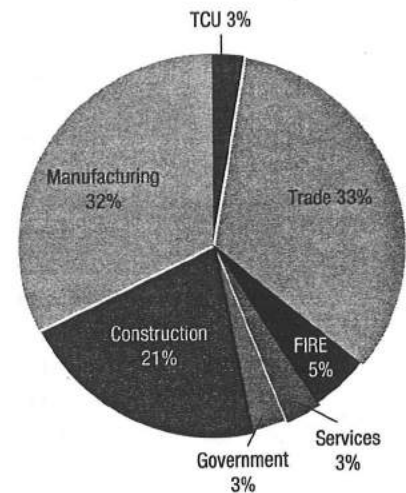
Industrial Sector	(A) February 1989	(B) December 1991	(C) Absolute Change	(D) Relative Change
Total	6624.8	5975.5	-649.3	-9.8
Construction	317.9	181.6	-136.3	-42.9
Manufacturing	1324.7	1115.5	-209.2	-15.8
Transportation, Communications & Utilities	272.4	252.4	-20.0	-7.3
Trade	1577.1	1364.6	-212.5	-13.5
Finance, Insurance & Real Estate	467.0	436.7	-30.3	-6.5
Services	1776.7	1757.5	-19.2	-1.1
Government	885.0	864.2	-20.8	-2.4

jobs, or by more than 15 percent (See Table 60). This manufacturing job loss was attributable to both an acceleration in the loss of civilian high technology manufacturing jobs and sharp reductions in defense manufacturing employment, especially in the states of Connecticut and Massachusetts.

The region's construction and manufacturing

chart 8

SHARE OF JOB LOSS IN NEW ENGLAND, BY INDUSTRY, FEBRUARY 1989 - DECEMBER 1991



recession were decidedly more mixed than those observed among goods producing industries. Over the course of the recession, several key elements of the services sector were substantially insulated from these job losses, experiencing quite small payroll employment declines.

Within the region's private services industries, which employ substantial shares of college graduates, total employment levels dropped by only 19,000 or about 1 percent over the course of the recession. Similarly, the finance, insurance, and real estate sectors lost 30,000 jobs in the region, a reduction of 6.5 percent, considerably less than the rates of job loss that occurred in the region's goods producing industries.

Unlike the experiences of the private services industries, the New England wholesale and retail trade sector did experience substantial job loss during the recession. Between February of 1989 and December of 1991, trade payroll employment in the region fell by 212,000 or by more than 13 percent. This job loss was dominated by declines in retail trade employment, including department stores and eating and drinking establishments, reflecting the declines in the real per capita incomes of residents and hence their purchas-

ance, and real estate sectors lost 30,000 jobs in the region, a reduction of 6.5 percent, considerably less than the rates of job loss that occurred in the region's goods producing industries.

sectors together accounted for only 1 of 4 jobs in New England in February 1989. However, they were responsible for more than one-half of all the wage and salary jobs that were lost in New England during the recession (See Chart 8). Clearly, the New England goods producing sector and its predominantly blue collar work force bore a disproportionate share of the wage and salary job losses experienced in the region. Given the high shares of manufacturing output that are exported outside of the region, the declines in manufacturing had substantial multiplier effects on the regional economy and contributed to the deepening of the regional recession.

The patterns of job loss in the region's services producing sector during the recent

The region's construction and manufacturing sectors together accounted for only 1 of 4 jobs in New England in February 1989. However, they were responsible for more than one-half of all the wage and salary jobs that were lost during the recession

ing power. Many retail firms employ high shares of lower level, white collar workers, including part-time sales clerks, cashiers, and other sales and service occupations. Thus, job loss in the retail trade sector was, similar to that among our goods producing industries, concentrated on those workers with fewer years of formal schooling. The private services industries and government, which employ relatively high shares of professional, technical, and managerial workers, were considerably less affected by the steep regional economic downturn between 1989 and 1991.

The Economic Recovery in New England

After experiencing nearly three years of continuous job loss, the region's labor markets hit their employment trough in December of 1991.⁴¹ At that point, total wage and salary employment (seasonally adjusted) had dipped below the six million job mark. The process of recovery from this job loss initially was quite slow. Throughout most of 1992, New England firms added few workers to their payrolls. Wage and salary employment in the region increased by only 29,000 jobs or 0.5 percent through all of 1992, marking the first year of what became known as the region's "jobless recovery." Most of the New England states posted quite small employment gains in 1992; however, payroll employment levels in Connecticut continued to decline throughout the year even as the rest of the region began to slowly recover.

Since the end of 1992, the rate of employment growth in the region has accelerated considerably, but still remains well below national growth rates. Between December of 1992 and August of 1995, total payroll employment in the region increased by more than 277,000 jobs or by 4.6 percent (See Table 61). While Connecticut and Rhode Island have added relatively

few net new jobs, New Hampshire has grown at a more rapid pace of 7.2 percent. Massachusetts also added 170,000 jobs, representing an increase in state payroll employment by 6.1 percent.

While the largest absolute and relative job losses of the recession were concentrated in the goods producing sector of the regional economy, most goods producing firms outside of the construction industry have added few jobs during the recovery. Aided by the implementation of the megaprojects in the Greater Boston area, construction employment has increased by about 21,000 jobs or 11% over the course of the recovery, but this increase was offset by a further loss of 29,000 jobs among the region's manufacturing industries through August of 1995 (See Table 62). The bulk of the net new jobs created during the current recovery have been concentrated in the region's services industries and to a lesser extent in wholesale and retail trade industries. Wage and salary employment in New England private service industries increased by more than 155,000 during the recovery, led by gains in key professional service industries, especially health services. The private service industries alone have accounted for 55 percent of the net increase in regional employment levels during the current recovery. The region's trade sector has expanded employment levels by 86,000 jobs or slightly more than 6 per cent over the current recovery, led by growth in eating and drinking establishments. Together, the private ser-

⁴¹ The employment trough is based on the seasonally adjusted wage and salary employment data from the monthly establishment surveys operated by the State Job Services in New England.

State	(A)	(B)	(C)	(D)
	December 1992	August 1995	Absolute Change	Relative Change
New England	6004.0	6281.7	277.7	4.6
Connecticut	1521.0	1546.4	25.4	1.7
Maine	514.8	541.8	27.0	5.2
Massachusetts	2795.5	2965.6	170.1	6.1
New Hampshire	492.9	528.6	35.7	7.2
Rhode Island	426.2	433.5	7.3	1.7
Vermont	253.6	265.8	12.2	4.8

TABLE 62

TRENDS IN WAGE AND SALARY EMPLOYMENT IN NEW ENGLAND
BY MAJOR INDUSTRY SECTOR, DECEMBER 1992 TO AUGUST 1995
(SEASONALLY ADJUSTED NUMBERS IN 1000'S)

Industry Sector	(A)	(B)	(C)	(D)
	December 1992	August 1995	Absolute Change	Relative Change
Total	6004.0	6281.7	277.7	4.6
Construction	186.2	207.3	21.1	11.3
Manufacturing	1080.0	1050.5	-29.5	-2.7
Transportation, Communications, & Utilities	254.1	266.2	12.1	4.8
Trade	1365.4	1452.0	86.6	6.3
Finance, Insurance & Real Estate	429.4	439.2	9.8	2.3
Services	1820.7	1976.5	155.8	8.5
Government	865.0	886.1	24.1	2.8

vices and trade sectors have accounted for more than 8 out of 10 net new jobs that have been created in New England during the recovery.

These employment developments represent a continuation of many of the earlier trends observed during the 1983-1988 employment expansion. Like the earlier period, the current economic recovery has been characterized by absolute declines in manufacturing employment together with job expansion concentrated in service and trade industries. Clearly, although accelerated by cyclical developments during the 1989-1991 period, the industrial structure of employment has continued its longer term pattern of transformation. Over the entire period of January 1983 to August 1995, New England experienced a net loss of 339,000 manufacturing payroll jobs, representing a 25 percent reduction in manufacturing employment. Over the same time period, 679,000 jobs in service industries and 258,000 trade jobs were added to the region's payrolls, increasing service industry employment levels by more than 50% and trade payroll employment levels by more than one-fifth.

One major result of these divergent industrial employ-

In 1983, the manufacturing sector remained the largest industrial employer in New England. By 1995, service industries employed nearly twice as many workers as the manufacturing industries.

ment developments is that the job content of the New England economy has been altered dramatically over the past 12 years. In 1983, manufacturing firms accounted for one of every four wage and salary jobs in the region (See Table 63). By 1995, only one of six jobs in the region was found in manufacturing firms. The sustained increase in service industry payrolls raised this sector's share of employment from about 25% in 1983 to nearly 33% by 1995. In 1983, the manufacturing sector remained the largest industrial employer in New England. By 1995, service industries employed nearly twice as many workers as the manufacturing industries.

The changes in the industrial structure of New England are part of a longer term trend in the American economy toward concentrating employment gains in service and trade industries, with manufacturing industries becoming an increasingly less important source of employment opportunities in the nation. This is not meant to imply that manufacturing output has decreased. In fact, manufacturing output has continued to grow

TABLE 63

INDUSTRIAL STRUCTURE OF WAGE AND SALARY EMPLOYMENT
IN NEW ENGLAND, 1983 AND 1995 (NUMBERS IN PERCENT)

	(A)	(B)
	1983	1995
Total	100.0	100.0
Construction	3.5	3.3
Manufacturing	25.5	16.7
Transportation, Communications and Utilities	4.3	4.2
Trade	21.9	23.1
Finance, Insurance and Real Estate	6.4	7.0
Services	23.8	31.5
Government	14.4	14.1

as a result of high rates of labor productivity growth, substantially outpacing those generated by all other sectors. This shift in the structure of industry employment in New England has had a number of important impacts on the nature of the demand for labor.

One of the most important impacts of these changes has been upon the occupational composition of employment in the region. As employment continues to shift from manufacturing to services and trade industries, many skilled and semi-skilled blue collar jobs where skills are more likely to be learned on the job have vanished. Trade and service industries require distinctly different types of skills from one another as well as from most manufacturing industries. The occupational composition of employment in both trade and service industry sectors is, thus, much different than that found in the region's manufacturing sector. Due to their higher productivity levels, many of the jobs in the region's manufacturing industries have paid above average wages to workers with a given level of formal schooling. The blue collar jobs found in these industries often provided important earnings opportunities for men and women with no formal schooling beyond high school. The characteristics of jobs found in manufacturing firms also often differed sharply from those found in services or trade with respect to other factors such as the availability of health and pension benefits and employer-provided training, both formal and informal.

Trends in the Occupational Composition of Employment in New England

Since the late 1970s, the occupational characteristics of the jobs held by New England workers have changed considerably.⁴² Employment opportunities for individuals in higher level, white collar occupations (professional, managerial, technical) have in general expanded at high rates. Simultaneously, the demand for many semi-skilled blue collar operatives, fabricators and assemblers has fallen sharply. Part of the explanation for

this change in the occupational skill mix of the region is associated with the patterns of industry employment growth and decline experienced in the region since the early 1980s. The nature of the production technologies employed by business establishments in New England vary widely across the major industrial sectors that compose the regional economy. For example, the types of production technologies utilized in durable goods manufacturing industries differ considerably from those employed in retail trade establishments. In turn, these differences in production technologies generate differing labor skill requirements to staff these alternative production processes. These skill requirements then drive the demand for workers in different educational and occupational subgroups.

Data appearing in Table 64 can be used to examine the distribution of employment by major occupational group within the three largest industrial sectors of the New England economy — manufacturing, retail trade, and professional services — in 1980, several years before the mid-80s employment boom. The New England manufacturing sector employed very high proportions of skilled and semi-skilled blue collar workers. Blue collar workers in all skill categories, including the unskilled, accounted for over 60% of New England manufacturing employment at the time of the 1980 decennial census. The retail trade sector employed considerably fewer blue collar workers (18%), but was a major employer of sales workers (37%) and service-related occupations (23%), such as food service workers, waiters, waitresses, and security guards. Professional service industries rarely employed blue collar workers, with less than 3 percent of the industries' workers employed in blue collar jobs. The professional services industry was dominated by professional workers, including computer programmers and software developers, lawyers, teachers, and health professionals, who accounted for 43 percent of employment in the industry. Clearly, the occupational staffing requirements of these three industry sectors varied quite considerably at the time of the 1980

⁴² For earlier analyses of the changing occupational structure of employment in New England,

See: (i) Andrew M. Sum, Paul Harrington, and Neeta Fogg, "New England Labor Markets During the Miracle Decade.....;" (ii) Ralph Whitehead, "Higher Education and the Workforce: What is the Link in the New Economy," *Connection*, Vol. 8, No., Spring/Summer 1993; pp. 15-16; (iii) Paul E. Harrington and Andrew M. Sum, "A Decade of Change in New England's Labor Market," *Connection*, Vol. 8, No. 1, pp. 12-14.

TABLE 64

OCCUPATIONAL STAFFING PATTERNS OF SELECTED MAJOR INDUSTRIAL SECTORS IN NEW ENGLAND, 1980 (NUMBERS IN PERCENT)

Occupational Group	(A)	(B)	(C)
	Manufacturing	Retail Trade	Professional Services
Executive, Administrative and Managerial	9.5	9.8	7.9
Professional	7.1	1.8	43.6
Technical	3.7	0.2	6.4
High Level Sales	2.2	8.7	0.1
Low Level Sales	0.3	27.8	0.4
Administrative Support	13.7	10.2	17.0
Service Occupations	1.8	22.7	20.9
Farming, Forestry, Fishing	0.5	0.1	0.3
Skilled Blue Collar Precision and Production Craft	19.3	8.4	1.6
Semi-Skilled Blue Collar Operatives	37.9	3.0	1.6
Unskilled Handlers/Laborers/Cleaners	4.0	7.2	0.3

Source: 1980 Census of Population and Housing, tabulations by Center for Labor Market Studies.

census.

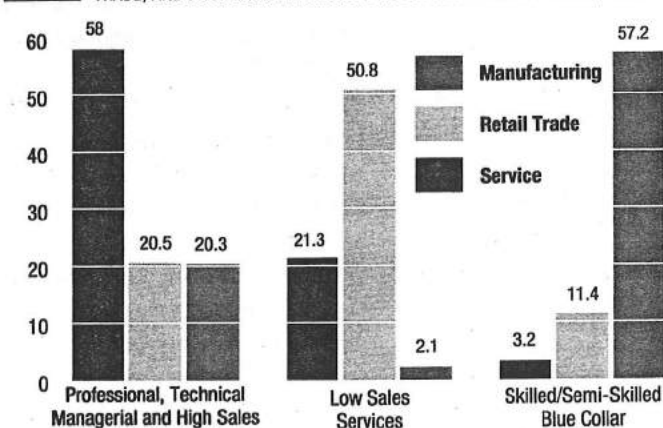
Since the early 1980s, employment trends in the regional economy through both periods of expansion and recession have consistently favored the services and retail trade sectors while manufacturing employment opportunities have declined. The industrial shifts in employment that have occurred since 1980 would have been expected to alter the occupational composition of employment within the region. The rapid growth in service industry employment should have resulted in a sharp increase in the demand for professional, technical, managerial, and high level sales workers (sales representatives, financial service representatives, stock and bond sales persons) who constitute the highest share of service industry employment in our region. These "college labor market" occupations account for well over half of professional service industry employment in New England (See Chart 9). As the number of wage and salary jobs in the service industry has continued to grow, opportunities for employment in these college labor market jobs has

expanded sharply. In contrast, the findings in Chart 9 suggest that semi-skilled blue collar employment opportunities were likely to diminish considerably as manufacturing sector employment levels continued to decline. While accounting for a substantial share of net job creation in New England, the retail trade sector did not intensively employ either blue collar or college labor market workers. Retail trade staffing patterns were dominated by lower level sales and service occupations whose educational and training requirements are considerably below those of most professional, technical, and management occupations. Workers in these occupations accounted for about one-half of retail trade industry employment levels. Thus, as the retail trade sector expanded its employment, substantial numbers of new job opportunities were created in lower level sales and service occupations, but relatively few new employment opportunities were created for either college labor market or blue collar workers.

Changing Occupational Staffing Patterns Within Industries — Educational Implications

Long-term shifts in the industrial structure of employment are not the only forces that will influence the occupational composition of employment in New England. Changes in the mix of products and services, the nature of production technologies, and work organization systems within industries will also alter the skill requirements within a particular

chart 9 SELECTED OCCUPATIONAL EMPLOYMENT SHARES OF MANUFACTURING, RETAIL TRADE, AND PROFESSIONAL SERVICES INDUSTRIES IN NEW ENGLAND, 1980



sector of the economy. Changing capital intensities of production, innovations in product design, changes in relative factor costs, new production techniques and even management philosophies and practices like total quality management and statistical quality control will influence the nature of industry production processes and, thus, the set of skills and worker traits that a business organization requires in order to achieve an efficient production process for its goods or services. During the decade of the 1980s and the first half of the 1990s, a number of key industrial sectors in the region have substantially altered the nature of their production process-

By the mid-1990s, over one-third of all manufacturing workers were employed in college labor market jobs, up from a one-fifth share just fourteen years earlier. In contrast, skilled and semi-skilled blue collar employment shares fell from 57 percent to 45 percent, a relative decline of 21 percent over the same time period.

es and, as a consequence, their skill requirements.

Between 1980 and 1994, New England's manufacturing sector underwent a fundamental structural transformation — not just by reducing its overall employment levels by one-third, but also by substantially altering the nature of the production processes utilized in many of the remaining manufacturing firms in the region. As New England manufacturers downsized, they also adopted new production methods and increased their use of capital that altered the skills required of remaining workers. The data provided in Table 65 examine the occupational staffing patterns of New England manufacturers, retailers, and professional service providers at two points in time, 1980 and 1994. An analysis of the data reveals that in 1980 about one-fifth of those persons employed in the region's manufacturing industries worked in college labor market jobs, i.e., professional, managerial, technical, and high level sales positions. At that time, well over one-half of

all manufacturing jobs were in skilled and semi-skilled blue collar occupations.

By 1994, however, the staffing patterns of firms in the New England manufacturing sector had substantially changed. As manufacturing employers trimmed payrolls in response to changing product demands and production technologies, substantial numbers of blue collar workers lost their jobs. Skilled and semi-skilled blue collar employment fell by nearly 390,000 in the region over this period. At the same time, the number of persons employed in professional, technical, managerial, and high level sales jobs in New England

manufacturing industries actually increased by more than 57,000. The result was a substantial "twist" in the demand for labor among manufacturing industries within New England. By the mid-1990s, over one-third of all manufacturing workers were employed in college

labor market jobs, up from a one-fifth share just fourteen years earlier. In contrast, skilled and semi-skilled blue collar employment shares fell from 57 percent to 45 percent, a relative decline of 21 percent over the same time period. Clearly, as manufacturers in New England downsized and reorganized and as the industrial distribution of jobs within manufacturing changed, they required more high level white collar workers, but many fewer blue collar employees to produce the growing volume of goods.

The findings in Table 65 reveal similar, although less pronounced, occupational staffing pattern twists occurring within the retail trade and professional service industries between 1980 and 1994.⁴³ Retail trade employers increased their utilization rates of college labor market workers by one-fifth over the period. The professional services industry was already an intensive employer of college labor market workers in the early 1980s. However, by 1994, the intensity of utilization of professional, technical, managerial, and

⁴³ The professional services industries include both private and public sector employers. These include legal, health, education, engineering and social services.

TABLE 65

OCCUPATIONAL COMPOSITION OF EMPLOYMENT IN SELECTED MAJOR INDUSTRIES IN NEW ENGLAND, 1980-1994 (NUMBERS IN PERCENT)

Major Occupational Group	Manufacturing		Retail Trade		Professional Services	
	1980	1994	1980	1994	1980	1994
Professional, Technical, Managerial, High Level Sales	20.3	36.0	20.5	25.1	58.0	63.4
Low Level Sales and Services	2.1	2.2	50.5	49.7	21.3	16.8
Skilled & Semi-Skilled Blue Collar	57.2	45.9	18.6	16.9	3.2	2.9

high level sales workers by these industries also increased. Thus, as New England service sector employers expanded their payroll employment levels, they also altered their production technologies and work organizations in ways that required more college labor market workers, while substantially diminishing job opportunities for those in skilled and semi-skilled blue collar jobs.

Occupational Employment Trends During Expansion and Recession

The economic boom of the mid-to late 1980s witnessed a substantial increase in the employment of persons in professional, technical, or managerial jobs. For example, the number of working-age New Englanders employed in executive or managerial jobs increased by more than 300,000 or 46% between 1983 and 1988 (See Table 66). Employment of professional workers increased by 155,000 or 18% while technical employment increased by 49,000. Employment in these three occupational groups increased in the region by more than 500,000. These college labor market occupations accounted for 60 percent of the net increase in the number of employed persons in New England between 1983 and 1988. Clearly, workers with college labor market related skills were the major beneficiaries of the 1980s economic expansion in the region. By 1989, one-third of all New England workers (16+) were employed in professional, managerial, and technical occupations, a share that was four percentage points higher than the U.S. average, and New England ranked first among the nine geographic divisions on this employment measure.

The employment situation for those persons working in blue collar occupations during this time period was much more mixed. During the construction industry boom, the demand for skilled craft workers increased considerably. Employment among all skilled blue collar craft workers increased by 96,000 or about 13 percent over this period, largely as a result of the construction boom. However, as manufacturing employment levels began to decline, semi-skilled blue collar employment in routine machine operative and related production positions began to decline even during the midst of the boom. The number of persons employed in these semi-skilled blue collar jobs in the region fell by 65,000 or nearly 12 percent during the 1980s expansion.

During the regional economic recession of 1989 to 1991, steep employment declines took place in the region's goods producing and retail trade sectors, while service industry employment was relatively insulated from this job loss. Occupational employment developments over the course of the recession largely mirror these trends in industry employment (See Table 67).

As construction and manufacturing payroll employment levels plummeted during the deepening economic recession, employment of workers in blue collar jobs fell sharply. Skilled blue collar employment levels declined by 137,000 or nearly 17 percent as both construction and manufacturing firms eliminated thousands of these skilled craft and precision production workers from their payrolls. The accelerating job loss in manufacturing also resulted in semi-skilled blue collar employment falling by nearly one-fifth in just three years. Unskilled blue collar jobs also fell sharply (16%) over this period. Thus, despite a growing number of national and regional newspaper stories that stressed the "white collar nature" of job losses during the recession, and the dislocation of middle managers, the regional recession of 1989 to 1991 was one in which blue collar workers bore the major burden of labor market dislocation experienced in New England.

TABLE 66 TRENDS IN EMPLOYMENT BY MAJOR OCCUPATIONAL GROUP IN NEW ENGLAND, 1983 TO 1988 (NUMBERS IN 1000'S, ANNUAL AVERAGES)

Major Occupational Group	(A)	(B)	(C)	(D)
	1983	1988	Absolute Change	Relative Change
Executive, Administrative, Managerial	663	968	305	46.0
Professional	871	1,026	155	17.7
Technical	168	217	49	29.2
Sales	630	764	134	21.2
Clerical	996	1,108	112	11.3
Service	774	798	24	3.1
Skilled Blue Collar	728	824	96	13.2
Semi-Skilled Blue Collar	561	496	-65	-11.6
Unskilled Blue Collar	404	458	54	13.4
Total	5,812	6,665	853	14.7

Source: U.S. Department of Labor, Bureau of Labor Statistics, Geographic Profiles of Employment and Unemployment, 1983 and 1988.

TABLE 67 TRENDS IN EMPLOYMENT BY MAJOR OCCUPATIONAL GROUP IN NEW ENGLAND, 1988 TO 1991 (ANNUAL AVERAGES, NUMBERS IN 1000'S)

Occupational Group	(A)	(B)	(C)	(D)
	1988	1991	Absolute Change	Relative Change
Executive, Administrative, Managerial	908	916	8	0.9
Professional	1,026	1,102	76	7.5
Technical	217	240	23	10.6
Sales	764	782	18	2.3
Clerical	1,108	1,006	-102	-9.2
Service	798	864	66	8.2
Skilled Blue Collar	824	687	-137	-16.6
Semi-Skilled Blue Collar	496	401	-95	-19.2
Unskilled Blue Collar	458	385	-73	-16.0

Source: U.S. Department of Labor, Bureau of Labor Statistics, Geographic Profiles of Employment and Unemployment, 1988 and 1991.

Higher level white collar workers, who were predominantly employed in the region's private services, banking, and government sectors, did not experience any net employment losses between 1988 and 1991. While some managers and professional workers did get displaced from their jobs, their losses were more than offset by employment gains elsewhere. In fact, as the region weathered this period of massive net job loss, employment in the region's college labor market occupations actually managed to increase modestly. The

only non-blue collar occupational group to sustain substantial job losses during the recession in New England was the administrative support and clerical occupations. Employment in this occupational area fell by 102,000 or by more than 9 percent over the course of the recession. Corporate restructuring and downsizing efforts as well as the effects of office automation eliminated nearly 1 of every 10 administrative support jobs in the region.

Table 68 provides data on trends in employment by major occupational groups over the first three years of the current regional economic expansion. Reflecting a recovery led by service sector payroll employment growth, the bulk of the net increase in the number of employed persons has occurred in managerial and professional occupations. Employment in these two major occupational groups increased by 95,000, accounting for more than 80 percent of the net increase in employment levels experienced in the region during the current economic expansion. Over the course of the recovery, clerical and most blue collar employment levels have continued to fall. Thus, the longer-term occupational trends of growth in college labor market occupations and further declines in blue collar and clerical jobs have continued throughout the mid-1990s.

Our analysis of the changing employment fortunes of New England workers between 1983 and 1994 divided this period into three distinct phases: rapid growth, deep recession, and economic recovery. Each of the periods of extraordinary job growth, decline, and now recovery were characterized by above average growth rates in college labor market occupations and absolute or relative declines in most blue collar occupations. Shifts in the industrial structure of employment away from goods producing industries toward service producing industries, combined with industry twists in occupational staffing patterns away from blue collar jobs and lower level white collar jobs toward college labor market jobs, has substantially altered the occupational job content of the New England economy.

TABLE 68 TRENDS IN EMPLOYMENT BY MAJOR OCCUPATIONAL GROUP IN NEW ENGLAND, 1991-1994

	(A)	(B)	(C)	(D)
	1991	1994	Absolute Change	Relative Change
Executive, Administrative, Managerial	916	971	55	6.0
Professional	1,102	1,142	40	3.6
Technical	240	224	-16	-6.7
Sales	782	791	9	1.1
Clerical	1,006	978	-28	-2.8
Service	864	884	20	2.3
Skilled Blue Collar	687	672	-15	-2.2
Other Blue Collar	786	787	1	0.1

Source: U.S. Department of Labor, Bureau of Labor Statistics, Geographic Profiles of Employment and Unemployment, 1991. 1994 CPS tabulations by the Center for Labor Market Studies.

TABLE 69 TRENDS IN EMPLOYMENT BY MAJOR OCCUPATIONAL GROUP IN NEW ENGLAND, 1983 TO 1994 (ANNUAL AVERAGES, IN 1,000'S)

	(A)	(B)	(C)	(D)
Occupational Group	1983	1994	Absolute Change	Relative Change
Executive, Administrative, Managerial	663	971	308	46.5
Professional	871	1,142	271	31.1
Technical	168	224	56	33.3
Sales	630	791	161	25.5
Clerical	996	978	-18	-1.8
Service	774	884	110	14.2
Skilled Blue Collar	728	672	-56	-7.7
Other Blue Collar	965	787	-178	-18.4

Sources: U.S. Department of Labor, Bureau of Labor Statistics, Geographic Profiles of Employment and Unemployment, 1983, 1994 CPS tabulations by the Center for Labor Market Studies.

To illustrate the magnitude and nature of these longer-term changes, we have tracked occupational employment developments in the region over the entire 1983 to 1994 period (Table 69 and chart 10).⁴⁴ The overwhelming share of the net increase in regional employment has been in professional, technical, and managerial jobs. Of the 654,000 net increase in employment, 635,000 or 97% occurred in professional, managerial, and technical jobs. Over this eleven year period, employment in managerial, professional, and technical occupations increased by 31 to 46 percent, while

blue collar occupations experienced absolute employment declines, with semi-skilled blue collar workers being the most adversely affected. This dramatic shift in the occupational structure of employment in New England has substantially altered the demand for workers in different schooling and literacy proficiency groups, with the college educated and the most literate being major beneficiaries of these developments. As the occupational structure of employment has changed, so have relative earnings by educational and occupational group.

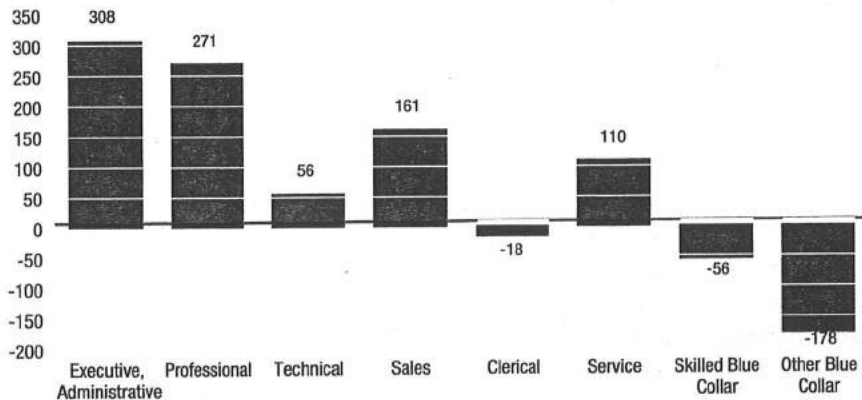
Educational Impacts of the Changing Job Content of the New England Regional Economy

The shift of employment in New England from goods producing to service producing industries along with twists in the occupational staffing patterns within industries have combined to sharply alter the educational requirements of the New England labor market. The previous section of this report revealed that during the expansion of the 1980s professional, technical, and managerial jobs accounted for the majority of net new jobs generated in the region. During the recession these same jobs were insulated from much of the job loss that occurred in most of the remaining occupational sectors of the economy. Moreover, the current regional economic recovery has been led by growth in these professional, technical, and managerial occupational areas.

The growth in employment opportunities in professional, technical, managerial, and high level sales jobs have resulted in a substantial increase in the demand for workers who have earned a college degree. The findings in Chart 11 reveal that these four occupational groups are highly composed of individuals who possess an associate's or bachelor's degree. Among those employed in executive and managerial jobs in 1994, two-thirds had a college diploma. Within the professional specialty occupations nearly nine out of ten workers possessed a college degree. More than one-half of all technician and high level

⁴⁴ Since the 1994 Geographic Profile data for New England have not yet been released by the U.S. Bureau of Labor Statistics, we have estimated 1994 occupational employment levels by taking five month averages based on the February, March, June, October, and November surveys for that year.

chart 10 NET CHANGE IN NEW ENGLAND EMPLOYMENT LEVELS BY MAJOR OCCUPATIONAL GROUP, 1983-1994
(NUMBERS IN THOUSANDS)

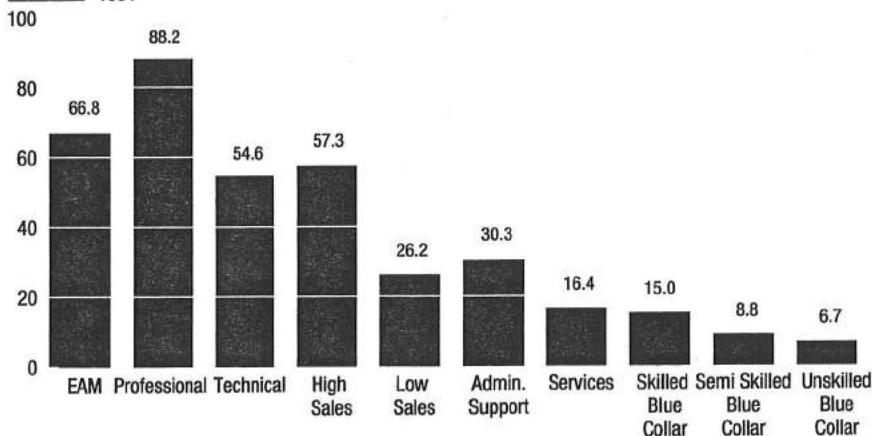


sales workers in New England had a college degree in 1994.

As the New England economy employed increasingly large shares of professional, technical, managerial, and high level sales workers, the educational requirements of employers in the region have changed substantially. In 1983 fewer than half of all employed workers in New England had additional schooling of any type beyond high school (See Table 70). However, as the job content of the regional economy changed the

Years of Schooling	1983	1989	1992	1995
Less than 12 Years	13.9	12.9	8.5	7.0
12 Years Only	40.2	39.3	34.2	31.9
13-15 Years	17.5	19.1	23.0	24.0
16+ Years	28.3	32.4	34.4	36.9

chart 11 SHARE OF EMPLOYED WORKERS WITH AN ASSOCIATE'S OR BACHELOR'S DEGREE, BY MAJOR OCCUPATION, 1994

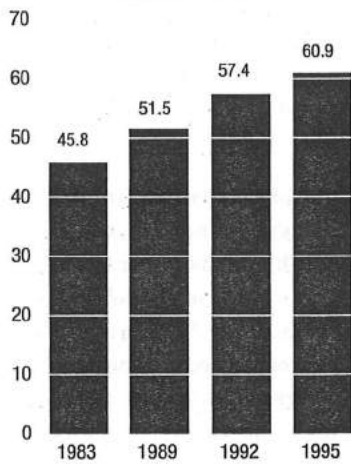


educational attainment of employed persons in the region changed as well. By 1989 the share of employed persons with 16 or more years of schooling increased to 32.4 percent, up from 28.3 percent in 1983. The share of employed persons with 13 to 15 years of schooling also increased over this time.

The recession had sharply disparate impacts on the array of employment opportunities available to workers with alternative levels of educational attainment. Much of the job loss that occurred during the New England economic recession was concentrated among blue collar workers who were employed in goods producing industries, who rarely had any post-secondary education of any type. By 1992 the share of employed persons in New England with no education beyond high school had fallen to 42.7 percent, a relative decline of 21 percent from their 1983 share of 54.1 percent. As the share of those with fewer years of schooling declined during the economic recession, the proportion of employed persons with some post-secondary schooling rose sharply. By 1992 the majority of employed persons within the region had some schooling beyond high school. Thus, as the region plunged into recession those with fewer years of schooling bore the brunt of job loss. Those with more years of schooling and thus better access to professional, technical, managerial, and high level sales jobs were largely insulated from the worst aspects of the labor market decline that occurred within the region.

The current recovery in New England labor markets has once again resulted in an increase in the demand for those with more schooling. As the region has begun to once again add to its payroll employment levels the bulk of the net increase in employment has occurred among those with a college education. The findings from the March 1995 Current Population Survey reveal that nearly 37 percent of employed persons in New England had 16 or more years of schooling, with an additional 24.0 percent of employed New Englanders reporting some post-secondary schooling. Between 1983 and 1995,

chart 12 SHARE OF EMPLOYED PERSONS WITH SOME POST-SECONDARY SCHOOLING IN NEW ENGLAND



the share of employed persons with some post-secondary education increased in relative terms by one-third from 45.8 percent to 60.9 percent (See Chart 12). During the same period of time the share of high school dropouts in the region fell by half, from 13.9 percent in 1983 to 7.0 percent in 1995. Our findings clearly indicate that throughout the decade of the 1980s and up to the present time the proportion of workers with higher levels of educational attainment steadily increased in the region regardless of overall labor market conditions. Projections of future occupational employment levels at the national and state levels suggest that past changes in the industrial and occupational structure of employment in the nation and the New England states are likely to continue in the future. These forecasts, thus, suggest an even greater role for formal educational attainment in determining access to better paying employment opportunities in the region.

UNEMPLOYMENT PROBLEMS IN NEW ENGLAND

Trends in Overall Unemployment Rates

Among the labor market statistics most frequently cited by the media are those related to unemployment problems, particularly the monthly unemployment rate. Despite their frequent citation by the press, these monthly unemployment data are frequently misinterpreted and not very well understood.⁴⁵ Knowledge of the magnitude, incidence, nature, and costs of unemployment to individual workers, their families, and to society at large is indispensable for economic and human resource policymaking; however, the unemployment data need to be properly and carefully interpreted and analyzed to make them meaningful for policymakers. To enhance the statistical reliability of the unemployment estimates presented in this report, nearly all of our findings are based on annual averages rather than any one month's findings.

During the recession year of 1982, the New England unemployment rate rose close to 8%. During the next few years, the region's unemployment rate plummeted sharply, falling below 5% in 1984 for the first time since the early 1970s and remaining below 4% from 1986 through 1989. All major demographic and socioeconomic groups in New England benefited from the job boom during these years. The region's unemployment rate from 1983 through 1989 remained well below the national average and was the lowest of the nine geographic regions in the nation during each of these years. The annual average unemployment rate bottomed out at 3.1% during calendar year 1988.

The decline in the region's overall unemployment rate was accompanied by a number of important changes in its character and composition. Relatively few of the remaining unemployed were permanent job losers, and the share of the unemployed who were out of work for 15 or more consecutive weeks (the

long-term unemployed) declined considerably. During 1988, only one-sixth of the unemployed in New England had been jobless for 15 or more consecutive weeks, yielding a long-term unemployment rate of only .5%, the lowest by far among the nine Census regions. Only 1 of every 200 members of the New England civilian labor force in 1988 had been continuously out of work for 15 or more weeks during that year, and only 1 of every 500 had been unemployed for six months or longer. The economic boom of the mid to late 1980s had basically eliminated problems of long-term unemployment in New England, an extraordinary accomplishment that was not widely recognized then or since.

As noted earlier, the employment peak in New England occurred in the first quarter of calendar year 1989, and unemployment problems began to mount rapidly as substantial job declines occurred. During the first quarter of 1989, the seasonally adjusted unemployment rate of the region stood at only 3.3% but would rise to 4.6% by year's end (See Table 71). The aggregate unemployment rate of the region would rise continuously through the fourth quarter of calendar year 1991, eventually peaking at 8.4%, a rise of five full percentage points over this three year period. While this represents a substantial rise in unemployment, the absolute size of the increase in the overall unemployment rate is surprisingly small, given the loss of nearly 10% of all wage and salary jobs in the region during this time period. The region's overall unemployment rate appears to have been held below double digit levels as a consequence of limited labor force growth, out-migration of the unemployed to other regions, and a shift away from wage and salary employment toward self-employment, temporary consulting positions, contract labor, and underground employment not captured by the payroll survey. The limited rise in the region's unemployment rate between 1989 and 1991 admittedly remains something of a

⁴⁵ The source of the unemployment data themselves is not often understood by the media, state and local political leaders, or the general public. The monthly unemployment data for the U.S., New England, and Massachusetts are generated by the CPS household survey, which is based on monthly interviews with 3400-3500 households in the region, with approximately half of these interviews taking place in Massachusetts. The CPS unemployment estimates are not based at all on either the number of people collecting unemployment benefits or those applying for job placement assistance in the local offices of the State Job Services. The unemployment estimates are based on the labor force experiences of all household members ages 16 and older as reported by the household to the Census Bureau interviews. The misinterpretation of the monthly data on unemployment rates, especially for Massachusetts, is due to the failure of analysts to take into consideration the sampling error associated with the monthly estimates. Given the current sample size for Massachusetts, a month-to-month change in the state's unemployment rate would have to be 1.0 percentage points or higher to be classified as statistically significant. Very few monthly changes are of this magnitude.

TABLE 71		TRENDS IN THE UNEMPLOYMENT RATES OF NEW ENGLAND RESIDENTS (16+) BY QUARTER, 1989 I TO 1995 III (SEASONALLY ADJUSTED, IN PER CENT)
Quarter		Unemployment Rate
1989 I		3.3
II		3.6
III		4.1
IV		4.6
1990 I		5.0
II		5.3
III		5.9
IV		6.6
1991 I		7.3
II		8.0
III		8.3
IV		8.4*
1992 I		7.6
II		8.0
III		7.9
IV		8.3
1993 I		7.5
II		6.7
III		6.4
IV		6.3
1994 I		6.2
II		5.8
III		5.9
IV		5.6
1995 I		5.6
II		5.6
III		5.6

mystery.

By 1991, the region's annual average unemployment rate had risen to 8.0%, nearly five full percentage points above the 3.1% unem-

ployment rate prevailing in 1988. During the jobless recovery of 1992, the unemployment rate remained unchanged at 8.0%, but the gap between the New England and U.S. unemployment rates narrowed considerably (See Chart 13). Since 1992, New England's unemployment rate has declined sharply, falling below 6% in 1994 and averaging only 5.6% during the first seven months of 1995. During the past three years, New England's overall unemployment rate has been generally identical to that for the nation. Our region's improved unemployment performance is, however, not due to above average rates of wage and salary job growth, but instead to a declining regional labor force brought about by a drop in the labor force participation rate and out-migration from New England.

Changing Nature of Unemployment Problems in the Region

As the aggregate level of unemployment rose substantially between 1988 and 1992, the nature and character of the region's unemployment problems changed in several key respects. First, a much higher fraction of the unemployed consisted of permanently displaced workers, and the average duration of the unemployment spells experienced by these workers rose considerably. During 1988, the annual average number of unemployed in the region was 216,000, of whom 54,000, or 25%, were individuals who had been permanently laid off from their last job (See Table 72). Nearly 60% of the region's unemployed during 1988 were job leavers, new entrants to the labor force, or re-entrants. Dislocation rates were relatively low in New England through 1988, and those displaced from their former jobs had a comparatively easy time finding new employment in a booming economy with few unemployed job competitors.

By 1992, however, the annual average number of unemployed in New England had risen to 562,000, of whom nearly 300,000 or 52% had been permanently laid off from their former jobs. The number of unemployed perma-

chart 13 UNEMPLOYMENT RATES IN THE UNITED STATES AND NEW ENGLAND, 1989-1995 (ANNUAL AVERAGES, NUMBERS IN PERCENT)

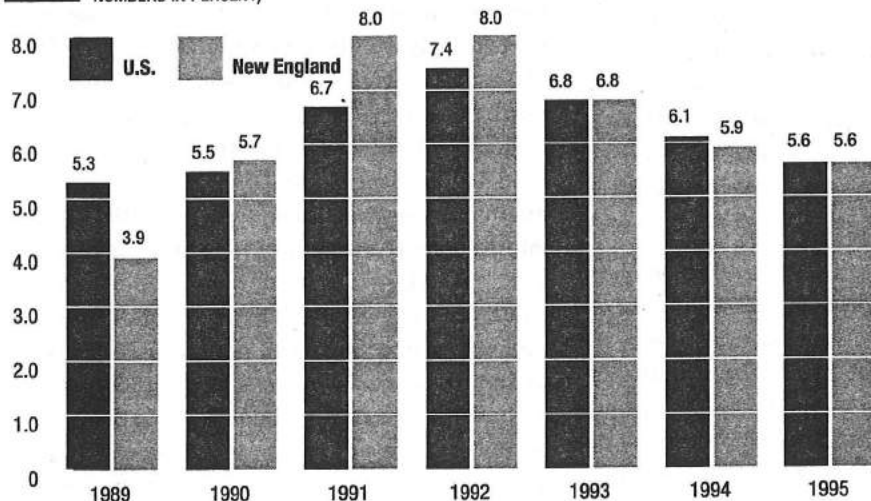


TABLE 72

PERCENT DISTRIBUTION OF TOTAL UNEMPLOYED BY REASON FOR UNEMPLOYMENT, NEW ENGLAND, 1988, 1990, 1992, 1993, 1994 (ANNUAL AVERAGES)

	1988	1990	1992	1993	1994
Total Unemployed	216,000	399,000	562,000	475,000	412,000
Job Losers	42.2	56.1	68.2	65.0	57.3
Not on Recall	25.1	36.6	52.3	49.4	42.5
Job Leavers	17.6	13.6	6.9	8.2	8.0
Entrants/Re-Entrants	40.2	30.3	24.8	26.7	35.0

ment job losers had, thus, increased from 54,000 to nearly 300,000, a more than five-fold increase in just three years. The unemployed dislocated worker had become the norm rather than the exception by 1992. Over the past two years, the region has achieved substantial progress in reducing the total number of unemployed persons, and the character of remaining unemployment problems has also changed. During 1994, the annual average number had declined to 412,000, a drop of 27% from the 1992 level, and the share of the unemployed who were permanent job losers declined from 52% in 1992 to 42% in 1994. Higher shares of the unemployed in 1994 consisted of job leavers and new or re-entrants to the labor force. We unfortunately cannot identify how many of the formerly unemployed dislocated workers became re-employed during the current recovery or simply withdrew from active labor force participation.⁴⁶

The unemployment problems of New England residents can also be categorized by the length of time that the unemployed have been continuously out of work. Knowledge of the durations of the on-going unemployment spells of workers is important for determining the personal and social costs of unemployment. The personal economic losses associated with unemployment will be critically influenced by the length of time that one remains unemployed and the availability of unemployment compensation benefits to offset earnings losses. The longer a worker has remained unemployed, the higher will be the earnings losses and the greater will be the probability that he will exhaust his eligibility for unemployment benefits. The higher the net earnings losses, the more severe will the impact

be on the family's income and the greater the likelihood that the family will become poor or near poor. Longer durations of unemployment are often associated with withdrawals from the labor force, thus reducing the size of the region's civilian labor force.

The monthly CPS household surveys collect information on the number of continuous weeks that the unemployed have been actively seeking work or on temporary layoff from their former jobs awaiting recall. Those persons who have been unemployed for 15 weeks or longer are categorized as the "long-term unemployed" in the United States. This definition stands in sharp contrast to the Western European case where the long-term unemployed are defined as those who have been out of work for 52 weeks or longer.⁴⁷ Most OECD nations in Western Europe experience considerably higher levels of long-term unemployment than the U.S. To assess trends in the durations of unemployment among workers in New England, we have tracked the shares of the region's unemployed that were unemployed for 15 weeks or longer (the long-term unemployed) or for 27 weeks or longer (the hard core unemployed) for each year during the 1988-1994 period.⁴⁸

During the full employment years of the late 1980s, not only were overall unemployment rates extraordinarily low (3.1 to 3.9 percent), but only a small fraction (16 to 18 percent) of the unemployed were long-term unemployed (See Table 73). Combining these low unemployment rates with relatively small shares of long-term unemployment yielded extremely low long-term unemployment rates for the region, .5% in 1988 and .7% in 1989 (See Chart 14). As the volume of job losses mounted during the recession and unemployment problems rose, the durations of unemployment also increased substantially. The long-term unemployed increased their share of the employed from 18 percent in 1989 to 26 percent in 1990, 40 percent in 1991, and up to 50 percent in 1992.

In terms of hard core unemployment, in the late 1980s, only 6 to 8 percent of the region's

⁴⁶ Findings of the February 1994 BLS dislocated worker survey for New England revealed an improvement in the reemployment prospects of dislocated workers; however, more comprehensive longitudinal information on the post-displacement labor market experiences of these individuals would be desirable to inform human resource policymaking in the region.

⁴⁷ For a review of the varying degrees of long-term unemployment problems among OECD nations,

See: Elaine Buckberg and Alan Thomas, "Wage Dispersion and Job Growth in the United States," *Finance and Development*, June 1995, pp. 16-19.

⁴⁸ These unemployment duration data pertain to the length (in weeks) of the on-going spells of unemployment of those working-age residents who were unemployed at the time of the surveys. The average length (mean) of completed durations of unemployment may be greater than the mean duration of on-going spells if the probability of exiting from unemployment is negatively related to the length of time that one remains unemployed. Such negative correlations do exist for unemployed workers in the U.S.

See: Stuart H. Garfinkle, "The Outcome of A Spell of Unemployment," *Monthly Labor Review*, January 1977, pp. 54-57.

chart 14 LONG-TERM UNEMPLOYMENT RATES IN THE UNITED STATES AND NEW ENGLAND, 1988-1994

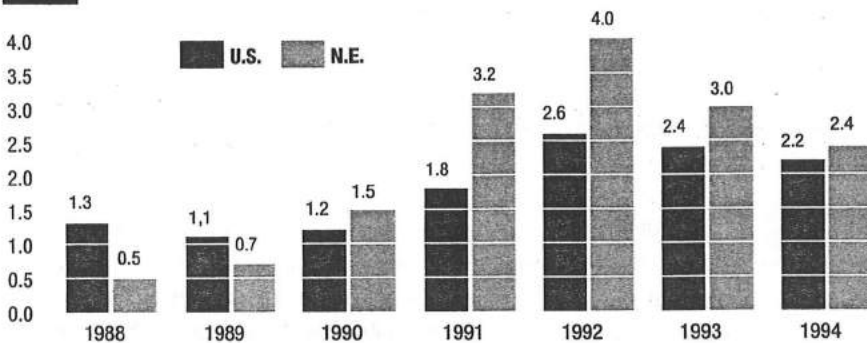
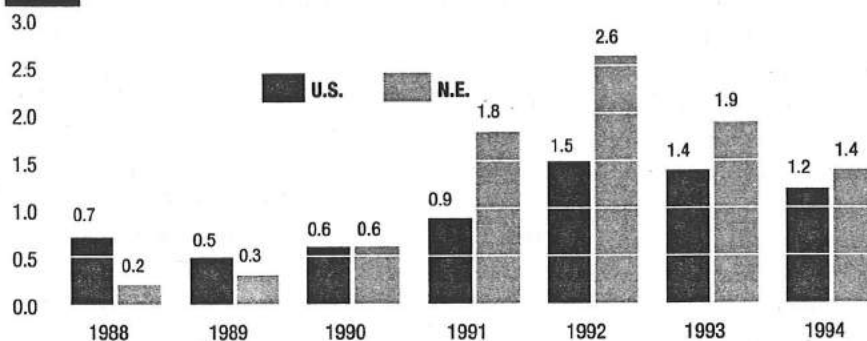


chart 15 HARD-CORE UNEMPLOYMENT RATES IN THE UNITED STATES AND NEW ENGLAND, 1988-1994



unemployed had been out of work for 27 or more weeks, yielding a hard core unemployment rate of only .2% (see Chart 15). By 1992, however, nearly one-third of a much larger pool of unemployed in New England had been out of work for more than six months. Combined with a considerably higher overall rate of unemployment (8.0%), this development raised the hard core unemployment rate to 2.6%, or thirteen times higher than its level in 1988. As more jobs were generated by the New England economy between 1992 and 1994 and as the pool of jobless applicants began to dwindle, the hard core unemployment rate has declined sharply, falling to 1.4% in 1994 but still remaining slightly above the U.S. rate.

The types of unemployment problems and the durations of existing spells of unemployment tend to be correlated with one another in the U.S. Persons who are permanent job losers typically experience the highest average durations of unemployment. Dislocated workers are the classic example of permanent job losers. As defined by the U.S. Bureau of

TABLE 73 THE LONG-TERM AND HARD CORE UNEMPLOYED AS A SHARE OF THE TOTAL UNEMPLOYED IN NEW ENGLAND, 1988 TO 1994 (ANNUAL AVERAGES, IN PERCENT)

Year	(A) Long-Term Unemployed	(B) Hard Core Unemployed
1988	16	6
1989	18	8
1990	26	11
1991	40	22
1992	50	32
1993	44	28
1994	40	24

Labor Statistics, dislocated workers are those persons who lost their last job due to a plant closing, plant relocation, a major reduction in force, or a technological change in the workplace.⁴⁹ During February 1994, the Bureau of Labor Statistics included a dislocated worker supplement to the standard monthly CPS labor force questionnaire. Our analysis of the findings of that survey revealed that unemployed, dislocated workers accounted for one-fourth of the total number of unemployed in the region; however, they represented 30% of the long-term unemployed and nearly one-third of the hard core unemployed. Clearly, unemployed dislocated workers experience above average difficulties in obtaining re-employment, thereby contributing in an important way to the region's hard core unemployment problems.

Unemployment Flows and Durations in New England

Nearly all of the media accounts and analyses of unemployment problems in New England are based on stock estimates of unemployment; i.e., how many persons are unemployed at a given point in time, namely the reference week of the CPS survey. Unemployment problems can also be viewed from a flows perspective, focusing on the number of individuals who flow into and out of unemployment during a given time period.⁵⁰ An analysis of the dynamics of unemployment can lend greater insight into the forces producing a rise or decline in the unemployment rate of a

⁴⁹ The Bureau of Labor Statistics also has included a job tenure criterion in its definition of the dislocated worker. To be classified as an official dislocated worker, the job loser must also have held his or her last job for three or more years. In our analysis of the problems of dislocated workers in New England, we have excluded the three year tenure criterion. This broader definition yields an estimate of the number of dislocated workers in New England that is twice as high as that which would have been generated with use of the official BLS definition.

⁵⁰ For examples of such analyses of the flows into and out of unemployment in the U.S. and other OECD nations,

See: (i) Manfred Keil and Andrew Newell, "Lessons from the OECD Experience of Unemployment," Labor Market Review, 1994; (ii) John P. Martin, "The Extent of High Unemployment in OECD Countries," Reducing Unemployment: Current Issues and Policy Options, A Symposium Sponsored by the Federal Reserve Bank of Kansas City, Kansas City, 1994.

TABLE 74

TRENDS IN THE INCIDENCE OF UNEMPLOYMENT AND MEAN WEEKS OF UNEMPLOYMENT DURING THE CALENDAR YEAR, U.S. AND NEW ENGLAND, 1988, 1990, 1992, 1993, 1994

	(A)	(B)	(C)	(D)	(E)
Unemployment Variable/Area	1988	1990	1992	1993	1994
Incidence of Unemployment					
U.S.	12.9	14.6	15.7	14.7	13.5
New England	8.9	14.8	15.9	13.9	12.5
New England Rank	Lowest	Fifth	Second	Highest	Third
			Lowest	Second	Lowest
Mean Weeks of Unemployment, if Unemployed					
U.S.	15.5	15.3	18.6	19.7	17.8
New England	14.1	17.7	20.6	20.6	19.1
New England Rank	Lowest	Highest	Second	Highest	Third
			Highest	Second	Highest

Source: March 1989, March 1991, March 1993, March 1994, and March 1995, CPS public use tapes, tabulations by Center for Labor Market Studies.

nation or region over time. For example, a rise in the unemployment rate in New England over time can be produced by either or both of the following events:

- An increase in the fraction of the civilian labor force that becomes unemployed during the year; i.e., the incidence of unemployment problems rises;
- An increase in the length of time that it takes an individual to exit from the pool of unemployed; i.e., a lengthening of the average duration of unemployment which is typically measured in weeks.

International comparisons of the unemployment experiences of different nations in North America, Western Europe, and Japan reveal that the U.S. has the highest inflow rate into unemployment but succeeds in maintaining a relatively low annual average rate of unemployment due to high monthly flows out of unemployment. To assess the forces producing the sustained rise in unemployment in New England between 1989 and 1992 and the decline in the unemployment rate over the following two years, we analyzed the work experience tapes for the U.S. and New England for selected years over the 1988-1994 period (See Table 74).⁵¹ The analysis provides estimates of the incidence of unemployment problems in the region and

the nation during each of those years as well as the mean number of weeks of unemployment encountered by the unemployed during each year.⁵²

During 1988, the 3.1% unemployment rate of New England, the lowest in the nation, was produced by a combination of a relatively low incidence of unemployment problems and a moderately lower mean duration of unemployment. Only 9% of New England's labor force participants experienced a spell of unemployment during 1988, versus 13% of U.S. labor force participants, and the unemployed in New England were out of work on average for 14 weeks versus nearly 16 weeks for their U.S. counterparts. Between 1988 and 1992, the region's unemployment rate rose from 3.1% to 8.0%, a relative increase of nearly 160%. This substantial rise in the region's unemployment rate was produced by a combination of a near doubling in the overall incidence of unemployment problems (8.9% to 15.9%) and a near 50% rise in the average duration of unemployment from 14.1 weeks to 20.6 weeks. The region's ranking among the nine geographic regions on both the incidence and mean duration of unemployment problems went from lowest in 1988 to second highest in 1992. During the following two years, both the incidence of unemployment problems and the duration of unemployment problems in the region declined, allowing the unemployment rate to drop from 8.0% to 5.9%. The region's relative unemployment rate has improved considerably, primarily as a consequence of a much lower incidence of unemployment; however, during 1994, the mean weeks of unemployment experienced by the region's unemployed were still quite high at 19.1 weeks, and New England's average unemployment duration was the second highest in the nation. This finding indicates the existence of a subgroup of the unemployed in our region who are experiencing severe difficulties in finding new employment, including a relatively large number of formerly dislocated workers.

The March work experience surveys collect information from respondents on the total

⁵¹ The CPS March work experience surveys are used by the U.S. Census Bureau to collect data from each household member (15+) on their labor force, employment, and unemployment experiences during the preceding calendar year. The findings can be used to estimate the number of labor force participants who encountered a spell of unemployment during the year and the number of weeks of unemployment that they experienced.

⁵² Since unemployed individuals may have experienced more than one spell of unemployment during the year these weeks of unemployment may not have been continuous.

TABLE 75

DISTRIBUTION OF THE UNEMPLOYED IN NEW ENGLAND BY WEEKS OF UNEMPLOYMENT DURING THE YEAR, 1994 (NUMBERS IN PERCENT, N = 934,000)

Weeks of Unemployment	(A)	(B)	(C)
	Percent of Unemployed	Percent of Total Weeks Of Unemployment	Cumulative Share of Weeks of Unemployment
01-05	22.2	3.3	3.3
06-14	26.6	14.0	17.3
15-26	26.0	28.6	45.9
27-39	11.1	18.9	64.8
40 or More	14.1	35.2	100.0
Total	100.0	100.0	

number of weeks of unemployment encountered by the unemployed during the entire preceding calendar year; thus, these findings can be used to examine the entire distribution of unemployment spells and to identify the concentration of total weeks of unemployment among key subgroups of the unemployed in New England.⁵³ Key findings for 1994 are summarized in Table 75. During 1994, approximately 934,000 different persons (16+) experienced one or more spells of unemployment, representing nearly 13% of the individuals who participated in the civilian labor force at some time during that year. Of this group, approximately 2 of every 9 were unemployed for only 1-5 weeks, and nearly half of the unemployed were actively seeking work for less than 15 weeks. Another 26% of the unemployed were out of work for 15-26 weeks, and only 1 of every 7 members of the unemployed were out of work for 40 weeks or longer.

Those persons unemployed for less than 15 weeks represented nearly one-half of the total number of unemployed in the region; however, they accounted for only 17% of the total number of weeks of unemployment (See Table 75, Column C). In contrast, those individuals who were unemployed for more than six months represented only one-fourth of the region's unemployed, but they account for 54% of the total weeks of unemployment.

The high degree of concentration of unemployment problems can be seen most clearly by examining the experiences of those persons unemployed for 40 or more weeks.

These 132,000 unemployed persons represented only 14% of all the unemployed in the region, but their share of total weeks of unemployment was 35%. These 132,000 unemployed actually accounted for only 1.8% of the entire number of civilian labor force participants in New England during 1994 yet they were responsible for 35% of all weeks of unemployment.

The Personal Economic Consequences of Unemployment in New England

Among the most important economic consequences of unemployment is the lost earnings of the unemployed during their periods of joblessness. These lost earnings for some of the unemployed are offset in part by the income they receive in the form of unemployment benefits;⁵⁴ however, not all of the unemployed are eligible for unemployment benefits, and those jobless for more than six months will exhaust their benefits. Only 36% of the unemployed in New England reported to have received any unemployment benefits during 1994. Since the vast majority of the unemployed (95% or more) in both New England and the U.S. were also employed at some time during 1994, we can calculate their average weekly earnings while employed. By multiplying these average weekly earnings by total weeks of unemployment, we can calculate the gross annual earnings losses of each unemployed person. Then by subtracting their reported unemployment benefits from this total, we can estimate the net earnings loss for each person who was unemployed during 1994.

The mean gross earnings loss for the entire unemployed population in New England was \$8,251, a very substantial loss. The estimated sizes of these earning losses ranged from approximately \$2,900 for those unemployed 1-14 weeks to a maximum of \$17,700 for those out of work for 6 months or longer. After adjusting these annual earnings losses for the value of the unemployment insurance benefits received by the unemployed, the net mean earnings loss was reduced to \$7,000.

⁵³ Given the retrospective nature of the reporting of weeks of unemployment and the fact that proxy respondents are allowed, there is a tendency for the work experience survey to under-estimate the true number of persons experiencing a spell of unemployment during the year. Previous research at the national level suggests that short-term unemployment spells of teenagers and women tend to be under-reported in the work experience survey.

⁵⁴ Unemployment benefits are known to be under-reported by respondents in the CPS survey; thus, our estimated net earnings losses are likely biased upward. We do not believe that this bias is likely to exceed 12% of the mean estimated net earnings loss for all of the unemployed.

TABLE 76

ESTIMATES OF THE ACTUAL AND HYPOTHETICAL MEAN EARNINGS OF THE UNEMPLOYED BY WEEKS OF UNEMPLOYMENT, NEW ENGLAND: 1994

Weeks of Unemployment	(A)	(B)	(C)
	Mean Actual	Mean Hypothetical	Hypothetical as a Percent Actual
All	\$10,811	\$17,812	165
1-14	\$13,084	\$15,379	118
15-26	\$11,788	\$19,400	165
27+	\$5,401	\$20,866	387

Those who experienced a spell of unemployment during the year were three times as likely as those with no unemployment spell to be poor or near poor.

Again, the magnitude of these net earnings losses varied considerably by weeks of unemployment, ranging from \$2,300 for those out of work for 1-14 weeks to a high of nearly \$15,000 for those unemployed for more than six months.

The annual earnings (less unemployment benefits) that the unemployed would have received if they had been able to completely avoid unemployment can be compared to their actual reported earnings during 1994 (See Table 76). The mean hypothetical earnings for the entire group of unemployed would have been \$17,812 during 1994 versus the actual reported earnings of only \$10,811, a difference of \$7,001 or 65%.⁵⁵ Given the estimated total of 933,000 unemployed persons during that year, the cumulative net lost earnings from unemployment in New England was approximately \$6.5 billion. Future efforts to reduce unemployment in the region, thus, have the potential to substantially raise the earnings and incomes of many New England house-

holds.

Given the high mean annual earnings losses of the unemployed, especially the long-term unemployed, one would expect that some of the unemployed would end up being poor or near poor as a result of their unemployment experiences. Findings on the share of U.S. and New England labor force participants who had family incomes below 125% of the poverty line during 1994 are displayed in Table 77, with participants categorized by their unemployment experiences during the year. For the entire nation, 11% of those who participated in the labor force during 1994 were living in families with combined money incomes below 125% of the poverty line. Those who experienced a spell of unemployment during the year were three times as likely as those with no unemployment spell to be poor or near poor (28% vs. 8%). Among the unemployed, the probability of being poor or near poor varied considerably by length of unemployment. Only one of five of those who were unemployed 1-14 weeks were poor or near poor versus two of every five of those who were jobless for more than six months. Longer-term unemployment was, thus, considerably more likely to lead to severe income inadequacy problems.

Similar patterns prevailed for New England workers though fewer of the region's labor force participants were poor or near poor (7% vs. 11% for the nation). Higher entry level wages and more multiple earner families in New England help explain this result. The unemployed in New England, however, were four times more likely than those with no

TABLE 77

PERCENT OF THE LABOR FORCE WHO WERE POOR OR NEAR POOR BY UNEMPLOYMENT STATUS, U.S. AND NEW ENGLAND, 1994

All Participants/Weeks of Unemployment	(A)	(B)
	U.S.	New England
Total	11.1	7.1
0	8.4	5.1
1 or More	28.4	21.2
1-14	21.8	17.0
15-26	30.3	23.0
27+	42.3	31.7

⁵⁵ A small fraction of the unemployed in New England (less than 5 percent) did not report any paid employment during calendar year 1994. To estimate their hypothetical earnings conservatively, we simply assigned them an hourly wage of \$4.25, the prevailing federal minimum wage.

spell of unemployment during 1994 to have been poor or near poor (21% vs. 5%). As expected, among the region's unemployed, those with the longer durations of unemployment were substantially more likely to be characterized by family income inadequacy problems. Thus, efforts to combat long-term unemployment also have the potential to assist in reducing problems of poverty. The region's remaining poverty problems, however, go well beyond the problems of the long-term unemployed. The bulk of the region's poor are either not attached to the labor market or have low earnings potential when employed. Multiple strategies are, thus, needed to make major inroads into remaining poverty problems.

The Labor Market Problems of New England's Residents

Previous sections of this report have reviewed trends in several labor market problem areas in New England, including open unemployment and declining labor force participation. The deep regional recession of 1989-1991 was accompanied by mounting problems of open unemployment and hidden unemployment. In the past few years, major reductions in unemployment and long term unemployment have been achieved with more moderate declines in the number of the hidden unemployed in the region. This section of our report will examine a number of different labor market problems in New England: 1) open unemployment; 2) part-time workers who want full-time work; 3) people not in the labor force who want a job; and 4) low-wage, full-time workers.⁵⁶ Since each of these categories of labor market problems is mutually exclusive, we can derive estimates of the fraction of the labor force with any type of labor market problem by simply summing the number and fraction in

each labor market problem category.

Before examining trends in the incidence of these labor market problems in New England, we need to explain precisely how each category is defined. The first category of labor market problems is the "open unemployed," or the official unemployed. This group contains those persons who were not employed but who were actively seeking work in the reference week of the CPS survey. The second problem category contains persons who were employed part-time (1 to 34 hours of work per week) for economic reasons. Economic reasons include slack work/business conditions, seasonal work, job started or ended during the week, and could only find part-time work.⁵⁷ Persons employed part-time work on average for only 21-22 hours per week and, thus, have considerably lower earnings than their full-time counterparts. The third category of labor market problems consists of those persons who were not active in the labor force but who reported that they wanted a job.⁵⁸ This group comprises the labor force overhang discussed earlier. The final labor market problem category contains low-wage full-time workers, and we define this group as persons who were employed full-time (35 or more hours per week), but who earned weekly wages which would not be sufficient to lift a

⁵⁶ As noted earlier, the "traditional" civilian labor force measures include only those persons who were employed and those who were unemployed at the time of the survey. To arrive at the "adjusted labor force," we simply add in those individuals who were out of the labor force but reported that they wanted a job, that is, the labor force overhang.

⁵⁷ These are the reasons used to define part-time, economic workers in the 1994 CPS surveys. The definition of part-time, economic workers is slightly different in the 1989 CPS surveys. In those surveys, part-time for economic reasons included those who were employed part-time due to slack work, material shortages, plant or machine repair, job started or ended during the week, and could only find part-time work. In addition to this conceptual difference, the 1994 surveys allow an individual to be classified as a part-time, economic worker even if that individual worked full-time in the reference week, but only if the individual "usually" worked part-time. In the 1989 surveys, an individual can only be classified as part-time for economic reasons if they actually worked part-time during the reference week. In order to provide comparable estimates, our 1994 analysis of part-time workers is restricted to those who actually worked part-time during the reference week.

⁵⁸ The 1989 CPS surveys asked this question of only one-fourth of the sample. More specifically, the question was asked only of those respondents who said they were unable to work or who said they had not looked for work in the past four weeks. In the 1994 CPS surveys, the question is asked of all respondents who were not in the labor force.

TABLE 78 FRACTION OF THE ADJUSTED LABOR FORCE WITH SOME TYPE OF LABOR MARKET PROBLEM, BY TYPE OF PROBLEM, U.S. AND NEW ENGLAND, 1989 AND 1994

	1989	1994
U.S.		
Unemployed	5.1	5.9
Employed Part-Time, Economic Reasons	3.6	3.6
Out of Labor Force, Want a Job	4.4	4.1
Low Wage Full-Time Worker	13.1	13.4
Any Type of Problem	26.2	27.0
New England		
Unemployed	3.9	5.8
Employed Part-Time, Economic Reasons	2.0	3.7
Out of Labor Force, Want a Job	2.5	3.4
Low Wage Full-Time Worker	7.3	8.1
Any Type of Problem	15.7	21.0

Sources: 1989 and 1994 Current Population Surveys, selected months, tabulations by Center for Labor Market Studies.

four-person family out of poverty, our minimum standard of weekly earnings adequacy.⁵⁹ In 1994, a full-time worker would have to obtain weekly earnings of \$291 to achieve this earnings adequacy standard.

Estimates in Table 78 represent the fraction of the adjusted labor force in the U.S. and New England that experienced each type of labor market problem in 1989 and 1994.⁶⁰ Nationally, the fraction of the adjusted labor force with some type of labor market problem increased slightly between 1989 and 1994, from 26.2 percent to 27.0 percent. This increase was due to increases in the fraction of the labor force who were unemployed and those who were low-wage full-time workers. Problems of part-time employment for economic reasons remained stable between 1989 and 1994, while the fraction of the adjusted labor force who were out of the labor force but who wanted a job fell slightly over the period.

In New England, our findings on the labor market problems of the region's residents once again reveal the substantial economic and social benefits of a persistent full employment economy. In 1989, less than 16 percent of the region's labor force experienced some type of labor market problem, an incidence more than ten percentage points below that prevailing nationally. New England's residents experienced each type of labor market problem at rates well below those of their national counterparts. For example, only 3.9 percent of the region's adjusted labor force was unemployed in 1989, compared to 5.1 percent nationally. The relatively high entry-level wage structure in New England also allowed a higher proportion of full-time workers to earn enough to raise a four-person family out of poverty. Slightly over 7 percent of New England's labor force were classified as low-wage full-time workers in 1989, compared to approximately 13 percent for the nation as a whole.

By 1994, the ability of New England's workers to avoid labor market problems relative to their national counterparts had eroded. Overall, the fraction of the region's labor force with some type of labor market problem increased from 15.7 percent in 1989 to 21 percent by 1994, an increase of over five percentage points. Over the same period, the fraction of the nation's adjusted labor force with some type of labor market problem increased by less than one percentage point. The incidence of each type of labor market problem increased in the region over the five year period. The fraction of the region's labor force who were unemployed and the fraction employed part-time for economic reasons both increased by nearly two percentage points between 1989 and 1994, while the fraction who were out of the labor force but who wanted a job and the fraction who were low-wage full-time workers each increased by nearly one percentage point over the period. Thus, the economic recession in New England and the ensuing low rate of net job creation had adverse impacts not only on open unemployment problems, but also on several other key labor market problems in the region. These other labor market problems also adversely affect the annual earnings of workers and their families' annual incomes, and they have contributed to rising poverty and income inequality.

The ability of members of the nation's and region's labor force to avoid labor market problems during 1994 was strongly associated with their formal educational attainment. In

⁵⁹ In 1994, the weighted average four-person poverty threshold was \$15,141, the equivalent of \$291.17 per week. Full-time workers who earned less than this amount were classified as a low-wage full-time worker.

⁶⁰ Since the number of persons in the labor force who were low-wage full-time workers (and in 1989 the number who were out of the labor force but wanted a job) are based on only one-fourth of the CPS sample, we have used a simple average of selected months to represent the incidence of labor market problems in 1989 and 1994. In 1989, we used the March, May, September, and October CPS surveys. In 1994, we used the February, March, June, October, and November surveys.

	U.S.	New England
Total	27.0	21.0
Less than High School	49.8	37.7
High School Graduate	31.6	26.9
Some College	23.4	18.7
Four Year Degree	11.8	12.3
Postbacc. Study or Degree	7.1	6.5

Source: 1994 Current Population Surveys, selected months, tabulations by Center for Labor Market Studies.

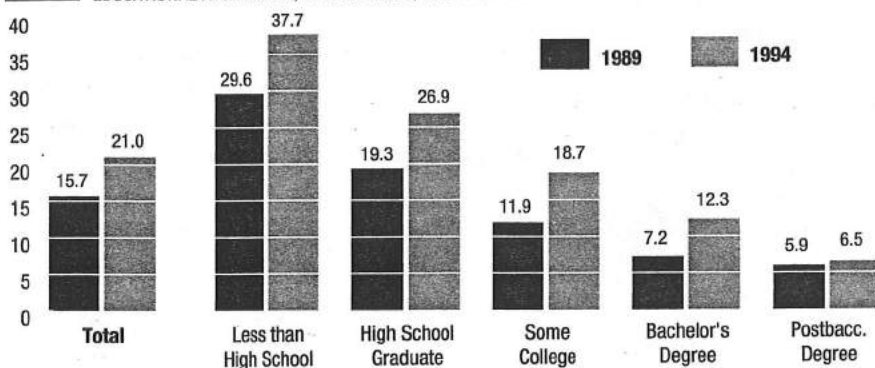
Nearly 38 percent of the region's labor force who did not complete high school experienced a labor market problem in 1994, versus 27 percent of those with a high school diploma, 12 percent of Bachelor's degree recipients, and only 7 percent of those with some postbaccalaureate education.

the U.S., nearly half of the adjusted labor force who failed to complete high school experienced some type of labor market problem in 1994, as did nearly one-third of those with a high school diploma but no postsecondary schooling (see Table 79). Among those persons with a Bachelor's degree, approximately 12 percent of the labor force experienced a labor market problem in 1994, versus only 7 percent of those with an advanced degree or some post-graduate study. With the exception of Bachelor's degree holders, the fraction of New England's labor force with some type of labor market problem was below the rate experienced by persons nationally. The patterns in the incidence of labor market problems by educational attainment were quite similar, however, with the incidence of such problems declining substantially as educational attainment increased. Nearly 38 percent of the region's labor force who did not complete high school experienced a labor mar-

ket problem in 1994, versus 27 percent of those with a high school diploma, 12 percent of Bachelor's degree recipients, and only 7 percent of those with some postbaccalaureate education.

An examination of trends in the incidence of labor market problems in New England over the 1989 to 1994 period reveals that each educational subgroup was characterized by a rising incidence of problems; however, the largest absolute increases in the incidence of such problems occurred among those with the least education. During this time period, the fraction of the labor force with some type of labor market problem increased by approximately eight percentage points among both those who failed to complete high school and high school graduates with no postsecondary schooling (see Chart 16). Among persons with a Bachelor's degree, the incidence of labor market problems in the region increased by five percentage points between 1989 and 1994, while among those with advanced degrees the incidence of labor market problems increased by less than one percentage point. These findings reveal quite clearly that those with the least education face the largest hurdles in overcoming labor market problems. Policymakers should focus on improving the human capital traits of the less educated members of the region and increasing their access to full-time, higher paying jobs. Successful initiatives in this area would improve workers' economic well-being and assist in solving a number of family income problems. Families headed by such individuals have encountered the most severe declines in real family incomes and the highest increases in poverty rates in our region over the past five years.

chart 16 FRACTION OF THE ADJUSTED LABOR FORCE WITH SOME TYPE OF LABOR MARKET PROBLEM, BY EDUCATIONAL ATTAINMENT, NEW ENGLAND, 1989 AND 1994



New England's Workers: Recent Trends in Real Wages, Wage Inequality, and Employee Benefits

TRENDS IN THE LEVEL AND DISTRIBUTION OF WEEKLY EARNINGS IN NEW ENGLAND

AMONG THE MOST IMPORTANT economic characteristics of the jobs held by workers in the nation and region are the weekly earnings that they provide. Trends in the level and distribution of these weekly earnings are the key determinants of the living standards of workers and their families and the degree of income inequality among families.

This section of the Report will primarily focus on trends in the real (inflation-adjusted) weekly earnings of full-time workers in New England over the past few decades and the degree of inequality in the weekly wage distribution. Findings will be provided for all full-time workers in the region and for men and women separately, and New England trends will be compared to those for the U.S. and the other geographic regions to provide a perspective for interpreting the New England results.

Tracking wage and earnings developments for workers in the U.S. is not a simple task since there are several different data sources on wages, each with their own underlying definitions and measures. The two most frequently cited sources of data on the weekly earnings of U.S. workers are those based on the monthly establishment surveys of the U.S. Bureau of Labor Statistics (also known as the Current Employment Statistics program) and the weekly earnings data generated by the U.S. Census Bureau in conducting the monthly Current Population Survey. The earnings data in the establishment survey are provided

by cooperating firms in the non-farm private sector while the CPS weekly earnings data are reported by adult household members, including proxy respondents who provide the data for other employed members of the household.

The national establishment survey provides estimates of the mean hourly and weekly earnings of production or non-supervisory workers on the payrolls of private sector firms outside of the agricultural sector. The survey does not cover the self-employed, workers in

During 1994, the mean weekly earnings adjusted for inflation of the nation's production and non-supervisory workers were 15% lower than they were in 1973.

farm industries, and employees of federal, state, or local government agencies. Within the private non-farm sector, approximately 82% of all wage and salary workers were covered by the earnings survey during 1994. These coverage ratios did, however, vary somewhat by sector, ranging from a low of 68% in durable manufacturing to highs of 88% in retail trade and 89% in business services and health services.⁶¹

The real average hourly earnings of the nation's production and non-supervisory workers rose strongly between 1964 and 1973, increasing by 21% over this nine year period (Table 80).⁶² Mean hourly earnings, however, became stagnant over the remainder of the decade of the 1970s. Since 1979, real hourly earnings on average have declined

⁶¹ The coverage rates of the wage data for production workers in manufacturing vary considerably by industry, being highest for non-durable goods manufacturing, such as textile and apparel, and lowest for some high technology manufacturing industries, such as computer equipment and scientific instruments.

⁶² The historical data on the hourly and weekly earnings of production and non-supervisory workers in the nation's non-agricultural industries were derived from the U.S. Bureau of Labor Statistics' monthly establishment survey.

See: U.S. Bureau of Labor Statistics, Employment and Earnings, March 1995.

by 10%, falling steadily throughout the 1980s and the first half of the 1990s. The real weekly earnings of production workers have declined even more precipitously since 1979, falling from \$440 to \$385 by 1994, a relative drop of nearly 13%. The steeper decline in real weekly earnings was due to a moderate reduction in the average work week, largely reflecting the continued shift in employment toward retail trade and private service industries which have shorter work weeks in large part because of their greater use of part-time workers. During 1994, the mean weekly earnings adjusted for inflation of the nation's production and non-

TABLE 81 TRENDS IN THE MEDIAN REAL WEEKLY EARNINGS OF FULL-TIME EMPLOYED MEN AND WOMEN IN THE U.S., SELECTED YEARS 1967-1994 (IN CONSTANT 1993 DOLLARS)

	(A)	(B)	(C)
Year	Men	Women	Women/Men
1967	498	310	62.2%
1974	568	345	60.7%
1979	568	355	62.5%
1989	545	382	70.1%
1994	509	389	76.4%
Percent Change 1967-74	+14.1%	+11.1%	
Percent Change 1974-94	-10.5%	+12.8%	

supervisory workers were 15% lower than they were in 1973. It should be noted, however, that the wages and salaries of non-production workers in mining and manufacturing industries and of managers in other industries appear to have risen in real terms over the past two decades; thus, the average wage and salary worker in the U.S. did not fare as badly as the average production or non-supervisory worker.⁶³ Many blue-collar workers lost ground while higher level management and professional workers improved their earnings position.

The weekly earnings data generated by the establishment survey have a number of important advantages, including the level of industrial detail; however, the earnings data are reported by each firm on an aggregate basis rather than on an individual worker basis. Thus, we cannot identify the actual earnings experiences of any given demographic or socioeconomic subgroup of workers. To overcome these shortcomings, we also have analyzed the weekly earnings data generated by the Current Population Survey, restricting our findings only to those wage and salary workers who were employed full-time (35 or more hours of work) at the time of the wage surveys.⁶⁴

Between 1973 and 1994, the median real weekly earnings of full-time wage and salary workers in the United States declined by nearly 7%, representing a substantial reversal of real wage trends prior to 1973.

The real wage trends for men and women in

TABLE 80

AVERAGE HOURLY AND WEEKLY EARNINGS OF PRODUCTION OR NON-SUPERVISORY WORKERS ON PRIVATE NONFARM PAYROLLS, SELECTED YEARS, 1964-1994

Hourly Earnings	Real Earnings
1964	\$10.23
1973	\$12.37
1979	\$12.34
1982	\$11.91
1989	\$11.55
1994	\$11.12
Percent Change	
1964-1973	+20.9%
1973-1979	-.2%
1979-1994	-9.9%
Weekly Earnings	Real Earnings
1964	\$395.76
1973	\$456.50
1979	\$440.41
1982	\$414.31
1989	\$399.47
1994	\$384.75
Percent Change	
1964-1973	+15.4%
1973-1979	-3.5%
1979-1994	-12.6%

Notes: The nominal hourly and weekly earnings data for each year were converted into constant 1994 dollars via use of the modified Consumer Price Index for All Urban Consumers, known as the CPI-UX1 index.

⁶³ For example, we estimate that the ratio of the mean weekly earnings of non-production workers to production workers in the nation's manufacturing industries rose from 145% in 1979 to 176% in 1989, the highest ratio in the past 30 years. Managers, other administrative and professional staff not involved in production or research and development activities, and high level sales workers clearly reaped important salary gains over the 1979-94 period while the weekly earnings of production workers did not keep pace with inflation.

⁶⁴ Prior to 1979, the CPS survey collected weekly earnings data only from employed respondents in the month of May. Since 1979, weekly earnings data are collected monthly from one-fourth of the respondent sample. For a review of the changes in data collection procedures:

See: Earl F. Mellor, "New Household Survey Statistics on Weekly Earnings," *Employment and Earnings*, February 1982, pp. 7-8.

the U.S. over the past two decades stand in sharp contrast to one another (Table 81). Between 1974 and 1994, the median real weekly earnings of full-time employed men fell by 11% while those of employed women rose by nearly 13%. The gender gap in weekly wages of full-time workers has narrowed considerably over the past two decades, with the female/male weekly wage ratio rising from 61% to 76%. Since full-time employed males work for a greater mean number of hours per week than their female counterparts (9% more hours in 1994), adjusting the weekly wage gap for only differences in hours worked would raise the female/male earnings ratio to 83% in 1994.

Trends in the Weekly Earnings of New England Workers, 1973-1994

The national earnings picture for full-time wage and salary workers over the past two decades was a mixed one, with males experiencing a decline in their median weekly earnings of 10% while women were able to achieve moderate weekly earnings gains. Within this national context, how well did the average New Englander fare? How successful were full-time male and female workers in boosting their real earnings over the past two decades? How well did workers at various points in the earnings distribution succeed in improving

Between 1973 and 1994, the median real weekly earnings of all full-time wage and salary workers in New England rose from \$471 to \$554, an increase of \$83 or 17%. This finding stands in sharp contrast to the 7% decline in the real weekly earnings of U.S. full-time workers over the same time period.

their real earnings?

Between 1973 and 1994, the median real weekly earnings of all full-time wage and salary workers in New England rose from \$471 to \$554, an increase of \$83 or 17% (Table 82). This finding stands in sharp contrast to the 7% decline in the real weekly earnings of U.S. full-time workers over the same time period. Improvements in the real weekly earnings of New Englanders took place during both the 1973-89 period and the most recent five year period. Since 1989, however, real wage growth has slowed, with the median real wage for all full-time employed New Englanders rising by only 3% over the past five years.

Both employed men and women in New England were able to improve their real weekly earnings over the 1973-94 period; however, similar to national developments, women fared considerably better than men, obtaining a 33% increase in their real weekly earnings versus a more moderate 7% increase

for men. Over the past five years, male New Englanders have failed to achieve any improvements in their real weekly earnings while women employed full-time boosted their median real weekly earnings by 12%. The poorer wage prospects for males in recent years are not surprising, given their greater job losses and unemployment problems during the deep

TABLE 82 TRENDS IN THE MEDIAN REAL WEEKLY WAGES OF FULL-TIME WAGE AND SALARY WORKERS IN NEW ENGLAND, SELECTED YEARS, 1973-94 (IN CONSTANT 1994 DOLLARS)

Group of Workers	(A)	(B)	(C)	(D)	(E)	(F)
	1973	1989	1994	Percent Change 1973-94	Percent Change 1973-89	Percent Change 1989-94
All	\$471	\$538	\$554	17.1%	14.1%	3.1%
Men	\$566	\$604	\$604	7%	7%	0%
Women	\$358	\$426	\$475	33%	19%	12%
Women as % of Men	63.2	70.5	78.6			

Note: Nominal weekly wages for 1973 and 1989 were converted into constant 1994 dollars via use of the CPI-UX1 index for the entire United States.

TABLE 83

COMPARISONS OF THE MEDIAN WEEKLY WAGES OF FULL-TIME WAGE AND SALARY WORKERS, BY REGION, 1973 AND 1994 (IN CONSTANT 1994 DOLLARS)

Region	(A)	(B)	(C)
	1973	1994	Percent Change, 1973-1994
U.S.	\$487	\$467	-4.1%
Pacific	\$550	\$517	-6.0%
East North Central	\$535	\$488	-8.8%
Middle Atlantic	\$503	\$510	+1.4%
Mountain	\$490	\$470	-4.1%
New England	\$472	\$553	+17.1%
West North Central	\$472	\$472	0%
South Atlantic	\$437	\$472	+8.0%
West South Central	\$409	\$434	+5.1%
East South Central	\$393	\$418	+5.4%
New England as % of U.S.	97.0	118.4	—
New England's Rank	Tied for 5th	First	First

Note: 1973 data are for May; 1994 data are the average of the March and October data.

regional economic recession of 1989-91.

New England's relative wage position has improved considerably over the past two decades. As noted in earlier sections of this report, through the late 1970s, New England was not viewed as a high wage region. The region's higher per capita incomes were generated by a combination of favorable demographic factors (a higher fraction of the resident population in the working-age groups), a higher labor force participation rate, especially among women, and above average amounts of property income. During 1973, the median weekly earnings of the full-time employed in New England were three percentage points below the U.S. average, and the region ranked only fifth highest among the nine geographic regions. Over the following two decades, however, growth in real weekly earnings in New England was the highest in the nation, more than doubling the growth rate of the South Atlantic region, the second strongest performer. During 1994, median weekly earnings in New England were the highest in the nation, exceeding the national average by 18% (Table 83).

⁶⁵ See: Massachusetts Taxpayers Foundation, "An Economy in Transition: Reducing the High Cost of Doing Business in Massachusetts," Boston, August 1995.

⁶⁶ The Gross State Product data are generated by the U.S. Commerce Department's Bureau of Economic Analysis. The most recent GSP data are provided for each of some seventy industries; however, the price deflators for each industry are national not state specific. The overall price deflators for each state's GSP will vary depending on their industrial mix.

Trends in Gross Regional Product

The greater growth in the weekly earnings of the region's full-time employed is sometimes considered by policy-makers to be a two-edged sword. On the one hand, rising real weekly earnings are a fundamental source of improved living standards for the region's workers and their families. Real wage growth from the late 1940s through 1973 was the primary contributor to the doubling of the real incomes of the nation's and region's families. This wage growth was generated by high annual rates of labor productivity growth with workers sharing fully in the gains from productivity. This trend has been radically reversed in recent decades: productivity growth has slowed considerably, and workers are not sharing in those productivity gains. Increased real wages not matched by gains in labor productivity can pose economic problems to the long-run competitiveness of the region. Rising unit labor costs relative to one's competitors, both in other regions and other nations, will place the region's producers at a competitive disadvantage and reduce our export potential. A number of studies of New England industries by the Massachusetts Taxpayers Foundation and other regional forecasting groups have cited slightly higher wage costs among the region's producers, even after adjusting for differences in the industrial mix, as a cause of some concern.⁶⁵

Nearly all previous studies of the region's wage and labor cost structure suffer from a very serious technical shortcoming: their inability to adjust for productivity differences between regions and states. As noted above, higher wages or earnings are only an economic problem when they lead to higher unit labor costs. Wage data by themselves cannot be used to make valid statements about unit labor costs. Unfortunately, timely data on labor productivity by industry and by state and region are not typically available; however, the U.S. Commerce Department's Bureau of Economic Analysis (BEA) has been producing data on the Gross State Product of state economies by industrial sector.⁶⁶ The real

TABLE 84 TRENDS IN GROSS REGIONAL PRODUCT IN NEW ENGLAND AND THE U.S., 1977 TO 1992 (IN CONSTANT 1987 DOLLARS)

Area	(A)	(B)	(C)	(D)
	1977	1986	1992	Percent Change 1977-92
U.S.	\$38,309	\$40,050	\$42,258	10.3%
New England	\$34,401	\$40,569	\$44,132	28.3%
New England as % of U.S.	89.8	101.3	104.4	
New England Rank Among Nine Regions	7th	3rd	3rd	

gate performance of the New England economy over the past two decades. Wages in individual industries may have outpaced productivity growth and created cost pressures in our region; however, identification of such wage and cost disadvantages requires a far more sophisticated analysis than has been provided by previous studies of the Massachusetts and regional economy.

Rising Wage Inequality in New England

Increasing concerns over the rising degree of inequality in the U.S. wage distribution have been expressed by a growing number of labor market analysts in recent years.⁶⁸ A sharp rise in wage and earnings inequality among U.S. workers has been taking place since the

GSP data can be combined with data on the level of employment in a state's economy to produce estimates of real output per worker.⁶⁷

Findings on the growth of real output per worker in the U.S. and New England over the 1977-92 period are displayed in Table 84. The 1992 real GSP data are the most currently available output data for states and regions. In 1977, Gross Regional Product (GRP) per worker in New England was \$34,401, nearly \$4,000 or 10% below the U.S. average (Table 84). New England's labor productivity performance was only seventh highest among the nation's nine regions during that year. By 1986, real output per worker in New England had surpassed that of the U.S. by a little over 1%, and our region's ranking had improved to third highest. During 1992, real output per worker in New England had risen to \$44,132, slightly exceeding its prior peak in 1989. Regional labor productivity during 1992 was 4% above the U.S. average, and New England ranked third highest in the nation.

Between 1977 and 1992, real output per worker in New England had increased by 28% versus only a 10% growth rate for the nation. New England's productivity growth was the highest of the nine regions over this 15 year period. Thus, the above average rates of real wage growth in New England since the late 1970s appear to be clearly justified by the region's superior productivity performance. The above findings are based on the aggregate

In 1979, the weekly earnings of male full-time workers at the 90th percentile exceeded those at the 10th percentile by a multiple of 3.42. By 1994, the relative earnings ratio for these two groups had risen to 4.43.

mid-1970s. The degree of inequality between wage earners at the top and bottom of the earnings distribution has risen particularly rapidly, and these trends have prevailed among both men and women. For example, in 1979, the weekly earnings of male full-time workers at the 90th percentile exceeded those at the 10th percentile by a multiple of 3.42. By 1994, the relative earnings ratio for these two groups had risen to 4.43.⁶⁹ During October 1994, the weekly earnings of males at the 90th percentile of the distribution were \$1108 versus only \$250 for those full-time workers at the 10th percentile of the distribution. Wage inequality has risen even more rapidly among women in the U.S. During 1979, the weekly earnings of full-time employed women at the 90th percentile of the distribution in the U.S. was only 2.61 times as high as those of women at the 10th percentile. By 1994, this relative earnings ratio had increased to 4.10 times. The degree of

⁶⁷ We have used data on annual average employment levels in each state from the Current Population Survey for producing these labor productivity estimates. The CPS employment data is preferred since it is based on the most comprehensive count of the employed, including the self-employed, agricultural workers, and unpaid family members. Each employed person is counted only once regardless of the number of jobs that he or she may hold.

⁶⁸ A logarithmic version of the W90/W10 inequality measure was used by Freeman and Katz in their analysis of changing wage inequality among men and women in various industrial countries between 1979 and 1989.

See: Richard B. Freeman and Lawrence F. Katz, "Rising Wage Inequality: The United States vs. Other Advanced Countries," in *Working Under Different Rules*, Russell Sage Foundation, New York, 1994, pp.29-62.

For other measures of earnings inequality in the U.S. during the 1970s and the 1980s, see: Bennett Harrison and Barry Bluestone, *The Great U-Turn: Corporate Restructuring and the Polarizing of America*, Basic Books Inc., New York, 1988.

A more recent review of income inequality trends in the 1990s among workers and households in the U.S. was prepared by Paul Ryscavage of the U.S. Bureau of Labor Statistics:

See: Raul Ryscavage, "A Surge in Growing Income Inequality?," *Monthly Labor Review*, August 1995, pp. 51-62.

⁶⁹ The 1994 wage inequality measures are based on the March and October CPS surveys during that year.

TABLE 85 TRENDS IN THE REAL WEEKLY WAGES OF FULL-TIME WAGE AND SALARY WORKERS IN NEW ENGLAND, BY DECILE OF THE DISTRIBUTION, 1973, 1989, AND 1994 (IN CONSTANT 1994 DOLLARS)

Decile Boundary				Percent Change	Percent Change
	1973	1989	1994	1973-94	1989-94
10	270	281	266	-1.5	-5.5
20	314	347	340	+8.3	-2.1
30	377	401	392	+4.0	-2.3
40	401	458	470	+17.2	+2.6
50	471	538	554	+17.6	+3.0
60	534	595	623	+16.7	+4.7
70	628	692	706	+12.4	+2.0
80	706	799	834	+18.1	+4.4
90	904	1,018	1,102	+21.9	+8.2

Note: The 1973 data are based on the May CPS survey. The 1989 and 1994 data are based on the findings of the March and October CPS surveys.

inequality in the women's wage distribution has come quite close to that of men in the U.S. in the past year and remains the highest of the world's industrialized economies.⁷⁰

To identify trends in the weekly earnings distribution for New England workers, we computed the 1973, 1989, and 1994 weekly earnings distributions for all full-time wage and salary workers in the region. The earnings data for each year are expressed in constant 1994 dollars using the CPI-UX1 index for the entire U.S.⁷¹ Between 1973 and 1994, the real weekly earnings of New England workers rose across nearly the entire distribution, with the exception of those in the bottom decile. Workers at the 10th percentile actually experienced a moderate decline (-1.5%) over this 21 year period. The relative size of these wage gains, however, varied substantially by position in the earnings distribution. Those workers at the 20th and 30th percentiles experienced modest 4 to 8 percentage point increases while the top wage earners at the 80th and 90th percentiles

obtained the largest weekly earnings increases (18 to 22 percent). Clearly wage inequality has grown among New England workers over the past two decades.

Since 1989, wage inequality in New England appears to have increased considerably (Table 85). The real weekly earnings of workers in the bottom thirty percent of the regional earnings distribution declined by 2 to 5 percent over the past five years while those in the middle of the earnings distribution typically rose by 2 to 3 percent. The highest wage earners (those at the 90th percentile) experienced the largest earnings increase (+8 percent). During the depressed regional economy of the early 1990s, the earnings gaps between "the haves" and the "have nots" have widened to a substantial degree.

The weekly earnings data appearing in Table 85 can be used to compute a variety of relative wage inequality measures. Five such wage inequality measures are displayed in Table 86 for New England workers during 1973 and 1994. The first three measures represent the relative earnings ratios for workers at the 90th percentile and those at the 10th, 20th, and 50th percentiles, respectively. The

TABLE 86 RELATIVE WEEKLY WAGES OF FULL-TIME WAGE AND SALARY WORKERS IN NEW ENGLAND AT VARIOUS POINTS ALONG THE EARNINGS DISTRIBUTION, 1973 AND 1994

Relative Wages	Percent Change,		
	1973	1994	1973-1994
W_{90}/W_{10}	3.35	4.14	+24%
W_{90}/W_{20}	2.88	3.24	+13%
W_{90}/W_{50}	1.92	1.99	+4%
W_{50}/W_{20}	1.50	1.63	+9%
W_{50}/W_{10}	1.74	2.08	+20%

TABLE 87 COMPARISONS OF THE DEGREE OF WAGE INEQUALITY IN THE U.S. AND NEW ENGLAND, 1994

Relative Wages	New England as		
	U.S.	New England	% of U.S.
W_{90}/W_{10}	4.36	4.14	95%
W_{90}/W_{20}	3.48	3.24	93%
W_{90}/W_{50}	2.13	1.99	94%
W_{50}/W_{20}	1.64	1.63	99%
W_{50}/W_{10}	2.05	2.08	101%

⁷⁰ Of the five countries examined by Katz and Freeman in their 1994 study, the degree of wage inequality among full-time female workers in the US. as measured by the W_{90}/W_{10} ratio was the highest, exceeding that of Japan and Italy by 50 to 80 percent.

See: Richard B. Freeman and Lawrence F. Katz, *op.cit.*, Table 2.2, p. 48.

⁷¹ Use of a modified version of the CPI-UX1 index for the Greater Boston area would have yielded nearly identical findings on wage trends. See Appendix A.

TABLE 88 TRENDS IN WAGE INEQUALITY FOR FULL-TIME WORKERS BETWEEN 1989 AND 1994, BY REGION

Region	1989 Average W_{90}/W_{10}	1994 Average W_{90}/W_{10}	Relative Change
New England	3.62	4.14	14%
Middle Atlantic	4.15	4.44	7%
East North Central	4.06	4.15	2%
West North Central	3.83	3.87	1%
South Atlantic	4.11	4.33	5%
East South Central	4.33	3.97	-8%
West South Central	4.57	4.57	0%
Mountain	4.02	4.58	14%
Pacific	4.66	4.79	3%

TABLE 89 TRENDS IN THE REAL WEEKLY WAGES OF FULL-TIME MALE WAGE AND SALARY WORKERS IN NEW ENGLAND, BY PERCENTILE IN THE DISTRIBUTION, 1973 AND 1994 (IN CONSTANT 1994 DOLLARS)

Decile Boundary	1973	1994	Percent Change 1973-94
10	314	280	-11%
20	393	367	-7%
30	440	441	0%
40	503	519	+3%
50	566	604	+7%
60	629	685	+9%
70	695	775	+12%
80	786	942	+20%
90	990	1,186	+20%

weekly earnings of a worker at the 50th percentile represent the value of the median weekly wage. The final two wage inequality measures represent the weekly earnings of the median wage earner relative to those at the 10th and 20th percentiles.

An overview of the findings reveals quite clearly that wage inequality in New England has risen across the board over the past two decades, with the size of the gaps becoming particularly large between the top wage earners and those in the bottom two deciles of the earnings distribution. By 1994, the weekly earnings of workers at the 90th percentile were 4.1 times as high as those of a worker at the 10th percentile and 3.2 times as high as those of workers at the 20th percentile. The wage gaps between those in the middle of the distribution and in the bottom two deciles

also rose considerably over the past two decades.

The rise in wage inequality in the region in recent years has led to a degree of inequality that closely approximates that for the entire nation. By 1994, the values of each of the five wage inequality measures in New England had either come quite close to or were identical to those for the nation (Table 87). In 1989, the ratio of the weekly earnings of those New England workers in the 90th percentile to those at the 10th percentile was the lowest among the nine geographic regions (Table 88). Between 1989 and 1994, however, the relative earnings ratio for these two groups in New England increased more rapidly than any other region, with the exception of the Mountain region. By 1994, New England's ranking on this wage inequality measure had risen from lowest to third lowest, basically tied with the East North Central region.

Wage Inequality Trends Among Male and Female Workers in New England

While the median real weekly earnings of full-time male workers in New England rose modestly (7%) over the past two decades, it is important to examine how male and female workers at various points along the earnings distribution fared in recent years. Over the 1973-1994 period, real wage trends for male workers varied quite widely across the earnings distribution, with those in the upper end of the distribution achieving considerably higher earnings gains (Table 89). Male workers in the bottom two deciles of the weekly earnings distribution actually encountered wage declines over the past two decades while the real wages of those at the 30th percentile were stagnant over the same time period. All other groups experienced real earnings gains, with the size of these wage increases ranging from 3% for those at the 40th percentile to highs of 20% for those males at the 80th and 90th percentiles.

Wage inequality among male workers in New England rose sharply across the entire earnings distribution between 1973 and 1994 (Table 90). The relative size of the earnings

TABLE 90 TRENDS IN WEEKLY WAGE INEQUALITY AMONG FULL-TIME MALE WAGE AND SALARY WORKERS IN NEW ENGLAND, 1973-1994

Relative Wage Measures	(A)	(B)	(C)
	1973	1994	Percent Change
W_{90}/W_{10}	3.15	4.23	+34%
W_{90}/W_{20}	2.52	3.23	+28%
W_{90}/W_{50}	1.75	1.96	+12%
W_{50}/W_{20}	1.44	1.65	+14%
W_{50}/W_{10}	1.80	2.15	+19%

gaps widened the most for those in the upper and bottom deciles of the distribution. The weekly earnings of males at the 90th percentile went from being 3.1 times as high as those of workers at the 10th percentile in 1973 to 4.2 times as high in 1994, a relative increase of 34% in this wage inequality measure. The top male wage earners also improved their position relative to those in the middle

of the distribution, and the middle wage earners gained ground relative to those in the bottom two deciles.

The rise in wage inequality among full-time workers in New England over the past two decades was not confined to men. The female earnings distribution also became substan-

tially more dispersed over the same time period. By 1994, full-time women workers at the 90th percentile of the distribution were receiving weekly wages that were nearly 3.7 times as high as those of their counterparts at the 10th percentile (\$934 vs. \$253). In comparison, this relative earnings ratio stood at only 2.50 in 1973, representative of a much more compressed wage distribution in the early 1970s. The strong real wage growth of New England women in the past two decades has been accompanied by a substantial increase in wage inequality. Given the high inter-marriage rates among men and women within social classes, the rising wage inequality among men and women in New England will clearly exacerbate earnings and income inequality among the region's families. Rising income inequality in turn will place greater strains on the economic and social cohesion of communities and the citizenry of New England.

HEALTH INSURANCE COVERAGE OF NEW ENGLAND RESIDENTS AND WORKERS

ACCCESS TO SOME form of health insurance has become a key concern for many American workers, health advocacy organizations, and some national and state political leaders during the 1990s. The absence of universal health care coverage has been cited as one of the major shortcomings of the U. S. health care system despite its many technical strengths relative to other countries.⁷² The lack of such coverage has important implications for the health care of the public. A recent national study found that, regardless of income, adults and children with full or even partial insurance receive more health care than those who do not have any health insurance coverage.⁷³ Access to health insurance coverage is, thus, a fairly good proxy for access to health care services.

Sharp increases in real health care costs and declining coverage rates for some residents have raised a growing number of concerns about continued access for all Americans to the nation's health care system.⁷⁴ In New England, more than 1.6 million people representing nearly 12 percent of the region's population reported no health insurance coverage during 1994. Thus, issues related to health care access are an important component of social and economic policy discussions in the New England region as well as throughout

⁷² For a review of health insurance coverage rates among U. S. residents, see: i) Blendon, Robert J. and Jennifer N. Edwards, *System in Crisis: The Case for Health Care Reform*, New York: Faulkner & Gray, 1991; ii) "Bill of Health," *The New Republic*, July 3, 1989, pp. 5-7; (iii) "The White House Domestic Policy Council, Health Security: The President's Report to the American People," New York: Simon & Schuster, 1993.

⁷³ Paulin, Geoffrey and Elizabeth Dietz, "Health Insurance Coverage for Families with Children," *Monthly Labor Review*, August 1995, pp. 13-23.

⁷⁴ Johnson, James W., "Health Care and Higher Education: A Chilling Parallel," *Educom Review*, Spring/Summer, 1993.

TABLE 91 PROPORTION OF THE NEW ENGLAND POPULATION COVERED BY SOME TYPE OF HEALTH CARE INSURANCE, 1994

Age Subgroup	Total Population	Number With Health Insurance Coverage	Percent With Health Insurance Coverage
Children under 18	3,156,357	2,904,699	92.0
18-64	8,179,700	6,969,900	85.2
65 and Over	1,750,100	1,741,700	99.5
Total	13,086,157	11,616,299	88.8

	1980	1990	1995
Total	86.1	84.4	85.2
Male	86.6	84.8	83.6
Female	85.6	84.0	86.8
White, non-Hispanic	86.8	84.9	85.7
Black, non-Hispanic	78.0	82.9	81.5
Hispanic	71.2	78.7	77.0

the nation.⁷⁵

Among New Englanders, health insurance coverage rates vary considerably by age. Virtually all persons age 65 years or older reported that they were covered by a health insurance plan of some type in 1994.⁷⁶ More than 99 percent of all elderly New Englanders participated in a health insurance program, primarily Medicare. Children under the age of 18 were also covered under a health insurance program at an above average rate in 1994, primarily as a result of expanded Medicaid coverage in recent years. About 92 percent of all children under 18 who resided in families had health insurance coverage. However, nearly 15 percent of persons between the ages of 18 and 64 in New England reported no health insurance coverage (Table 91). Young adults (18-24) were the most poorly covered by the nation's health insurance system in 1994.

Health insurance coverage rates for 18 to 64 years old residents of New England have declined mildly during the past 15 years (Table 92). Between 1980 and 1990, coverage rates for all 18 to 64 year olds fell from 86 percent of the population to 84 percent. The decline in coverage rates was about the same for both men and women during this time period. Since 1990, however, men's health insurance coverage rates have continued to decline modestly while coverage rates of women have actually increased in recent years due to a combination of improved employment and expanded Medicaid coverage for poor women.

Findings in Table 92 reveal that, as overall

health insurance coverage rates for the region's 18 to 64 year old population declined, coverage for Blacks and Hispanics actually improved by 3.5 and 6 percentage points, respectively, between 1979 and 1994. In contrast, White, non-Hispanics witnessed a decline in their health insurance coverage during the past 15 years. Thus, by 1994, variation in health care coverage rates across race/ethnic groups in the region had narrowed.

Health Insurance Coverage and Labor Market Attachment

A key feature of health insurance coverage for non-elderly working-age individuals in the U.S. is that it is generally provided as part of a package of employee benefits supplied by employers. For most persons in the 18 to 64 year old age group, health insurance is provided through an employer-financed health plan, either directly as an employee of the firm or indirectly as a family member covered by an employer-financed health insurance plan. Findings in Table 93 examine trends in coverage rates of 18 to 64 year olds in New England by their labor force status. Coverage rates for all three labor force groups (the employed, unemployed, and those not in the labor force) fell over the 1979 to 1994 period. In particular, coverage rates among unemployed individuals fell sharply. In 1979 nearly 8 out of 10 unemployed workers reported they were covered by some type of health insurance plan. Fifteen years later, only 2 out of 3 unemployed persons reported some form of health insurance coverage. Even persons who were employed saw their health insurance coverage rates fall over this time period. In 1979 fewer than 10 percent of

⁷⁵ For a discussion of issues related to health insurance coverage, see: i) Delores King, "Mass. comeback seen giving jobs but few health benefits," *The Boston Globe*, October 1995; ii) Charles Stein, "Still uninsured," *The Boston Globe*, January 8, 1995; iii) "Health coverage lost to 1 million," *The Boston Globe*, October 20, 1994.

⁷⁶ Data for health insurance coverage rates were obtained from the March supplement to the Current Population Survey (CPS). Respondents to the survey were asked to report if they were covered by a health insurance plan at any time during the prior calendar year. The section on health insurance coverage contains numbers derived from the March CPS surveys of 1980, 1990, and 1995, representing coverage rates for the calendar years 1979, 1989, and 1994.

Labor Force Status	1979	1989	1994
Employed	90.6	86.8	87.0
Unemployed	79.2	70.4	67.0
Out of the Labor Force	85.3	78.4	80.4

those persons with a job lacked health insurance coverage. By 1994, 13 of every 100 employed individuals lacked any type of health insurance coverage.

Health Insurance Coverage Rates by Educational Attainment, Industry and Occupation

The likelihood of a New England resident lacking any type of health insurance coverage is closely associated with their level of educational attainment. In 1994 more than one of four high school dropouts had no health insurance coverage (Chart 17). High school graduates were somewhat more likely to have health coverage, with 19 percent of all high school graduates in the region reporting no health insurance coverage in 1994. In marked contrast, college graduates were only one-half as likely as high school graduates to report no health insurance coverage. Only 8 percent of all four year college graduates in New England said they had no health care coverage during 1994.

Health insurance coverage rates declined somewhat over the 15 years since 1979 regardless of educational attainment; however, the magnitude of the reductions in health insurance coverage rates varied sharply by years of formal schooling. High school dropouts and high school graduates with no post-secondary schooling saw their coverage rates fall considerably. Between 1979 and

1994 the health insurance coverage rate of 18 to 64 year old New Englanders fell from 86.1 percent to 85.2 percent. High school graduates saw their coverage rates drop from 86.0 percent to 80.9 percent. High school dropouts witnessed a sizable drop in their coverage rates from 81.1 percent to 73.2 percent. College graduates, in contrast, had their coverage rates fall from 93.5 percent to 91.6 percent, a drop of only two percentage points.

Part of the sharper decline in health insurance coverage rates among those persons with no post-secondary schooling was attributable to the steeper decline in employment in blue-collar occupations where high school graduates and dropouts accounted for the bulk of the employed. By 1994, the proportion of high school dropouts working in manufacturing industries fell by more than one-third. Over the same time period, a growing proportion of high school dropouts and graduates became employed in the retail trade and business and repair service industries. Persons working within these industry sectors reported an incidence of health care coverage well below those observed in manufacturing industries. The retail trade and low end service industries had health insurance coverage rates that were 10 to 17 percentage points less than those prevailing in durable manufacturing industries. In contrast, employment prospects for college graduates grew rapidly during the past 15 years.

chart 17 PROPORTION OF 18 TO 64 YEAR OLD PERSONS IN NEW ENGLAND REPORTING NO HEALTH INSURANCE COVERAGE, BY YEARS OF SCHOOLING COMPLETED

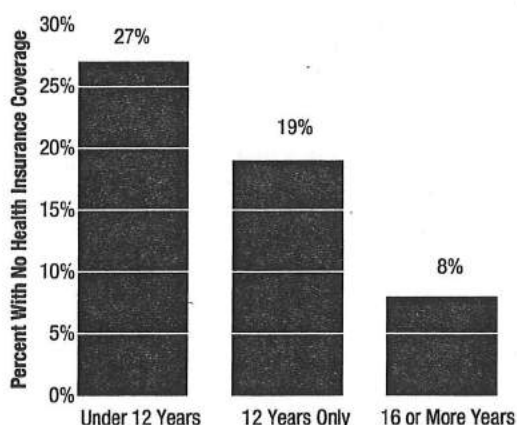


TABLE 94 HEALTH INSURANCE COVERAGE RATES OF 18-64 YEAR OLD EMPLOYED PERSONS IN NEW ENGLAND, BY MAJOR INDUSTRIAL SECTOR, 1979, 1989, AND 1994

Industrial Sector	1979	1989	1994
Construction	78.5	73.7	68.5
Durable Manufacturing	94.0	92.0	91.8
Non-Durable Manufacturing	90.1	86.1	90.5
Transportation, Communication, & Utilities	94.5	88.5	91.0
Wholesale Trade	91.8	93.9	88.7
Retail Trade	79.3	76.9	80.4
Finance, Insurance, & Real Estate	95.0	89.0	92.0
Business Repair & Personal Services	75.9	78.7	75.7
Professional Services	90.6	90.0	91.6
Public Administration	90.4	92.9	94.6

Employed college graduates are heavily concentrated in the region's professional services, finance, and public administration industries, all of which are characterized by high rates of health insurance coverage. Moreover, over the entire 1979 to 1994 period, these three industry sectors experienced either no reduction or only a slight decline in health insurance coverage rates. In contrast, both retail trade, business repair and personal service industries experienced relatively large declines in health insurance coverage rates (Table 94).

Thus, New England adults with fewer years of formal schooling experienced above average reductions in health care coverage rates as their access to jobs in industries providing high coverage rates has diminished. In contrast, job growth in those sectors that are intensive employers of college graduates who have relatively high health insurance coverage rates have insulated most of the region's college graduates from reductions in health insurance coverage.

Health Insurance Coverage Rates of Family Householders

Health insurance coverage of spouses and children in most families is dependent on the health insurance coverage of the family householder. Thus, a separate analysis of trends in health insurance coverage among the region's family householders over the past 15 years is warranted. Selected comparisons will be made with the health insurance coverage rates of the nation's family householders. Our analysis will focus on the coverage rates of those family householders between the ages of 18 and 64. Elderly householders (65 years and older) were excluded since nearly all of them are covered by Medicare. Analysis of the health insurance coverage rates of the

region's children under 18 is performed separately.

An analysis of the health insurance coverage of family householders in New England reveals a moderate decline between 1979 and 1994. In 1979, nearly 92 percent of all family householders in New England reported some kind of health insurance coverage. This ratio declined by one percentage point by 1989, and between 1989 and 1994, there was another one percentage point decline (89.7 percent) in health insurance coverage rates (Table 95). Nationwide, health insurance coverage rates of family householders declined by 2.6 percentage points between 1979 and 1994, falling to 86.4 percent in 1994.

Although 9 of 10 family householders in New England were covered by some type of health insurance plan during 1994, health coverage rates varied substantially by the characteristics of the householder. Heads of married-couple families, older householders (30 and older), and householders with higher levels of formal educational attainment had considerably higher rates of health insurance coverage than each of their respective counterparts. Between 1979 and 1994, health insurance coverage rates declined among most all subgroups of family householders. However, single male family heads, the young, and the less well educated witnessed larger declines,

TABLE 95 HEALTH INSURANCE COVERAGE RATES OF 18 TO 64 YEAR OLD FAMILY HOUSEHOLDERS IN NEW ENGLAND, 1979, 1989, AND 1994

	1979	1989	1994
All Family Householders	91.7	90.7	89.7
Type of Family			
Married-couple family	93.6	91.3	92.2
Male-headed family	89.5	86.0	77.2
Female-headed family	81.1	88.5	82.4
Age of Householder			
18-29	90.5	88.0	84.1
30-64	91.9	91.1	90.5
Years of Schooling Completed			
Less than 12	88.0	84.6	76.0
12	90.8	87.8	88.3
13-15	92.7	90.2	90.6
16 or more	96.2	97.0	95.1

thus, widening the gaps between the “health-haves” and the “health-have-nots” over the past 15 years in New England.

While 92 percent of New England’s married-couple family householders had health insurance coverage in 1994, only 82 and 77 percent of female-headed and male-headed family householders (with no spouse present in the household), respectively, reported some type of health insurance coverage during 1994 (Table 95 & Chart 18). The householders in married-couple families are more likely to have higher levels of educational attainment and are, thus, more likely to be employed in jobs that provide higher levels of benefits, including health insurance coverage. Due to the greater likelihood of Medicaid health coverage among female-headed families with children, they had a higher overall health coverage rate compared to the male family heads (82 versus 77 percent). Similar patterns prevailed nationally: 89 percent of married-couple family heads, 81 percent of single female heads, and 71 percent of single male heads reported some type of health insurance coverage during 1994.

Considerable differences in health insurance coverage also existed among family householders with different levels of educational attainment. Those family householders who

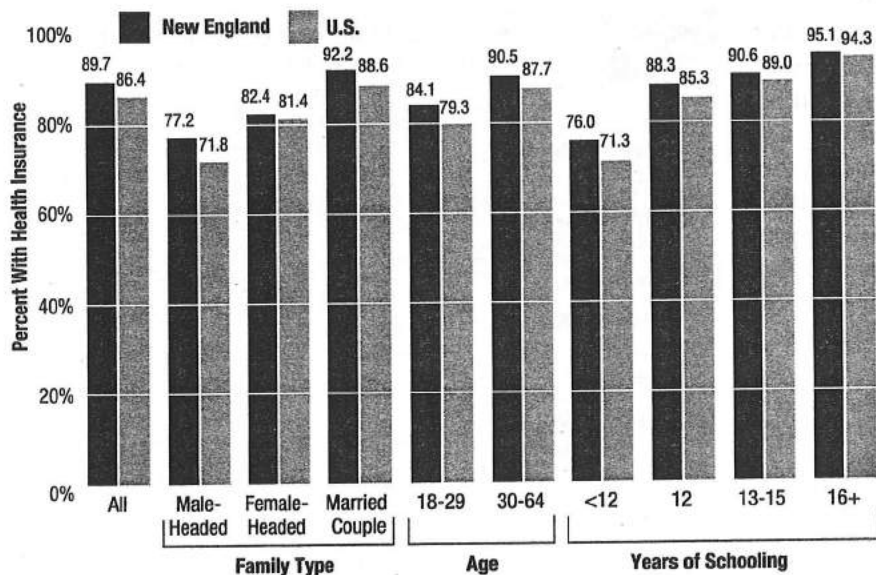
failed to complete high school lost substantial ground in health insurance coverage, falling from 82 percent in 1979 to 71 percent in 1994. Among high school graduates, only 85 percent reported some type of health insurance coverage during 1994. This ratio was down by five percentage points since 1979. College graduates, on the other hand, were able to maintain their health coverage rate at around 95 percent during both 1979 and 1994 (Table 95).

In New England, younger householders (18- to 29-years old) witnessed steeper declines in their health insurance coverage rates from 90.5 percent in 1979 to 84.1 percent in 1994. The gap in health insurance coverage rates between young householders (18-29) and their older counterparts (30-64) grew from 1.4 percentage points in 1979 to 6.4 percentage points in 1994 (Table 95). Similar, albeit more pronounced, trends were observed among young family householders and their older counterparts nationwide.

Younger families are increasingly composed of single-parent families, especially female-headed single parent families headed by never-married and poorly educated householders. Over the past 15 years, there has been a steady increase in the proportion of births taking place out of wedlock in the nation and in New England. In 1993, 31 percent of all births in the nation occurred to never-married mothers while this ratio stood at 28 percent in New England. Unless the upward trend in out-of-wedlock births is stabilized or reversed, the numbers of young female-headed families will continue to rise.

Although many of these single parent families can secure health insurance coverage by going on AFDC and receiving Medicaid, those single parent family heads who choose to work often end up in lower-wage jobs that do not provide health insurance benefits. The loss of Medicaid benefits by transitioning to employment has been cited as an important obstacle to moving AFDC recipients into the world of work.

chart 18 HEALTH INSURANCE COVERAGE RATES OF 18 TO 64 YEAR OLD FAMILY HOUSEHOLDERS IN THE U. S. AND NEW ENGLAND, 1994



Health Insurance Coverage Across Deciles of the Family Income Distribution

Our analysis of the changing family income distribution in earlier sections of this report revealed that families in the bottom of the income distribution in New England and the nation were increasingly composed of non-working families. Forty-five percent of the families in the lowest quintile (one-fifth) of the income distribution in New England did not have a single family member who was employed at some time during 1994. The ratio was even higher (54 percent) among those in the lowest decile (one-tenth) of the income distribution in New England. A high proportion of these non-working family householders were eligible for health insurance coverage under Medicaid or Medicare. Thus, 7 out of 10 family householders in the bottom decile of the income distribution reported some form of health coverage during 1994. In fact, health insurance coverage rates among family householders in the bottom decile of the income distribution increased from 67 percent in 1979 to 71 percent in 1994 (Table 96).

However, families in the second lowest decile that were composed of a large number of working householders with low annual earnings and who did not qualify for Medicaid, witnessed sharp declines in their health

insurance coverage rates. In 1979, nearly 4 out of 5 family heads in the second lowest decile had some health insurance coverage. By 1994, the coverage rates had declined to less than 3 out of 4. Of the families in each of the income distribution deciles, the group of householders who suffered the largest decline in coverage rates were those in the second lowest decile of the family income distribution in New England. Lower income working families were most adversely affected by the declining rates of health insurance coverage.

An examination of health coverage rates of family householders in New England by family poverty status revealed that, while in 1979 both poor and near-poor family householders had the same health insurance coverage rates (77 percent), by 1994 there was a fairly large difference in the rates of health insurance coverage of these householders (Table 97). Nearly 79 percent of poor family householders in New England had health coverage during 1994; however, the coverage rate was 10 percentage points lower (69 percent) among near-poor family householders. Nationwide, health insurance coverage rates of poor family householders remained around 68 percent, while near-poor family householders witnessed a small decline in their coverage rates falling from 71 percent in 1979 to 68 percent in 1994. Expansions of Medicaid coverage have benefited the dependent poor while

TABLE 96 HEALTH INSURANCE COVERAGE RATES OF 18 TO 64 YEAR OLD FAMILY HOUSEHOLDERS IN NEW ENGLAND BY INCOME DISTRIBUTION DECILE, 1979-1994

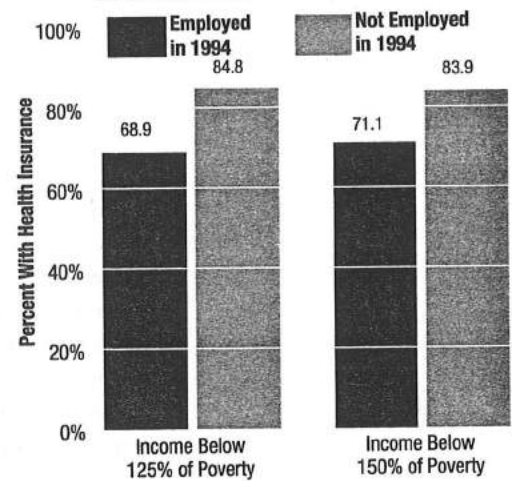
Decile of the Family Family Income Distribution	Health Insurance Coverage Rates		
	1979	1989	1994
Lowest	76.0	78.6	78.4
Second	79.6	79.9	73.0
Third	83.7	82.1	81.6
Fourth	92.8	92.5	86.1
Fifth	91.8	91.0	90.1
Sixth	96.4	92.4	90.9
Seventh	96.7	96.1	96.0
Eighth	97.2	95.6	97.0
Ninth	98.0	93.5	97.4
Highest	95.9	97.2	97.9

TABLE 97 HEALTH INSURANCE COVERAGE OF 18 TO 64 YEAR OLD FAMILY HOUSEHOLDERS BY RATIO OF FAMILY INCOME TO THE POVERTY THRESHOLD, U. S. AND NEW ENGLAND, SELECTED YEARS 1979-1994

	1979	1989	1994
U. S.			
Under the poverty line	67.8	68.8	68.8
100% to 124% of the poverty line	71.0	64.9	68.2
125% to 149% of the poverty line	78.0	71.2	69.6
150%+ of the poverty line	92.5	90.4	91.0
New England			
Under the poverty line	77.5	80.2	78.5
100% to 124% of the poverty line	77.0	72.7	69.3
125% to 149% of the poverty line	76.6	79.0	77.0
150%+ of the poverty line	93.8	92.1	92.0

TABLE 98	HEALTH INSURANCE COVERAGE OF 18 TO 64 YEAR OLD FAMILY HOUSEHOLDERS BY RATIO OF FAMILY INCOME TO THE POVERTY THRESHOLD AND EMPLOYMENT STATUS DURING THE YEAR, NEW ENGLAND		
	1979	1989	1994
Householders with Family Income Below 125% of the Poverty Threshold			
Employed 1+ weeks during the year	74.7	68.8	68.9
No employment during the year	81.2	89.7	84.8
Householders with Family Income Below 150% of the Poverty Threshold			
Employed 1+ weeks during the year	76.0	72.5	71.1
No employment during the year	79.2	88.1	83.9

chart 19 HEALTH INSURANCE COVERAGE RATES OF 18 TO 64 YEAR OLD FAMILY HOUSEHOLDERS BY RATIO OF FAMILY INCOME TO THE POVERTY LINE AND EMPLOYMENT STATUS IN 1994, NEW ENGLAND



The absence of health insurance coverage is most acute for those householders who were employed, but had low levels of earnings and incomes which kept them below or only moderately above the poverty threshold.

working poor and near-poor family heads have lost ground in the health insurance arena.

The health insurance coverage rates of two groups of low income family householders classified by the ratio of their family incomes to the official poverty threshold are displayed in Table 98. These two groups consist of the householders of families with annual incomes below 125 percent of the poverty threshold (poor and near-poor), and those below 150 percent of the poverty threshold. For each of these two groups health insurance coverage rates of householders are computed for those householders who reported at least one week of employment during the entire year and those householders who reported zero weeks of employment during the year. Within both of these groups, family householders who reported some employment had consistently lower health coverage rates than their counterparts with no reported employment (Table 98 and Chart 19). This finding reinforces the

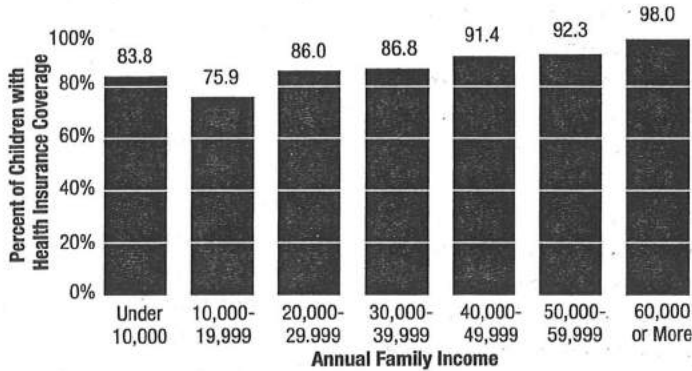
fact that the absence of health insurance coverage is most acute for those householders who were employed, but had low levels of earnings and incomes which kept them below or only moderately above the poverty threshold.

Health Insurance Coverage of Children Under 18

Health insurance coverage rates of children under 18 in New England declined from 92 percent in 1979 to 90 percent in 1989 (Table 99). Between 1989 and 1994, the proportion of children with some health insurance coverage remained constant. Similar trends were observed nationally over the 15 year period. New Medicaid legislation passed by Congress in the 1990's expanded coverage for poor children. Initially this Medicaid coverage includ-

TABLE 99	HEALTH INSURANCE COVERAGE RATES OF CHILDREN (UNDER 18) IN THE U. S. AND NEW ENGLAND, 1979, 1989, AND 1994		
	1979	1989	1994
U. S.			
Children under 18	88.5	85.7	85.7
Children under 6	88.4	85.4	85.0
Children between 6 and 17	88.6	85.8	86.1
New England			
Children under 18	92.0	90.4	90.5
Children under 6	91.8	90.0	92.0
Children between 6 and 17	92.1	90.6	89.7

chart 20 PERCENT OF CHILDREN UNDER 18 IN NEW ENGLAND WITH SOME TYPE OF HEALTH INSURANCE COVERAGE, BY LEVEL OF FAMILY INCOME, 1994



ed just the youngest children; however, that coverage has since been expanded to cover all those under 18 years of age.

Findings from an examination of the health insurance coverage rates among children under 18 by family income levels are present-

ed in Chart 20. Nearly 84 percent of the region's children residing in families with annual incomes of \$10,000 or less were covered under some type of health insurance plan in 1994. Most of these children are covered by Medicaid. The 1994 health insurance coverage rate among children residing in families with annual incomes between \$10,000 and \$20,000 was very low (75 percent) in New England. One of four children in this group was not covered by any health insurance plan. After this income bracket, health insurance coverage rates of children under 18 in New England rose steadily with family income. Nearly all children (98 percent) in the region who resided in families with annual incomes in excess of \$60,000 had health insurance coverage in 1994.

THE PENSION PLAN COVERAGE AND UNIONIZATION STATUS OF NEW ENGLAND'S WORKERS

IN ADDITION TO HEALTH insurance coverage, one of the most important employee benefits is that of an employer-financed pension plan. The existence of such a plan allows the worker through both employer and their own contributions to build a savings pool that will generate an annual income stream in the retirement years, thereby boosting purchasing power and living standards in those years. A number of national establishment surveys of employee benefits conducted by the U.S. Bureau of Labor Statistics do capture information on the numbers of workers covered by pension plans at the job site and the characteristics of those pension plans, but they do not provide information on the characteristics of the individual workers who are covered by the provisions of such plans at the work site.

The March Current Population Survey contains a supplementary set of questions on the pension plan coverage of all employed persons. Two questions on the March CPS files pertain to the pension plan coverage of persons who were employed for one or more

weeks during the preceding calendar year. The first asks respondents to indicate whether their employer had a pension plan, and the second asks respondents whether they were included in that plan. Data from the March 1980, March 1990 and March 1995 CPS surveys have been analyzed to determine trends in the pension plan coverage of workers in the nation and the region over the 1979 to 1994 period. Pension plan coverage rates will be presented for all employed persons and for selected demographic and socioeconomic subgroups of the workforce.

Pension plan coverage rates for all workers in the nation are presented in Table 100. Nationally, approximately 40 percent of all persons employed at some point during the year were covered by a pension plan at work, a rate which did not change to any substantive degree over the 1979 to 1994 period. This finding of no increase in pension coverage rates itself is troubling, given that the average worker was better educated and more experienced in 1994 than in 1979, and these development would have been expected

to improve coverage rates.

During each year, males, prime-aged workers (aged 25 to 54), the more highly educated, and persons with higher annual earnings were more likely to be included in a pension plan at work than each of their respective demographic counterparts. In contrast, young workers (under 25), persons who failed to obtain a high school diploma, and persons with low annual earnings were the least likely to be covered a pension plan. For example, only 12 percent of employed persons under the age of 25 were covered by a pension plan in 1994, versus 40 percent of persons aged 25 to 34 and 53 percent of workers in the 35 to 54 year old age group. During the same year, approximately 18 percent of all employed persons who failed to graduate from high school were covered by a pension plan, compared to 39 percent of high school graduates, 55 percent of Bachelor's degree holders, and 65 percent of those with an advanced degree or some postbaccalaureate study. Pension coverage rates rise continuously with the annual

earnings of workers. Workers with annual earnings below the \$10,000 mark had a pension plan coverage rate of only 9 percent in 1994, compared to 33 percent of workers with earnings between \$10,000 and \$20,000, 55 percent among workers earning between \$20,000 and \$30,000 and 73 percent among workers earning more than \$40,000 per year. The lowest paid workers are the least likely to obtain pension support in their retirement years other than Social Security. Thus, the large earnings gaps that prevailed among the employed during their work years will be replaced by large income gaps in their retirement years.

Younger workers and those with the least amount of formal schooling were not only considerably less likely to be covered by a pension plan in 1994, but they also experienced the largest declines in pension coverage rates over the 1979 to 1994 period. Persons under the age of 25 and 25-34 year olds experienced a 7-8 percentage point decline in their pension plan coverage rates between 1979 and 1994, with virtually all of the decline occurring over the decade of the 1980s. Employed persons who failed to complete high school experienced a 12 percentage point decline in pension coverage rates over this fifteen year period, with about three-fourths of the decline occurring during the decade of the 1980s. Employed high school graduates encountered a 4 percentage point decline in coverage rates, with all of the decline in coverage rates taking place during the 1980s. While men continue to be covered by a pension plan at a higher rate than women, the size of the gender gap in pension coverage rates has narrowed considerably, due in part to a serious erosion in men's coverage rates over this time period. Men's real wages and benefit coverage rates have declined since the late 1970s in the U.S.

Thus, although the overall fraction of workers covered by a pension plan at work did not change considerably over the 1979 to 1994 period, key subgroups of the nation's workforce have experienced an erosion in their pension plan coverage rates. The overall pen-

TABLE 100

PERCENT OF EMPLOYED PERSONS COVERED BY A PENSION PLAN AT WORK, BY GENDER, AGE, EDUCATIONAL ATTAINMENT, AND REAL ANNUAL EARNINGS, U.S., 1979, 1989 AND 1994

	1979	1989	1994	Absolute Change		
				1979-89	1989-94	1979-94
All	42.4%	39.5%	41.2%	-2.9	1.7	-1.2
Male	48.0%	42.2%	43.3%	-5.8	1.1	-4.7
Female	35.3%	36.3%	38.9%	1.0	2.6	3.6
Less than 25	19.8%	12.6%	11.6%	-7.2	-1.0	-8.2
25-34	47.4%	39.1%	40.4%	-8.3	1.3	-7.0
35-54	53.7%	51.2%	52.6%	-2.5	1.4	-1.1
55 and Over	44.9%	41.8%	42.0%	-3.1	0.2	-2.9
Less than High School	29.1%	20.1%	17.6%	-9.0	-2.5	-11.5
H.S. Graduate	43.5%	38.3%	39.4%	-5.2	1.1	-4.1
Some College	41.8%	39.8%	40.4%	-2.0	0.6	-1.4
Four Year Degree	56.3%	52.1%	55.1%	-4.2	3.0	-1.2
Postbacc. Degree/Study	63.4%	61.3%	65.2%	-2.1	3.9	1.8
Annual Earnings						
\$ 1 to \$9,999	9.6%	8.5%	9.1%	-1.1	0.6	-0.5
\$10,000 to \$19,999	36.3%	30.9%	32.6%	-5.4	1.7	-3.7
\$20,000 to \$29,999	58.6%	53.1%	55.4%	-5.5	2.3	-3.2
\$30,000 to \$39,999	71.0%	66.1%	67.2%	-4.9	1.1	-3.8
\$40,000 and Above	73.3%	69.8%	72.7%	-3.5	2.9	-0.6

Source: March 1980, March 1990 and March 1995 Current Population Surveys, tabulations by Center for Labor Market Studies.

TABLE 101

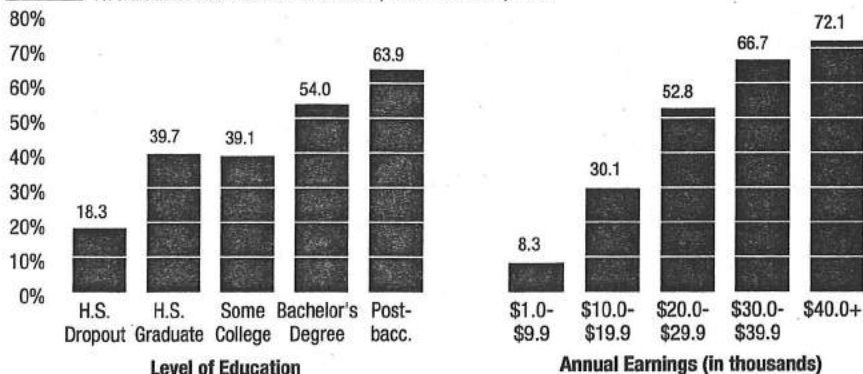
PERCENT OF EMPLOYED PERSONS COVERED BY A PENSION PLAN AT WORK, BY GENDER, AGE, EDUCATIONAL ATTAINMENT, AND REAL ANNUAL EARNINGS, NEW ENGLAND, 1979, 1989 AND 1994

	1979	1989	1994	Absolute Change		
				1979-89	1989-94	1979-94
All	41.9%	40.2%	42.8%	-1.7	2.6	0.9
Male	48.8%	45.4%	44.5%	-3.4	-0.9	-4.3
Female	33.4%	34.3%	40.9%	0.9	6.6	7.5
Less than 25	16.3%	13.6%	11.1%	-2.7	-2.5	-5.2
25-34	45.3%	39.8%	43.7%	-5.5	3.9	-1.6
35-54	54.1%	50.8%	54.1%	-3.3	3.3	0
55 and Over	50.7%	46.4%	43.1%	-4.3	-3.3	-7.6
Less than High School	31.7%	25.5%	18.3%	-6.2	-7.2	-13.4
H.S. Graduate	40.8%	38.2%	39.7%	-2.6	1.5	-1.1
Some College	36.9%	37.3%	39.1%	0.4	1.8	2.2
Four Year Degree	57.8%	48.7%	54.0%	-9.1	5.3	-3.8
Postbacc. Degree/Study	64.1%	58.1%	63.9%	-6.0	5.8	-0.2
Annual Earnings						
\$ 1 to \$9,999	7.6%	8.3%	8.3%	0.7	0.0	0.7
\$10,000 to \$19,999	33.5%	26.8%	30.1%	-6.7	3.3	-3.4
\$20,000 to \$29,999	62.7%	46.0%	52.8%	-16.7	6.8	-9.9
\$30,000 to \$39,999	70.2%	63.1%	66.7%	-7.1	3.6	-3.5
\$40,000 and Above	74.8%	69.1%	72.1%	-5.7	3.0	-2.7

Source: March 1980, March 1990 and March 1995 Current Population Surveys, tabulations by Center for Labor Market Studies.

sion plan coverage rate remained stable over the 1979-1994 period because groups with relatively high coverage rates, specifically prime-aged workers and workers with higher levels of educational attainment, increased their share of the workforce over the period. Inequality in pension coverage rates was growing over the past fifteen years, reflecting the trend of rising wage inequality over the same time period.

chart 21 FRACTION OF EMPLOYED PERSONS COVERED BY A PENSION PLAN AT WORK, BY EDUCATIONAL ATTAINMENT AND ANNUAL EARNINGS, NEW ENGLAND, 1994



The national patterns in pension coverage rates across subgroups of workers and trends in coverage rates over time were nearly identical to those experienced by workers in New England. The fraction of New England workers covered by a pension plan (41.9 percent) was only slightly below the national average in 1979 (Table 101). During the 1980s, pension coverage rates fell less in New England than in the U.S., while over the 1989 to 1994 period coverage rates rose more in the region compared to the national average. As a result, in 1994 workers in New England were covered by a pension plan at a rate slightly above that of their national counterparts (43 percent versus 41 percent).

Similar to the national patterns, males, prime-aged workers, workers with the most formal schooling, and those with the highest annual earnings were characterized by the highest pension plan coverage rates compared to each of their respective demographic counterparts. Only 18 percent of employed persons in the region who failed to graduate from high school were covered by a pension plan, compared to 40 percent of high school graduates, 54 percent of Bachelor's degree recipients, and 64 percent of those with an advanced degree or postbaccalaureate study (see Chart 21). Pension plan coverage rates also rose steadily and strongly as annual earnings increased. Only 8 percent of the region's employed persons with annual earnings below \$10,000 were covered by a pension plan, compared to 53 percent of those with earnings between \$20,000 and \$30,000 and 72 percent among workers earning more than \$40,000 per year.

The region's younger workers, those with no postsecondary schooling, and those with relatively low annual earnings not only had the lowest pension plan coverage rates in the region, but they also experienced the largest declines in coverage rates between 1979 and 1994. Trends in the pension coverage rates of New England's workers were quite similar to those experienced nationally. The only major exceptions to this pattern appear to be older workers (aged 55 and over) and Bachelor's

degree recipients, with each of these groups experiencing a somewhat larger decline in pension coverage rates in New England compared to the U.S. as a whole. By 1994, employed persons with a Bachelor's or advanced degree in New England were slightly less likely than their national counterparts to be covered by a pension plan at work.

Pension Coverage by Industry and Size of Firm

The availability of pension benefits at work has traditionally been highest in larger firms and in most of the nation's goods-producing industries, especially manufacturing. Well-defined career ladders within many of these firms (so-called internal labor markets) provided incentives for both employees and employers to remain committed to one another. Relatively low employee turnover allowed the employer to provide higher amounts of formal and informal training to the workforce since greater longevity would enable them to recoup the costs of their investments. The economic benefits of such training were shared between the workers and the firm, as part of the increased productivity went to the worker in the form of higher wages and part went to enhance the firm's profits. Another characteristic of jobs in firms with highly integrated internal labor markets is a relatively high level of non-wage benefits, including health insurance coverage and the availability of a pension plan. Unionization of the workforce also tended to be associated with a

greater likelihood of pension benefits.

In order to shed additional insight into the pension plan coverage of New England workers, we have analyzed the March 1995 CPS survey to examine pension plan coverage rates by industry of employment and size of firm. Findings in Table 102 reveal that pension plan coverage rates rise steadily with the size of the firm. Only 14 percent of the workers in firms with fewer than 25 employees were covered by a pension plan, compared to 34 percent of those in firms with 25 to 99 employees, 54 percent of those in firms with 100 to 999 employees, and 65 percent of those in the largest firms, that is, those with 1000 or more workers. Pension plan coverage rates were also higher in key manufacturing industries in the region. Approximately two-thirds of the workers in durable goods manufacturing industries and transportation, communications, and utilities were covered by a pension plan in 1994. In contrast, only one of six workers in retail trade were covered by a pension plan. On average, pension plan coverage rates were considerably lower in the broadly defined services industries. These rates ranged from a high of nearly 50 percent in professional services to 27 percent in business and repair services and only 11 percent in other services (including personal services and entertainment and recreation services). The shift in the industrial distribution of the region's employment away from manufacturing toward retail trade and services will likely reduce pension plan coverage in the future unless firms in the latter two industries expand pension plan coverage to their future workers.

Within each of the above industrial sectors, pension plan coverage rates rise with the employment size of the firm. The highest pension plan coverage rates were obtained by workers in the largest firms in durable manufacturing (83 percent) and transportation, communications, and utilities (86 percent). The lowest pension plan coverage rates were experienced by workers employed in the smallest firms in the region's retail trade and service industries. Unfortunately, workers in

TABLE 102

PERCENT OF EMPLOYED PERSONS COVERED BY A PENSION PLAN AT WORK, BY INDUSTRY OF EMPLOYMENT AND SIZE OF FIRM, NEW ENGLAND, 1994

	All	Number of Workers			
		1-24	25-99	100-999	1000+
Total	42.8%	13.8%	34.2%	53.6%	64.7%
Durable Manufacturing	63.5%	23.8%	51.8%	57.6%	83.1%
Transp., Commun., Utilities	66.3%	9.9%	46.5%	67.7%	85.8%
Retail Trade	16.7%	5.0%	8.5%	26.7%	28.2%
Business, Repair Services	27.4%	11.5%	29.0%	47.8%	50.7%
Professional Services	49.3%	21.4%	46.0%	57.0%	65.2%
Other Services	10.7%	3.5%	1.9%	16.2%	34.3%

Source: March 1995 Current Population Survey, tabulations by Center for Labor Market Studies.

these latter establishments comprise a growing share of all workers. Together, workers employed in the largest firms in durable manufacturing and transportation, communications, and utilities made up less than 8 percent of all workers in the region in 1994. In contrast, approximately 19 percent of all workers in New England were employed by firms with fewer than 25 employees in retail trade and service industries. The changing industrial mix, the shifting size class of firms, and the decline in unionization rates will seriously complicate the task of expanding pension coverage in New England, particularly among those workers with no postsecondary schooling who face reduced employment prospects in manufacturing, utilities, and many communications industries, especially the telephone industry as a result of downsizing and restructuring.

The Unionization Status of New England's Workers

The role of labor unions and the collective bargaining process in promoting the economic welfare of workers has long been a source of controversy among economists and other social scientists. Some economists tend to view labor unions as monopolistic entities that benefit their own members at the expense of other, non-union workers.⁷⁷ Many others, however, view unions as important economic and social institutions that have won important wage and non-wage benefits for all American workers and brought about important democratic reforms in the workplace and secured economic benefits for all persons through legislation at the national and state level.

Whatever one's view concerning the economic and social roles of unions, there is no disagreement that the relative membership of the union movement has declined considerably since its peak in the years following World War II. The decline of unionism is believed by some economic analysts to have

Nationally, the number of workers who were either labor union members or covered by the provisions of a union contract fell from nearly one in four in 1983 to only one in six by 1995.

contributed to declining wages of U.S. workers and to the rise in wage inequality in the U.S. and other nations.⁷⁸

The March CPS surveys collect information on the union status of employed respondents and the existence of collective bargaining agreements at the work place. This section of the report utilizes the findings of the March 1983 and March 1995 Current Population Surveys to identify the fraction of workers in the U.S. and New England who were either labor union members or were covered by a collective bargaining agreement at their jobs.⁷⁹

Nationally, the number of workers who were either labor union members or covered by the provisions of a union contract fell from nearly one in four in 1983 to only one in six by 1995 (see Table 103). Males and workers over the age of 35 were more likely than females and younger workers to be covered by a union contract in both 1983 and 1995. However, each gender and age subgroup experienced a decline in unionization rates over this time period.

Unionization rates have traditionally been highest among workers in many of the skilled and semi-skilled blue collar occupations in goods-producing industries and in transportation, communications, and utilities. As a result, many of the less-educated members of the workforce, who were more likely to hold jobs in these industries than workers with more education, have historically belonged to unions. Nationally, approximately 22 percent of workers who failed to complete high school and 26 percent of those with high school diplomas but no postsecondary schooling were union members or were covered by a collective bargaining agreement in 1983. Between 1983 and 1995, these less-educated workers

⁷⁷ For a basic discussion on the economic role of unions and empirical findings, see: i) Ehrenberg, Ronald G. and Robert S. Smith, *Modern Labor Economics: Theory and Public Policy*, Fifth Edition, HarperCollins College Publishers, 1994, Chapter 13; ii) Freeman, Richard B., and James L. Medoff, *What Do Unions Do?*, New York, Basic Books, 1984.

⁷⁸ For a review of findings on the impact of the decline in unionization on wage inequality in the U.S. and the U.K., see i) Freeman, Richard B., and Lawrence F. Katz, "Rising Wage Inequality: The U.S. Versus Other Industrial Countries," in *Working Under Different Rules*, (Edited by Richard B. Freeman), Russell Sage Foundation, New York, 1994; ii) Gossling, Amanda, and Steve Machin, "Trade Unions and Wage Dispersion in U.K. Establishments, 1980-90," University College, London, December 1992.

⁷⁹ The unionization questions were asked of one-fourth of the CPS sample beginning in 1983. There are two questions on the CPS pertaining to unions. The first asks, "On this job, is . . . a member of a labor union or an employee association similar to a union?" The second asks, "On this job, is . . . covered by a union or employee association contract?" In the text, the fraction of respondents answering in the affirmative to either of these questions is referred to as the "unionization rate."

Between 1983 and 1995, the unionization rate among males in New England had fallen from 33 percent to 17 percent, a 16 percentage point or 50 percent decline. Similarly, while nearly 30 percent of those with no postsecondary schooling were covered by a collective bargaining agreement in 1983, only one-sixth were so covered in 1995, a near 50 percent decline in their unionization rate.

experienced the largest declines in unionization rates. By 1995, only 10 percent of employed persons lacking a high school diploma were covered by a union collective bargaining agreement, a decline of more than 11 percentage points or 50 percent. By 1995, high school dropouts had the lowest unionization rate. Similarly, workers with a high school diploma but no postsecondary schooling experienced a 6 percentage point decline in their unionization rate, down to 20 percent by 1995. Although more highly educated workers also experienced a decline in unionization rates, the absolute and relative magnitude of their declines were not as large. By 1995, workers in the U.S. with some postgraduate schooling, including many teachers and other government workers, were the most likely to be covered by a union or other bargaining agreement at their work site.

The decline in unionization rates between

1983 and 1995 was even more pronounced in New England, particularly among males and workers with no postsecondary schooling. In 1983, nearly 27 percent of the region's workers were labor union members or were covered by a collective bargaining agreement, a unionization rate more than 3 percentage points higher than the national rate. By 1995, however, the fraction of workers in New England who were union members or covered by a union contract had fallen below 17 percent, statistically identical to the national rate.

Although declines in unionization rates occurred among all major demographic groups of workers in New England, male workers and those with the least education experienced the largest declines in unionization rates. Between 1983 and 1995, the unionization rate among males in New England had fallen from 33 percent to 17 percent, a 16 percentage point or 50 percent decline. Similarly, while nearly 30 percent of those with no postsecondary schooling were covered by a collective bargaining agreement in 1983, only one-sixth were so covered in 1995, a near 50 percent decline in their unionization rate (see Chart 21). This steep decline was influenced by the changing industrial structure of employment away from good producing industries which were more likely to be unionized.

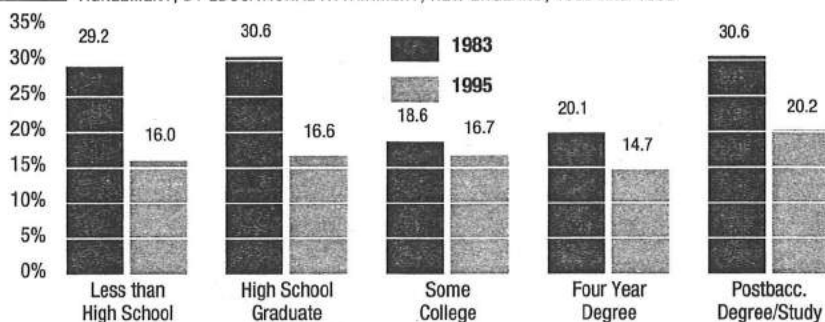
Unionization rates in New England also declined within most industrial sectors. For example, workers in the region's manufacturing industries experienced steep declines in unionization rates between 1983 and 1995. In 1983, approximately one-third of the workers in durable manufacturing industries were covered by a union contract in both the U.S. and New England (see Table 104). By 1995,

TABLE 103 PERCENT OF EMPLOYED PERSONS WHO WERE UNION MEMBERS OR COVERED BY A COLLECTIVE BARGAINING AGREEMENT, BY GENDER, AGE, AND EDUCATIONAL ATTAINMENT, U.S. AND NEW ENGLAND, 1983 AND 1995

	U.S.		New England	
	1983	1995	1983	1995
All	23.5%	16.9%	26.8%	16.6%
Male	28.3%	19.7%	33.2%	16.5%
Female	18.0%	13.8%	19.6%	16.7%
Less than 25	10.8%	6.8%	13.3%	10.3%
25-34	22.9%	13.9%	26.5%	12.0%
35-54	29.8%	21.9%	31.5%	19.0%
55 and Over	28.0%	18.3%	37.0%	23.8%
Less than High School	21.5%	10.4%	29.2%	16.0%
H.S. Graduate	25.8%	19.7%	30.6%	16.6%
Some College	20.0%	15.5%	18.6%	16.7%
Four Year Degree	19.4%	15.7%	20.1%	14.7%
Postbacc. Degree/Study	30.7%	23.6%	30.6%	20.2%

Source: March 1983 and March 1995 Current Population Surveys, tabulations by Center for Labor Market Studies.

chart 22 FRACTION OF WORKERS WHO WERE UNION MEMBERS OR COVERED BY A COLLECTIVE BARGAINING AGREEMENT, BY EDUCATIONAL ATTAINMENT, NEW ENGLAND, 1989 AND 1995



the national unionization rate in durable manufacturing had fallen by roughly one-third, to 22 percent. In New England, the unionization rate in this sector had declined to only 12 percent, representing a relative decline of two-thirds. The shifts in the occupational mix of workers away from blue collar workers and towards higher level professional and managerial jobs and the inability of unions to organize workers in many of the newer high technology and biotechnology manufacturing industries were key factors influencing this outcome. Similar though less pronounced declines in unionization rates occurred among the region's nondurable manufacturing workers. In sharp contrast to their national counterparts and their own historical experiences, New England's manufacturing

workers in 1995 were less likely than the average worker to be a union member or covered by a union collective bargaining agreement. Union membership in New England had fallen considerably throughout the private sector. By 1995, nearly one half (43 percent) of all the union members in New England were employed by a federal, state, or local government agency. The declines in unionization in our region were accompanied by declining real wages for men with no post-secondary schooling and rising wage inequality due to the reduced bargaining power of less-skilled workers. Unless alternative institutional arrangements are developed to improve the bargaining power and productivity of less educated workers, their future economic outlook in our region will remain quite bleak.

TABLE 104

PERCENT OF EMPLOYED PERSONS WHO WERE UNION MEMBERS OR COVERED BY A COLLECTIVE BARGAINING AGREEMENT, BY INDUSTRY, U.S. AND NEW ENGLAND, 1983 AND 1995

	U.S.		New England	
	1983	1995	1983	1995
All	23.5%	16.9%	26.8%	16.6%
Durable Manufacturing	34.1%	21.5%	33.3%	11.8%
Nondurable Manufacturing	27.4%	17.2%	24.8%	12.1%
Transp., Commun., Utilities	47.8%	36.0%	56.1%	45.1%
Retail Trade	8.6%	6.5%	5.7%	9.7%
Professional Services	26.8%	20.8%	31.7%	21.9%
Other Services	7.3%	6.1%	4.0%	3.2%
Public Administration	41.0%	34.8%	66.7%	43.4%

Source: March 1983 and March 1995 Current Population Survey, tabulations by Center for Labor Market Studies.

GLOSSARY OF KEY TERMS

- Adjusted work force.** A measure of the number of individuals during an entire calendar year who worked, looked for work, or wanted a job but did not look because they believed they could not find a job.
- Civilian Labor Force.** The sum of the employed and unemployed resident population.
- Civilian Labor Force Participation Rate.** The fraction of the civilian non-institutional population that is active in the civilian labor force; i.e., either employed or unemployed.
- College labor market.** The set of jobs classified by occupation which constitute the core of the labor market for college graduates. They include professional, managerial, technical, and high level sales occupations (sales representatives, stockbrokers, buyers).
- Current Population Survey.** A monthly national household survey conducted by the U.S. Census Bureau for the U.S. Department of Labor's Bureau of Labor Statistics. It is the source of monthly data on the labor force status of the nation's working-age population.
- Discouraged worker.** A person not active in the civilian labor force who desires an immediate job, has looked for a job in the past 12 months, is available to work, but has not searched for a job in the past months due to economic or personal discouragement reasons (does not believe jobs are available in his line of work, believes he is too young or too old to be hired).
- Dislocated worker.** A person who permanently lost his/her last job due to a plant closing, plant relocation, major reduction in force, or a technological change in the work place.
- Durations of unemployment spells.** A measure of the length of time that an individual has been continuously unemployed. These durations can be measured as of the date of a given survey (on-going durations) or after they have been completed (completed durations).
- Earned Income Tax Credit (EITC).** A federal government tax credit paid to workers with annual earnings below a given threshold, based on the number of eligible children and their actual earnings.
- Employed.** A working-age person who worked for one or more hours for pay or profit in the reference week, had a job from which he/she was temporarily absent, or worked without pay for 15 or more hours in a family owned business.
- Employed part-year.** Employed for 1-49 weeks annually.
- Family household.** A household containing two or more persons who are related by blood, marriage, or adoption.
- Female-headed family.** A family that is headed by a female householder with no husband present in the household.
- Flow/stock ratio.** The ratio of the total number of individuals who will experience a spell of unemployment during the year to the average monthly stock of unemployed persons.
- Foreign immigration.** In-migration into a nation or a state from abroad. A growing source of increased labor supply in the United States.
- Full-time employed.** Employed persons working a total of 35 or more hours per week on all jobs held during the reference week of the survey.
- Gross State Product (GSP).** The market value of the goods and services produced by the labor and property located in a particular state.

Hidden unemployment. A somewhat elusive concept designed to measure the pool of individuals who would like to be employed but are not actively searching for work and, thus, are not counted as unemployed.

Household. Separate living quarters occupied by one person or by two or more persons who may or may not be related to one another by blood, marriage, or adoption.

Incidence of labor force attachment. The fraction of the working-age population or a subgroup of that population that either worked or looked for work during a calendar year.

Incidence of unemployment. A measure of the fraction of labor force participants who will experience at least one spell of unemployment during a given calendar year.

Intensity of labor force attachment. A measure of the degree (in weeks or hours) of active participation in the labor market during a calendar year by labor force participants.

Job losers. A subgroup of the unemployed who lost their last job. Job losers can be further divided into three groups: those on temporary layoff, those whose temporary jobs ended, and those whose jobs were permanently eliminated.

Labor force overhang. Those persons (16+) not currently active in the labor force who express a desire for immediate employment.

Labor productivity. A measure of the efficiency with which labor can produce real output per unit of time. Output per hour is a standard measure of labor productivity in the United States.

Long-term unemployment. Those persons who have been unemployed for 15 or more consecutive weeks. In Western Europe, however, the long-term unemployed are defined as those who have been out of work for 52 weeks or longer.

Male-headed family. A family that is headed by a male householder with no wife present in the household.

Mean. Arithmetic average.

Mean duration of unemployment. The arithmetic average of the current durations of unemployment spells experienced by the unemployed.

Median. A value at the mid-point of a distribution that is arranged in an ascending or descending order.

Not in the labor force. A residual labor force status used to represent those working-age individuals who are neither employed nor unemployed.

Open unemployment. The official count of the unemployed as measured by the Current Population Survey. Persons who are jobless, actively looking for work, and available for work. The term is used to contrast official unemployment with so-called hidden unemployment.

Outflow rate. The fraction of the unemployed in one month who will leave the ranks of the unemployed by the following month. Persons can end a spell of unemployment by finding a job or by withdrawing from active labor force participation.

Part-time workers. Employed persons working for fewer than 35 hours per week. The Bureau of Labor Statistics further categorizes these workers into the following two groups: (a) Those working part-time voluntarily, (b) Those working part-time for economic reasons.

Part-time for economic reasons. Those persons working for fewer than 35 hours per week due to reasons such as an inability to find a full-time job, slack work, or material shortages. Under the 1994 CPS revisions, such persons must express a desire for full-time employment and be available for full-time work.

Per capita personal income. The total incomes of state residents from employment, property, cash transfers, and in-kind benefits (food stamps, Medicare, etc.) during an entire calendar year divided by the total number of state residents.

Permanent job losers. Unemployed persons whose jobs have been permanently eliminated. A major subset of these unemployed workers would be classified as dislocated workers.

Poverty rate. The proportion of the entire population or a subgroup of the population that has annual money incomes below the federal poverty threshold.

Poverty threshold. The level of annual money income of a household, family, or person below which they are regarded as being poor.

Quintile. The division of a distribution (earnings, incomes) into five equal parts. Each fifth of the distribution is categorized as a quintile.

Short-term unemployed. Those unemployed persons who have been jobless for fewer than five consecutive weeks.

Unemployed. In the CPS household survey, the unemployed are those persons (16+) who did no work for pay or profit in the reference week, who have actively looked for work (or are on temporary layoff) in the past four weeks, and are available for employment.

Work Experience Survey. An annual supplement to the March Current Population Survey used to collect information on the labor force, employment, unemployment, and earnings experiences of all household members (15+) during the prior calendar year.

Working Poor. Persons who are employed at some time during the year but whose families have combined money incomes below the official poverty line.

Year-round, full-time workers. Persons who worked 35 or more hours per week for 50 or more weeks during the calendar year.

APPENDIX A: TECHNICAL NOTES ON DATA SOURCES, SAMPLING ERRORS, AND INFLATION ADJUSTMENTS

Sources of Data on the Incomes of Persons and Families in the United States and New England

Any analysis of trends in the economic well-being of a population should be explicit concerning the measure or measures of well-being to be utilized. Economists and other social scientists often have at their disposal a diverse number of variables with which to measure the economic well-being of the residents of a given area. Two of the more frequently utilized measures of economic well-being are real earnings and incomes. Earnings refer to remuneration from paid work in the labor market, either from one's employer or through self employment. Information on the earnings of wage and salary workers is available from the Current Population Survey (CPS), a monthly household survey of approximately 60,000 households conducted every month by the U.S. Census Bureau for the U.S. Bureau of Labor Statistics (BLS). Data on hourly and weekly earnings can also be obtained from the Current Employment Statistics survey, an establishment survey also conducted monthly by the BLS. This survey collects information on the hourly and weekly wages of production or nonsupervisory workers on the payrolls of nonagricultural establishments in the U.S. One advantage of this data source is the large number of establishments and employees covered by the survey. Its major drawback is that no data are collected on the demographic, educational attainment, or other socioeconomic characteristics of workers.

Income is a more comprehensive measure of economic well-being than earnings. It includes earnings from the labor market, plus income from other sources such as social security retirement income, private pension and other retirement income, interest, rents, dividend income, cash public assistance income, and child support and alimony. Analyses of the ability of the economy to generate "good"

jobs usually utilize the earnings concept as a measure of job quality and economic well-being. Discussions surrounding the annual flow of financial resources available to families for consumption and their overall level of economic well-being typically use the income concept.

There are two major sources of information on the incomes of the population of regions and states. The first is income data derived from household surveys such as the Decennial Censuses and the March Current Population Survey. The latter survey includes a work experience and income supplement that collects data on the annual incomes of all household members (15 years of age and older). The second source of data on personal incomes is that developed by the U.S. Commerce Department's Bureau of Economic Analysis (BEA). This series provides data on the total and per capita personal incomes of regions and states. The income concepts used in conducting the household surveys differ in a number of key respects from the income concepts used by BEA. First, the income measures utilized in the March CPS are based on sources of cash income only. Fringe benefits, wage supplements, and in-kind transfers such as food stamps, medical insurance, and housing subsidies are not included in the conventional CPS measures of income. The CPS income concept does, however, include cash income received in the form of private pension payments, alimony, and child support income which are ignored in the BEA personal income measures. Second, the personal and family measures of income in the CPS survey represent pre-tax incomes. The BEA personal income measures exclude employee and employer contributions to the Social Security trust fund and all indirect business taxes, but do not adjust for personal

taxes such as federal and state income taxes. The BEA disposable income series does take these latter tax payments into account.

As a result of differences in the income concepts utilized in these two surveys and the methods used to gather the data, analyses of income developments based on the two sources of data can and do reach somewhat different conclusions concerning the economic well-being of the average American. It is quite possible to conclude, based on the BEA data, that the per capita incomes of U.S. residents are increasing moderately while the Census Bureau income data may indicate that incomes in the U.S. have been stagnant or even moderately declining over time. It is not the case that one source of data is correct and the other is incorrect. Rather, they measure the incomes of residents from slightly different perspectives.

In fact, one "puzzle" that arose during the preparation of our report concerned the seemingly contradictory trends over the 1989-1994 period in the per capita real personal incomes of New England residents as measured by the BEA and the median real incomes of families in New England as measured by the CPS survey. CPS findings presented in the body of this report revealed that the median real incomes of families in New England have declined by 9.5 percent between 1989 and 1994. Data from the BEA's personal income series indicate, however, that the real per capita incomes of New England's residents fell by only 1.1 percent over the same period (see the first two rows in Table A-1). In order to reconcile these findings, we proceeded in the following manner. First, the median income of families may not change to the same extent as mean family income as a result of changes in the distribution of incomes over time. Rising inequality over time will allow the mean to rise faster (or decline more slowly) than the median income. Using the mean rather than the median as a

TABLE A1

ALTERNATIVE MEASURES OF CHANGES IN THE ECONOMIC WELL-BEING OF FAMILIES AND PERSONS IN NEW ENGLAND OVER THE 1989 TO 1994 PERIOD

	Percent Change
A. Median Real Family Income (CPS)	-9.5%
B. Real Per Capita Personal Incomes (BEA)	-1.1%
C. Mean Real Family Income (CPS)	-8.3%
D. Real Per Capita Income, Less All Transfers Except Unemployment Benefits (BEA)	-6.9%

measure of central tendency yields a decline in the real incomes of New England's families of only 8.3 percent over the 1989-1994 period (see row C). Second, the mean size of families in New England has moderately declined over the 1989-1994 period. Thus, the mean per capita income of family members fell by only 7.3 percent (based on the CPS survey).

More importantly, the BEA data on personal incomes include a number of in-kind benefits, in particular food stamps, housing subsidies, Medicaid, and Medicare, that are not counted as income in the CPS survey. In addition, many of the cash transfer incomes in the CPS are known to be under-reported by respondents, especially AFDC and unemployment benefits. When we compute the per capita real incomes of residents after subtracting out all transfer payments (less state unemployment insurance benefits), our analysis reveals that the real per capita incomes of New England's residents fell by 6.9 percent between the first quarter of 1989 and the third quarter of 1994 (see Row D), an estimate much closer to the 7.3 percent decline in real per capita incomes of family members.

March Current Population Survey Sample Sizes and Estimated Standard Errors of Mean Real Family Incomes in the United States and New England

Since the March Current Population Survey is a sample household survey and not a complete census of all households, findings of the survey are subject to sampling error. The sizes of sampling errors are a function of the size of the estimates themselves and the number of sample cases on which they are based. Table A-2 displays the number of sample observations for family households in the U.S., New England and each individual New England state for selected years during the period covered by our analysis. Sample sizes have declined somewhat since the March 1980 CPS, although there were still 3,240 family observations for New England on the March 1995 CPS tape.

Table A-3 presents the estimated mean real incomes of families in the U.S., New England and individual New England states for the years 1989 and 1994. In addition to the reported means, the estimated standard errors and 90 percent confidence intervals also are displayed. The confidence interval has been constructed by multiplying the estimated standard error by a factor of 1.6, and then subtracting and adding this dollar amount to the mean

income. The 90 percent confidence interval allows us to say (with 90 percent confidence) that the true mean real family income lies within this range. For example, mean real family income in New England in 1989 was estimated to be \$59,581 and the standard error of this estimate was \$710. The confidence interval is thus the income range bounded by $(\$59,581 - 1.6 * \$710)$ and $(\$59,581 + 1.6 * \$710)$, or \$58,445 to \$60,717. What this means is that we can be 90 percent confident that the true real mean income in New England falls somewhere within this range. Statistically, if we had taken an infinite number of samples of real family incomes in New England in 1989, then 90 percent of these samples would have generated a real mean income lying within the confidence interval. For individual New England states, the 90 percent confidence intervals will vary more widely due to smaller sample sizes. The standard errors of these estimates range from \$999 for Massachusetts to \$2,323 for Connecticut.

TABLE A2	NUMBER OF SAMPLE OBSERVATIONS FOR FAMILIES IN THE U.S., NEW ENGLAND AND NEW ENGLAND STATES, MARCH CURRENT POPULATION SURVEY, 1980-1995		
	1980.	1990	1995
U.S. Total	48,393	42,577	39,946
New England Total	3,906	3,391	3,240
Maine	642	451	355
New Hampshire	571	362	329
Vermont	547	339	318
Massachusetts	973	1,497	1,532
Rhode Island	588	372	339
Connecticut	585	370	367

Source: March Current Population Survey, 1980-1995.

TABLE A3	MEANS, STANDARD ERRORS, AND 90 PERCENT CONFIDENCE INTERVALS OF REAL FAMILY INCOMES IN THE U.S., NEW ENGLAND AND NEW ENGLAND STATES, 1989 AND 1994		
	Mean	Standard Error	Confidence Interval
1989			
U.S.	\$48,417	\$177	\$48,134 - \$48,701
New England	\$59,581	\$710	\$58,445 - \$60,717
Maine	\$45,126	\$1,582	\$42,594 - \$47,658
New Hampshire	\$57,759	\$2,213	\$54,218 - \$61,300
Vermont	\$50,665	\$2,010	\$47,449 - \$53,881
Massachusetts	\$61,114	\$1,102	\$59,351 - \$62,876
Rhode Island	\$51,246	\$1,921	\$48,172 - \$54,321
Connecticut	\$67,809	\$2,153	\$64,365 - \$71,254
1994			
U.S.	\$46,611	\$176	\$46,329 - \$46,893
New England	\$54,638	\$690	\$53,534 - \$55,741
Maine	\$43,486	\$1,665	\$40,821 - \$46,150
New Hampshire	\$49,050	\$1,908	\$45,998 - \$52,103
Vermont	\$47,834	\$1,666	\$45,168 - \$50,499
Massachusetts	\$56,690	\$999	\$55,091 - \$58,289
Rhode Island	\$49,005	\$1,932	\$45,914 - \$52,097
Connecticut	\$60,077	\$2,323	\$56,360 - \$63,793

Methods Used to Adjust Nominal Family Incomes into Their Real Dollar Equivalents

The median annual incomes of families in the U.S. and New England are measured by the CPS household survey in current dollars. Given changes in the prices of consumer goods and services over time, the purchasing power of these nominal incomes will vary over time. To enable the family income estimates for one year to be compared to those of other years, these incomes must be converted into constant dollars, or the prices of a given year. The Consumer Price Index for All Urban Consumers, more popularly known as the CPI-U, is typically used to convert nominal incomes into their constant dollar equivalents.

In the early 1980s, the U.S. Bureau of Labor Statistics modified the methodology used to calculate the Consumer Price Index, especially with respect to home ownership costs. Use of the new methodology has led to a slightly lower rate of inflation. While the new methodology did not go into effect until 1982, the BLS has developed an alternative historical series for the CPI-U known as the CPI-U-X1 index which yields lower price levels for the years preceding 1982. We have used the CPI-U-X1 index for all years prior to 1982 in calculating the real incomes of U.S. and New England families. This choice yields slightly lower estimates of median real incomes for years prior to 1982.

As noted in the text, there unfortunately are no consumer price indices for individual states or regions. Thus, we used the CPI-U-X1 index for the entire United States to convert national and New England incomes into their constant 1994 dollar equivalents. The Greater Boston area, which includes all of Eastern Massachusetts and part of southern New Hampshire, does have its own CPI-U index (the values of the CPI-U-X1 are displayed in Table A-4). For the entire time period 1979-1994, the Boston CPI-U index grew at a rate 2 percent higher than the national CPI-U index, with all of the positive difference occurring in the 1980s. Since 1989, the CPI-U index for Boston has been growing more slowly than for the U.S. as a whole. Use of the Boston CPI-U index to adjust for changes in the median real incomes of New England families would have yielded a 1.5 percent lower rate of decline in their real incomes over the 1989-1994 period.

Year	CPI-U-X1		Inflation Adjustment Factor	
	U.S. Average	Boston Metropolitan Area	U.S. Average	Boston Metropolitan Area
1967	36.3	37.4	4.083	4.142
1973	47.2	49.2	3.140	3.148
1979	74.0	74.6	2.003	2.076
1982	95.6	94.6	1.550	1.637
1986	109.6	112.2	1.352	1.381
1988	118.3	124.2	1.253	1.247
1989	124.0	131.3	1.195	1.180
1990	130.7	138.9	1.134	1.115
1991	136.2	145.0	1.088	1.068
1992	140.3	148.6	1.056	1.042
1993	144.5	152.9	1.026	1.013
1994	148.2	154.9	1.000	1.000