

The Workforce Development Report for New England: A Summary of Key Research Findings and Their Workforce Development Implications

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Table of Contents

Preface.....	i-ii
Labor Force Growth in New England: Past, Current, and Future Trends and Their Implications for Workforce Development Policy	1-9
The Absent Male Worker and the Limited Growth of New England’s Labor Force During the 1990s: Implications for Future Regional Workforce Development Policy	10-16
Immigrant Workers in New England Labor Markets: Implications for Workforce Development Policy.....	17-22
The Deterioration in the Employment Position of Teens and Non-College Educated Young Adults in New England from the Boom in 2000 to the Bust in 2003	23-26
Industry and Occupational Employment Developments in New England, 1989-2002: Implications for Current and Future Workforce Development Policy	27-32
Job Growth in New England During the Economic Recovery and Economic Boom from 1992 – 2000: The Case of the Missing 500,000 Workers.....	33-39
The Real Output Performance of the New England Economy, 1989-2000.....	39-42
Unemployment Developments in New England from the Late 1980’s to 2003; An Overview and Assessment of Their Implications for Future Workforce Development Policies and Programs in Our Region.....	42-46
Labor Force Underutilization Problems in the New England Region From the End of the Regional Labor Market Boom in 2000 Through 2003	47-53
The Downturn in the Summer Job Market for the Region’s Teens, 2000-2004: Teen Job Losses and Their Workforce Development Implications.....	53-57
The Rising Tide of Wage Inequality in New England: An Assessment of Key Trends in Wage Inequality in Our Region Over The Past Three Decades.....	57-64
The Uneven Tides of Economic Growth in New England: The Sharp Rise in Annual Earnings Inequality in New England During the 1990s.....	65-69
Recent Trends in Poverty and Other Income Inadequacy Problems in New England: Implications for Future Anti-Poverty and Workforce Development Policies and Programs.....	69-74

Preface

During the past three years, the Center for Labor Market Studies of Northeastern University has conducted a wide array of labor market research and program evaluation activities in support of The Workforce Development Report for New England. This ambitious research project was undertaken for the New England Regional Office of the U.S. Department of Labor's Employment and Training Administration (ETA) with funding support from the national office. The primary goals of the project were to systematically analyze labor force, employment, real output, unemployment, wages, annual earnings, and poverty income developments in New England in recent years and to assess the consequences of these findings for future workforce development policymaking and program planning in our region. Other objectives of the project included working with regional office staff in conducting analyses of the operations and outcomes of both WIA-funded and other U.S. Department of Labor employment and training programs in the region. A number of seminars and informal conferences were held with state and local workforce development agencies from across the region to improve their capabilities of evaluating their own programs.

This monograph presents the summaries of thirteen research reports prepared by the Center for Labor Market Studies as part of the Workforce Development Report for New England.¹ These thirteen individual reports can be grouped into the following five general topic areas:

- Labor force developments in New England during the 1990s and the first few years of the twenty-first century.
- Employment developments by class of worker, major industry, and major occupational area in New England from 1990 through 2003.
- The real output performance of the New England Economy in the 1990s and the sources of real output growth in the region and individual New England states over the past decade.
- Unemployment and the other labor market problems in New England during the 1990s and from the end of the labor market boom in 2000 through calendar year 2003.
- Analyses of trends in the real weekly earnings and annual earnings of New England workers during the 1990s and the early years of the current decade and poverty and other family income inadequacy problems from the late 1980s to 2001.

The first four reports describe and analyze the growth and changing demographic composition of the resident labor force in the region as a whole and in individual New England states. They also present comparisons of the New England findings with those for labor force developments in the nation, other geographic regions, and other states. Special attention is paid to the underlying sources of the very slow growth in the region's labor force during the 1990s, the absence of any substantive male labor force growth in the region, especially in the three southern New England states, and the growing dependence of the region on immigrant labor, and the employment experiences of teens and young adults (20-24 years old). The implications of these

¹ The full versions of these reports are available from the Center for Labor Market Studies at Northeastern University. Contact Sheila Palma at s.palma@neu.edu.

findings for current and future workforce development policy are carefully assessed.

The second set of research findings is primarily focused on changes in the structure of jobs in the New England region by class of worker, major industrial section, and occupational group over the past decade and during the first four years of the current decade (2000-2004). The impacts of these employment changes upon the demand for workers by educational skill level are discussed. The mystery of the substantial gap between the number of formal payroll jobs created in the region over the 1992-2000 period and the growth in civilian employment over the same time period is described and explained in a separate paper in this series. (The Case of the Missing 500,000 Workers).

The real output performance of the New England economy and individual states within the region between 1989 and 2000 is described and assessed in a separate paper. The changing industrial composition of the region's output and the sources of output growth (a rising labor force, increased annual hours of work per employee, and higher labor productivity) are described, and their potential implications for the region's future workforce development systems are examined.

The fourth set of readings examines changes in unemployment problems and other labor underutilization problems in New England during both the 1989-2000 period and the more recent 2000-2003 period. Trends in the levels and rates of open unemployment and the changing structure of unemployment problems by reason for and duration of unemployment are described and critically analyzed. Other types of labor market problems, including under-employment and hidden unemployment, are also reviewed. The sharp deterioration in the summer job

market for the region's teenagers over the 2000-2004 period is the focus of a separate paper in this set, with a brief discussion of alternative workforce development strategies to boost future summer job opportunities for the region's teens.

The final set of papers examines key trends in the real weekly wages and annual earnings of New England workers in recent decades and the ability of New England families to avoid poverty and other forms of income inadequacy problems over the 1987-2001 period. Trends in the real (inflation-adjusted) weekly earnings of full-time wage and salary workers in New England over the 1973-2002 period are reviewed, with an emphasis on the rising tide of wage inequality in the U.S. and other geographic regions are provided. A second paper in this set examines the growth and decline of the real annual earnings of full-time, year round workers in New England over the 1990s and analyzes changes in the size of these earnings along the distribution from bottom to top. Separate analyses of changes in earnings inequality are provided for men and women. The final paper provides both an overview and critical analysis of changes in the incidence of poverty/near poverty problems among persons and families in the New England region and the U.S. from the late 1980s through to calendar year 2000. The limited success of the region in reducing these poverty problems and the labor market problems underlying continued poverty problems are identified, and their implications for future workforce development policymaking and program planning in our region are discussed.

Labor Force Growth in New England: Past, Current, and Future Trends and Their Implications for Workforce Development Policy

Introduction

Since the very beginnings of workforce development policies in the 1960s, many of the nation's federally-funded employment and training programs were aimed at strengthening the labor force attachment and employability of various demographic and socioeconomic subgroups of the population. Many youth employment and training programs were designed to equip participants with the work behaviors, knowledge, and occupational skills that would improve their ability and willingness to seek work and their success in finding jobs. Most welfare-to-work programs were designed to bring welfare recipients into the labor market and strengthen their capacity to find work and command higher wages. Dislocated worker programs funded under the former Job Training Partnership Act (JTPA) and now under the Workforce Investment Act are intended to facilitate the re-employment of dislocated workers, to prevent them from experiencing long-term joblessness that often leads to labor force withdrawals, and to improve their ability to maintain if not increase their previous real wages. Older worker programs under both CETA and JTPA and today under the Community Service Employment Program were designed to provide older workers with job placement, job training and subsidized employment to maintain their active labor market participation, improve their annual earnings and avoid poverty.

While individual employment and training programs often had enhanced labor force participation and increased employment intensity as core objectives for many of their participants, workforce development programs were not often seen as strategies for boosting the aggregate size of the

available labor force. In fact, the problems of excess labor supply were often viewed as core labor market problems in most of the 1970's and much of the 1980's until the peak of the national economic boom at the end of the latter decade.

Here in New England, labor supply shortages prevailed in the late 1980s but diminished rapidly in the early 1990s as employment declined sharply across the region. From 1992 onward, unemployment fell steadily and sharply. The region's unemployment fell to 2.8% in 2000, the lowest of the nine geographic divisions. The achievement of this historically low unemployment rate for New England was accompanied by growing empirical findings and anecdotes of labor shortages in a wide array of industries, occupations, and geographic areas across the region.

The greater tightness of labor market conditions in New England was attributable in large part to the more limited growth in the regional supply of labor in the 1990's, especially in the three southern New England states of Connecticut, Massachusetts, and Rhode Island. While the sharp reduction in labor demand in the region since early 2001 has raised the region's unemployment rate by more than two percentage points above its historic low over the past few years, there is strong reason to believe that labor shortages will once again return once the national and regional economies resume strong and consistent employment growth. Labor supply issues, both quantitative and qualitative, will once again loom important in our region.

Workforce development programs, both public and private, in the aggregate could

play an important role in improving the quantity and quality of labor supply in our region. Understanding past, present, and future labor supply developments in our region and in each of the six individual New England states is, thus, critical to the formulation of appropriate workforce development strategies to boost future labor supply. This chapter of the Workforce Development Report was intended to describe and assess the growth of the region's work force over the past decade, at the present time, and in the near future. An analysis of the demographic forces and labor force behaviors underlying the limited growth of the region's labor force during the past decade was presented, and the outlook for future labor force growth was assessed. Key findings of the analysis appearing in this chapter are presented below.

- Between 1990 and 2000, the civilian labor force of the U.S. increased from nearly 123.5 to 137.7 million, an increase of 14.2 million or 11.5%. In New England, however, the resident civilian labor force is estimated to have grown by only 179,000 or 2.5%. New England captured only 1.3% of the growth in the nation's civilian labor force over the decade of the 1990s, despite the fact that the region was home for nearly 6 percent of all of the nation's labor force members at the time of the 1990 census. This 1.3% share of national labor force growth also was well below the region's performance in the prior decade when it generated just under 6 percent of the nation's labor force growth.

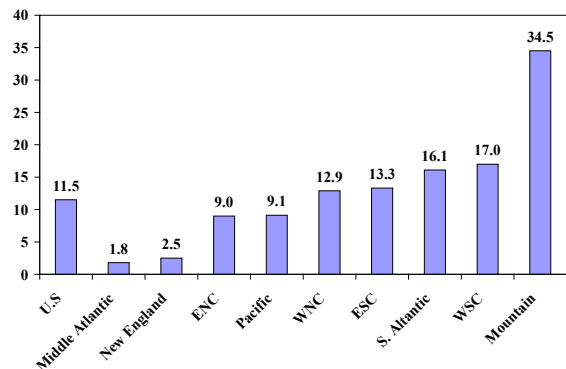
Table 1:
Growth in the Civilian Labor Force of the United States and New England, 1990 to 2000
(Numbers in 1000s)

Geographic Area	(A) 1990	(B) 2000	(C) Absolute Change	(D) Percent Change
U.S.	123,473	137,669	14,196	11.5
New England	7,083	7,262	179	2.5

Source: 1990 and 2000 Census of Population and Housing, tabulations by authors.

Civilian labor force growth rates during the 1990s varied considerably across the nation's nine geographic divisions, ranging from a low of 1.8% in the Middle Atlantic division to a high or nearly 35% in the Rocky Mountain region. New England ranked second lowest among the nine geographic divisions on this measure, with only the Middle Atlantic region faring worse. The rate of growth of the New England labor force in the 1990s was the lowest posted in the past 50 years.

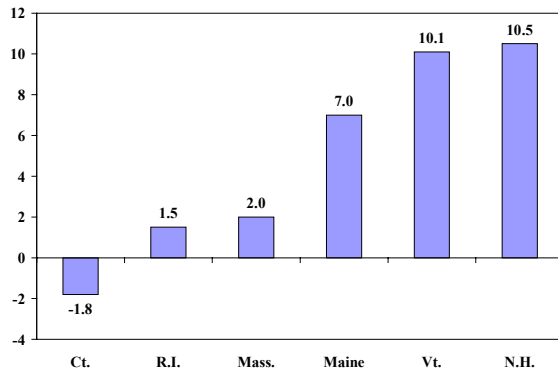
Civilian Labor Force Growth Rates in the U.S. by Geographic Division, 1990 – 2000



- Labor force growth rates in the 1990s in New England varied considerably across the six states. Each of the three southern

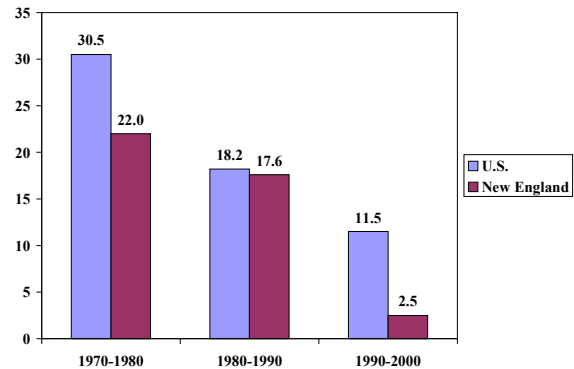
New England states experienced very limited to no growth in their resident labor force, with Connecticut's labor force estimated to have declined by close to two percent while Rhode Island and Massachusetts experienced only 1.5 to 2.0 percentage point gains. Labor force growth in the three northern New England states was stronger, with Vermont and New Hampshire boosting their resident labor force by slightly more than 10 percent over the decade (Chart 2).

Civilian Labor Force Growth in New England by State, 1990 – 2000
(in %)



- Labor force growth in the U.S. and New England has tapered off considerably over the past three decades. In the 1970s, the U.S. civilian labor force grew by more than 30% due to a huge influx of baby boomers into the labor market and a further substantial rise in the labor force participation rates of adult women (Chart 3). During the 1980s, the U.S. labor force increased by 18.2%, but by the 1990s this growth rate had slowed to 11.5%.

Growth Rates of the Civilian Labor Force in the U.S. and the New England Region, 1970-80, 1980-90, 1990-2000
(in %)



- The reduction in the growth rate of the New England labor force between the 1980s and 1990s was far more dramatic than the nation's. During the 1980s, New England's labor force increased quite strongly (17.6%), nearly matching the growth rate of the nation. During the 1990s, however, New England experienced only a 2.5% increase in its labor force, 15 percentage points below its 1980s growth rate. Each of the six New England states experienced considerably slower growth in their resident labor forces in the 1990s than in the 1980s.

Growth in the Male and Female Civilian Labor Force in New England and the U.S., 1990 to 2000

- Since 1950, women have contributed a majority share of the growth in the civilian labor force of New England and the U.S. during each decade. The findings from the 2000 Census on the gender composition of the civilian labor force in April 2000 together with similar findings from the 1990 Census allow us to identify the growth of the female and male civilian labor force over the past

decade for both the nation and the New England region.

- For the nation as a whole, the growth of the female civilian labor force over the 1990s decade outstripped that of men in both absolute and relative terms. Between 1990 and 2000, the number of women in the civilian labor force increased by nearly 7.9 million or 14% while the number of male labor force participants only rose by 6.3 million or 9.4%. Women accounted for 56% of the growth in the nation’s civilian labor force over the past decade.
- Within the New England region, the overwhelming share of labor force growth in the 1990s was attributable to women. The number of women in the region’s civilian labor force is estimated to have increased by 162,000 or just under 5% while the number of men who were active in the civilian labor force rose by only 18,000 or .5% over the same ten year period. Thus, in New England, women accounted for 90% of the growth in the region’s civilian labor force over the decade of the 1990s. In the 1980s, women had accounted for only 62% of the growth in New England’s civilian labor force.

Trends in the Size of the Working-Age Population in New England, 1990 to 2000

- The growth of a region’s resident labor force over time will be influenced by three sets of variables: the growth of its working age population (16 and older), the changing age/educational attainment/race-ethnic composition of its working-age population (16 and older), and changes in the labor force participation rates of the members of these demographic subgroups. Typically, the labor force participation rates of the

national working-age population rise strongly with age from their teens to the late 20s, level off until the late 40s, then begin to decline steadily, especially after age 55 and 65. Very similar age patterns in participation rates prevailed in New England in 2000.

- For the nation as a whole, the working-age population increased from 191.8 million in 1990 to 217.2 million in 2000, an increase of 25.3 million or 13.2%. In New England, however, the resident working-age population rose by only 466,000 or 4.5% over the decade, barely one-third of the growth rate of the nation over the same time period. Clearly, limited growth in the region’s working-age population was a key demographic factor underlying the region’s low labor force growth in the 1990s.

Table 2:
Changes in the Working-Age Population of the U.S. and New England, 1990 to 2000
(Numbers in 1000s)

	(A)	(B)	(C)	(D)
Geographic Area	1990	2000	Absolute Change	Percent Change
U.S.	191,829	217,168	25,339	13.2
New England	10,474	10,940	466	4.5

Source: 1990 and 2000 Census of Population and Housing.

- Growth rates in the working-age population of the nine geographic divisions ranged from lows of 4.5% in both the New England and Mid-Atlantic divisions to a high of 36% in the Rocky Mountain division. New England tied for last place on this critical population growth measure. The rates of increase in the working-age population of individual New England states during the 1990s

ranged from a low of 1.4% in Connecticut to a high of nearly 12% in New Hampshire. Four of the six New England states, including all three southern New England states, ranked in the ten slowest growing states, and three New England states (Connecticut, Rhode Island, and Massachusetts) fell in the bottom five states on this measure. High levels of domestic out-migration from these three states during the 1990s were key factors underlying the very limited growth in their working-age population.

Table 3:
Working-Age Population Growth Rates and Rankings of the Six New England States, 1990 to 2000

	(A)	(B)
State	Growth Rate (in %)	Rank Among 50 States
New Hampshire	11.9	24 th
Vermont	10.3	32 nd
Maine	6.1	42 nd
Massachusetts	4.2	46 th
Rhode Island	3.3	48 th
Connecticut	1.4	50 th

Trends in Labor Force Participation Rates in New England and the U.S. in the 1990s

- Changes in a region’s or state’s labor force over time also are influenced by changes in the labor force participation behavior of its working-age population. The civilian labor force participation rate is one of the primary measures of the labor force attachment of an area’s working-age population.

Table 4:
Trends in the Labor Force Participation Rates of All Working-Age Persons, Men and Women in the U.S. and New England, 1990-2000
(in %)

Geographic Area/Gender	(A) 1990	(B) 2000	(C) Change (B – A)
U.S.			
• All	64.4	63.4	-1.0
• Men	72.8	69.8	-3.0
• Women	56.6	57.4	+ .8
New England			
• All	67.6	66.4	-1.2
• Men	75.6	72.7	-2.9
• Women	60.4	60.7	+ .3

Source: 1990 and 2000 Census of Population and Housing.

Note: Estimates of labor force participation rates are based on the decennial Census definitions. The denominator includes all civilian, working-age residents including persons who are living in institutions (jails, prisons, juvenile homes, nursing homes).

- The overall civilian labor force participation rate of New Englanders fell by 1.2 percentage points over the 1990-2000 period to 66.4% in 2000. The participation rate of women rose slightly by .3 percentage points while men experienced a near three percentage point drop in their participation rate, a decline comparable to that experienced by males in the United State.
- At the time of the 1990 Census, New England’s overall labor force participation rate ranked highest among the nine geographic divisions. Identical findings prevailed for men and women as well. By 2000, however, New England’s ranking had slipped modestly to second place, falling behind the West North Central region in the Midwest for all

persons and for men and women separately.

- New Hampshire and Vermont remained national leaders in labor force participation rates in 2000. If Connecticut, Massachusetts, and Rhode Island had matched the 2000 participation rate of New Hampshire (70.4%), there would have been another 300,000 civilian labor force participants in New England at the time of the 2000 Census. Depending on their educational characteristics and occupational skills, this additional pool of labor could have eliminated many of the labor shortages in the region in 2000. A greater understanding of the job desires and labor force barriers of the pool of non-participants, especially in southern New England, would clearly be desirable for future workforce development planning.

Table 5:
1990 and 2000 Rankings of the Six New England States on their Civilian Labor Force Participation Rates for All Persons

	(A)	(B)		(A)	(B)
State	1990 Rate	1990 Ranking	State	2000 Rate	2000 Ranking
N.H.	71.3	1 st	N.H.	70.4	2 nd
Vt.	69.2	4 th	Vt.	69.1	5 th
Ct.	68.4	8 th	Ct.	66.2	15 th
Mass.	67.5	9 th	Mass.	66.1	16 th
R.I	65.2	25 th	Maine	64.8	24 th
Maine	64.3	30 th	R.I	64.1	32 nd

Source: 1990 and 2000 Census of Population and Housing.

- The labor force participation rates of non-elderly New England residents varied widely across age groups, ranging from just under 56% for teens (16-19) to highs of 86% for those in the 25-54 age groups. For five of the six age groups, annual

average participation rates of New England residents exceeded those of their U.S. counterparts by two to five percentage points. The only age group for whom New England fell below the U.S. average and ranked seventh among the nine geographic divisions was 20-24 year olds, a key demographic group that the region would like to retain.

- Findings of the monthly CPS household surveys for all of calendar year 2000 were used to estimate civilian labor force participation rates for key age subgroups in each New England state and all other states across the country. The New England states' participation rates tended to rank higher for the older worker groups than for younger workers, especially those 20-24 and 25-34 years of age. Three New England states ranked in the top ten states for 45-54 and 55-64 year olds, and only one state (Rhode Island) fell in the bottom half of the distribution for these two older age groups. In contrast, among 20-24 year olds, only one state (New Hampshire) ranked among the top 10 states, and three states fell in the bottom ten. While participation rates were quite high among 25-34 year olds, only one New England state made the top ten list. Intensive work experience in these younger age groups (20-29) tends to be associated with very favorable payoffs in higher future wages and earnings. Strengthening the future labor force attachment of younger adults in New England, thus, holds the potential for improving current labor supply, future earnings, and future labor supply by increasing the economic incentives for future work.

Foreign Immigration and the Growth of the Labor Force of New England

- Among the most important demographic developments in New England during the decade of the 1990’s was the strong growth in the immigrant population, especially in the three southern New England states. Of the 715,600 increase in the resident population of New England over the decade of the 1990’s, 605,000 or nearly 85 percent was attributed to new foreign immigration. All of the net population increase in Connecticut, Massachusetts, and Rhode Island was due to the influx of new foreign immigrants over the decade. In contrast, only one-fifth to one-sixth of the population growth in the three northern New England states was generated by new foreign immigration over the 1990s.
- Between 1990 and 2001, the resident civilian labor force of the U.S. increased from 125.8 million to 141.8 million, a gain of nearly 16 million. Of this 16 million gain in the number of labor force participants, slightly more than 8 million or 50% were foreign immigrants who arrived in the U.S. from 1990 onward. In New England, the estimated number of “new foreign immigrants” in the region’s civilian labor force in 2001 was 374,000, accounting for nearly six times the estimated increase in the region’s labor force over this eleven year period. In the absence of new foreign immigration, the region’s civilian labor force would have declined substantially during the 1990’s.

Table 6:
Civilian Labor Force Growth in the U.S. and New England Between 1990 and 2001 and the Amount Attributable to New Foreign Immigration (Numbers in '000s)

Geographic Area	1990 CLF	2001 CLF	Change in CLF 1990-2001	New Immigrants in CLF 2001	Share of CLF Growth Due to Immigrants
U.S.	125,840	141,815	15,975	8,031	50.3
N.E.	7,146	7,212	66	374	567.0

Sources: (i) U.S. Bureau of Labor Statistics, Geographic Profile of Employment and Unemployment; (ii) U.S. Bureau of Labor Statistics, Employment and Earnings, May 2002; (iii) 2001 Monthly CPS Surveys, tabulations by Center for Labor Market Studies.

- The contributions of foreign immigration to labor force growth in the nine geographic divisions over the past decade varied considerably. From a relative vantage point, New England was clearly the most dependent on new foreign immigration for its labor force growth in the 1990’s although the Mid-Atlantic division also would have experienced a steep decline in its labor force in the absence of new foreign immigration.
- Within New England, the contributions of new foreign immigrants to labor force growth varied considerably by state. In the three southern New England states, foreign immigration played a dominant role with 354,000 new immigrants in these states’ labor force in 2001, accounting for all of their labor force growth over the past decade. Each of these three states would have experienced steep declines in their resident labor forces in the absence of the new waves of foreign immigrants. In contrast, the three northern New England states (Maine, New Hampshire, and Vermont) were far

less dependent on foreign immigration for their labor force growth. Over the 1990-2001 period, new foreign immigrant workers generated only 9 to 21 percent of their labor force growth.

Alternative Workforce Development Strategies for Boosting Labor Force Growth in New England

Many areas within New England will likely face limited labor force growth over the remainder of the current decade due to a combination of demographic and labor market forces, including a slow growing and aging working population. Only overwhelming reliance on foreign immigration allowed the region to achieve any labor force growth over the past decade, especially in the three southern New England states. Effective, coordinated and comprehensive workforce development policies, thus, have the potential to boost regional labor supply in the first decade of the twenty-first century. Actions will be needed on a variety of fronts.

There are a number of areas in which more effective workforce development policies in our region could contribute to regional labor supply growth. First, while teenage labor force participation rates in our region remain slightly above the national average, they are far below those for the leading geographic divisions, especially in the Midwest. The number of teenagers in our region will be growing over the next 5 to 6 years; thus, workforce development policies for teens, including school-to-career programs to boost year-round employment opportunities for high school students, could boost the size of the teen labor force and improve their transition from high school to the adult labor market. Early work experience in high school tends to strengthen labor force attachment and employability in the early years after leaving high school.

Second, the participation rates of 20-24 year olds in our region in both 2000 and 2001 were below the U.S. average and ranked low among the nine geographic divisions. Achieving stronger labor force attachment of post-secondary students, especially through programs such as cooperative education, apprenticeships for community college students, and internships in career-related jobs, could not only boost the labor supply of young college students, but increase their ability to secure college labor market jobs upon graduation and remain more committed to residing in the region.

Third, workforce development agencies should work closely with local high schools to reduce school dropout rates, especially in the region's larger, urban school districts. Young high school dropouts in New England experience a multitude of labor market problems that reduce their employability and earnings and their future attachment to the labor force.

Fourth, future anti-poverty efforts in New England will have to concentrate on increasing the labor force participation rates and the labor supply of poor family heads. Even during the super full employment year of 2000, only 43 of every 100 poor family heads in New England were employed at any time during the year, and the employment rate fell to only 27% if the family head did not possess a high school diploma or a GED certificate. Workforce development programs need to attract more poor family heads into the labor force and increase the intensity of the work effort among those employed. National research evidence suggests that employment and training programs that can raise the market wages of the poor, especially those of single mothers, should also help increase their annual hours of work.

Fifth, dislocated worker training programs under the Workforce Investment Act and the Trade Adjustment Assistance Act can help maintain labor supply by improving the re-employment prospects of workers permanently displaced from their jobs. During the 1990's, re-employment rates of displaced workers in New England steadily increased as labor market conditions improved. The re-employment rates of New England workers displaced from their jobs between 1997 and January 2000, however, varied fairly widely by age and educational attainment. Strengthening the effectiveness of re-employment services can help maintain the active labor market attachment of dislocated workers throughout the region and boost regional labor supply.

Sixth, a diverse array of human resource policies for strengthening the labor market attachment of older workers (45-69), especially men with no post-secondary schooling, can help increase the size of the regional labor supply over the remainder of this decade. From the early 1970's, through the mid-1990s, the labor force participation rates and full-time employment rates of older men in Massachusetts and New England declined considerably, especially among men with no college education. During more recent years, there has been a modest rise in the labor force attachment of older men, partly as a consequence of the strong labor market conditions in the latter half of the 1990s decade. Over the coming decade, workers in the 45-64 age group will be the fastest growing population group in our region. Our success in keeping these older workers active in the labor market will play a critical role in determining the growth rate of the region's labor supply over the current decade.

Seventh, states should undertake a series of labor force projections to stimulate labor force growth under alternative scenarios.

The projections would provide the outlook for labor force growth by age, gender, and possible race-ethnic subgroups.

Finally, there is a clear need to improve our knowledge base on the ability of workforce development programs to strengthen the labor force attachment and labor supply of participants in these programs. Adult education programs, including adult basic education (ABE) and English-as-a-second language programs, do not typically track the post-program labor market experiences of participants, the WIA one-stop centers and labor exchanges provide little information on the post-program labor market experiences of clients other than their job placement status at time of termination. WIA employment and training programs for adults and dislocated workers do not provide core information on the employment and labor supply experiences of trainees over the 15 month follow up period, other than point in-time employment or job retention rates. Few public school systems other than the city of Boston systematically track their high-school graduates' experiences in the labor market in the year following high school graduation. Our community colleges and four-year colleges and universities do little systematic tracking of the labor market experiences of their own graduates.

A concerted and coordinated series of efforts by workforce development and education agencies at all geographic levels across New England (local and state) to improve the information base on the post-program employment experiences of program participants is critically needed. Sharing of information on the findings of these studies and lessons learned would be particularly desirable.

The Absent Male Worker and the Limited Growth of New England’s Labor Force During the 1990s: Implications for Future Regional Workforce Development Policy

Introduction

Findings of our preceding analyses of New England labor force developments during the 1990s based on findings of the 2000 Census and annual CPS household surveys revealed that the region as a whole experienced very limited growth in its resident labor force over the decade. In fact, the number of working-age males who were active members of the region’s labor force at the time of the 2000 Census was approximately the same as it was in 1990. The absence of any substantive male labor force growth in New England over the past decade was the key factor underlying the very limited growth in the region’s overall labor force during the 1990s and contributed substantially to the growing labor shortages prevailing throughout the region at the peak of the labor market boom in calendar year 2000.

This chapter of the Workforce Development Report for New England was designed to identify and assess the growth of the male labor force in New England during the 1990s, to place the findings for New England in comparative perspective with those for the nation and the other geographic regions, to briefly examine the sources of the limited growth in the region’s male labor force, and to identify the future workforce development implications of such limited male labor force growth. Key findings of the analyses presented in this chapter are summarized below

- From 1950 to 1990, women contributed a majority share of the growth in the civilian labor force of New England and the U.S. during each decade. Similar findings prevailed during the 1990s. For

the nation as a whole, the growth of the female civilian labor force over the past decade outstripped that of men in both absolute and relative terms. (Table 1). Between 1990 and 2000, the number of women in the nation’s civilian labor force increased by nearly 7.9 million or 14% while the number of male labor force participants only rose by 6.3 million or 9.4%. Women accounted for 56% of the growth in the nation’s civilian labor force over the past decade.

Table 1:
Trends in the Male and Female
Civilian Labor Force in the U.S. and New
England, 1990 to 2000
(Numbers in 1000s)

	(A)	(B)	(C)	(D)
Geographic Area/ Gender	1990	2000	Absolute Change	Percent Change
U.S.				
• Men	66,986	73,285	6,299	9.4
• Women	56,487	64,383	7,896	14.0
New England				
• Men	3,764	3,781	18	.5
• Women	3,319	3,481	162	4.9

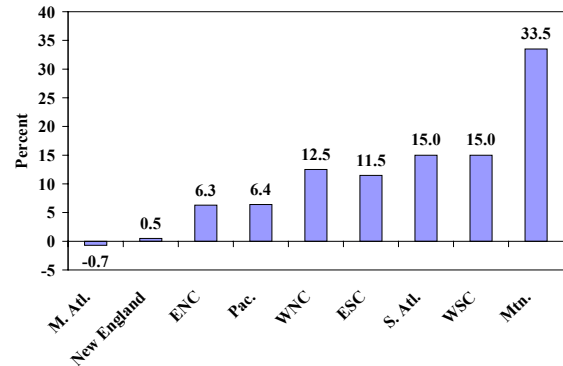
Source: 1990 and 2000 Census of Population and Housing.

- Within the New England region, the overwhelming share of labor force growth in the 1990s was attributable to women. The number of women in the region’s civilian labor force is estimated to have increased by 162,000 or just under 5% while the number of men who were active in the civilian labor force rose by only 18,000 or .5%. (Table 1). The male labor force in our region was essentially

stagnant during the 1990s. Women accounted for 90% of the growth in the region’s civilian labor force over the past decade. In the preceding decade of the 1980s, women had accounted for only 62% of the growth in New England’s civilian labor force. At no time in the past 50 years had New England been so dependent on women for its labor force growth. The absence of male labor force growth was a historically unique phenomenon for the region.

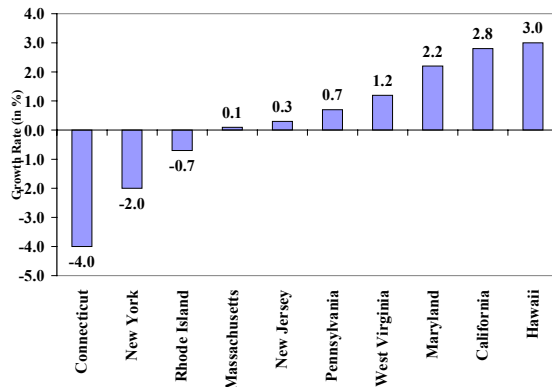
- The growth of New England’s male labor force during the 1990s ranked second lowest among the nine geographic divisions. (See Chart 1). Only the Middle Atlantic region, whose male labor force actually shrank by nearly one percent, fared worse than New England. In sharp contrast, five of the nine geographic divisions experienced double-digit growth rates in their male civilian labor force over the 1990s, and the Rocky Mountain region experienced a near one-third growth in its male civilian labor force. To place the findings for the New England area in perspective, consider the fact that 38 of the 44 states outside of New England added more men to their labor force over the past decade than the entire New England region did, including such low populated states as Alaska, Iowa, Montana, New Mexico, and South Dakota.

Chart 1:
Growth Rates of the Male Civilian Labor Force
by Geographic Division, 1990 – 2000
 (in %)



- Growth rates of the male civilian labor force between 1990 and 2000 were estimated for each of the 50 states, and they were ranked from lowest to highest. The ten fastest growing states were primarily located in the Rocky Mountain region and in the Pacific Northwest. The growth rates of their male labor force ranged from just under 19% in Florida to a high of 52% in Nevada. Not one New England state ranked among the ten fastest growing states on this measure. The 10 slowest growing states included the three southern New England states and the three Mid-Atlantic states of New Jersey, New York, and Pennsylvania. (Chart 2). Connecticut ranked last while Rhode Island and Massachusetts ranked third and fourth lowest, respectively.

Chart 2:
Ten States with the Lowest Civilian Labor Force
Growth Rates for Men, 1990 – 2000



- The above findings on the growth of the entire civilian labor force and the male civilian labor force in New England and the other geographic divisions can be combined to estimate the male share of civilian labor force growth over the decade of the 1990s. Since 1950, men contributed less than half of the growth in the region’s civilian labor force, including 38% of the increase in the 1980s. During the 1990s, however, males in New England were responsible for only 10 percent of the region’s labor force growth, their lowest share in the past 50 years. (Chart 3). In the U.S., men contributed slightly over 44% of the growth in the nation’s civilian labor force during the 1990s. Only in the Mid-Atlantic region did men account for a lower share of the growth of the area’s labor force. Within the Mid-Atlantic region, the number of men in the labor force actually declined by 67,000 between 1990 and 2000, with all of the drop taking place in the state of New York. Both New Jersey (.3%) and Pennsylvania (.7%) posted a very modest growth in their male labor forces, but they could not overcome the near 100,000 reduction in the male labor force of New York state. (Chart 4).

Chart 3:
Men’s Share of the Change in the
Civilian Labor Force of the
New England Region by Decade,
1950 – 2000
(in %)

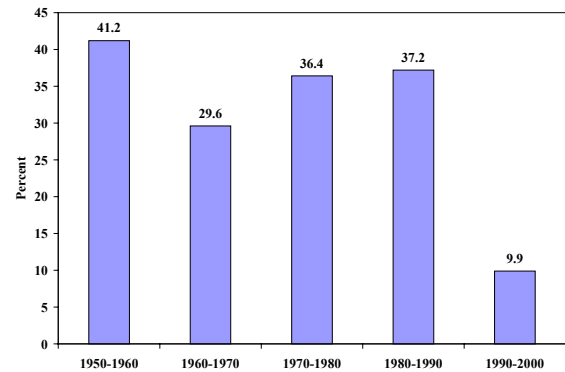
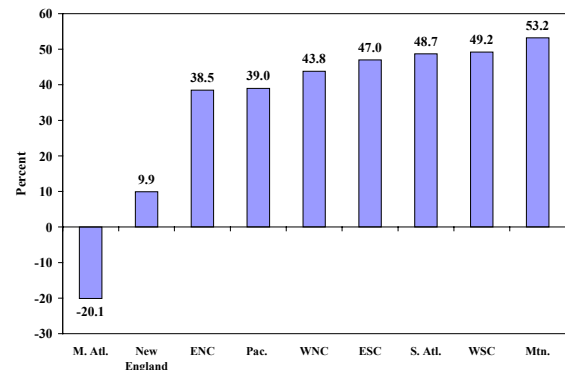


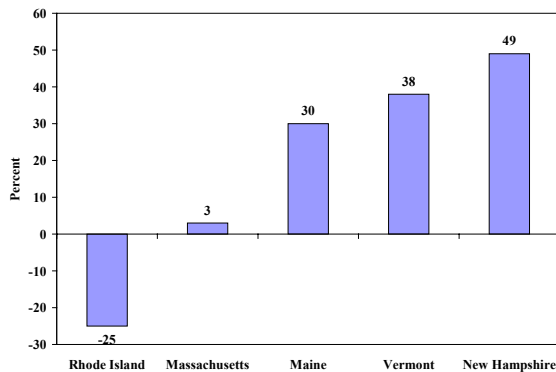
Chart 4:
Men’s Share of the Change in the
Civilian Labor Force of Each Geographic
Region by Decade, 1990 – 2000
(in %)



Within the New England region, between 1990 and 2000, the male labor force declined in both Connecticut and Rhode Island; thus, men contributed none of the growth in the labor force of these two states. In fact, the decline in the male labor force of Connecticut more than offset the small increase in the size of the female labor force, thereby producing a net decline in the state’s resident labor force for the first time in 50 years. In Massachusetts, men contributed only 3% of the growth in the state’s resident labor force, the lowest such ratio in the past

50 years (Chart 5). In the three northern New England states, the male labor force experienced stronger growth, generating 30% of the growth in Maine, 38% in Vermont, and nearly one half of the labor force growth in New Hampshire. The decline in the male labor force of the three southern New England states combined (a net -38,000) was, thus, the primary cause of the stagnation in the male labor force of the region in the 1990s.

Chart 5:
Men's Share of Growth in the Civilian Labor Force of the Five New England States with Positive Labor Force Growth, 1990 - 2000
 (in %)



- The growth of the labor force for any given demographic group over time will be influenced by two variables: the change in the size of the population of the group and the change in the labor force participation rate of the members of that group. Shifts in the age, educational composition, and race-ethnicity of that demographic group also can independently influence the size of the labor force given fairly high variations in labor force participation rates across age, race-ethnic and educational attainment subgroups.

- Between 1990 and 2000, the working-age male population of New England increased from 4.978 million to 5.201 million, a gain of 223,000 or 4.5%. (Table 2). This rate of population growth was essentially identical to that for women in the region, but was well below the growth rate of the male population in the U.S. (12%). The rise in the male working-age population should have increased the male labor force in New England over the 1990s; however, the labor force participation rate of New England males declined by nearly three full percentage points over the decade falling from 75.6% to 72.7%. (Table 3). A similar decline in the male labor force participation rate also took place nationally; however, changes in male labor force participation rates varied markedly across the 50 states. The declines in male labor force participation rates in New England ranged from 1.6 percentage points in Maine to highs of 3.2 percentage points in Massachusetts and 3.8 percentage points in Connecticut. The latter two states were characterized by the 40th and 45th lowest changes in male participation rates.

Table 2:
Growth of the Civilian Working-Age Population in New England, 1990 - 2000,
Total and by Gender
 (Numbers in 1000s)

	(A)	(B)	(C)	(D)
Gender Group	1990	2000	Absolute Change	Percent Change
All	10,474	10,940	466	4.5%
Men	4,978	5,201	223	4.5%
Women	5,496	5,736	240	4.4%

Source: 1990 and 2000 Census of Population and Housing.

Table 3:
Trends in the Civilian Labor Force
Participation Rates of All Working-Age Persons,
Men and Women in New England, 1990 to 2000
(in %)

	(A)	(B)	(C)
Gender Group	1990	2000	Change B – A
All	67.6	66.4	-1.2
Men	75.6	72.7	-2.9
Women	60.4	60.7	+.3

Source: 1990 and 2000 Census of Population and Housing.

Note: Estimates of civilian labor force participation rates are based on the decennial 2000 Census definition. The denominator includes all civilian, working-age persons who were living in institutions (nursing homes, juvenile homes, prisons, jails).

- The above findings clearly indicate that the decline in the male labor force participation rate in New England was the primary factor underlying the absence of any substantive growth in the regional male labor force over the past decade. Future analyses identifying the specific factors influencing the decline in the male labor force participation rate based on the public use micro-records from the 2000 Census long-form questionnaires would be desirable. Each New England state should undertake such an analysis. Earlier analyses for Massachusetts and Connecticut revealed that males lacking a high school diploma or a GED certificate were experiencing severe labor market problems, especially declining real wages and earnings, that would reduce their incentives to actively participate in the labor force. Older males (45-69) with no post-secondary schooling also were reducing their attachment to the labor force through the mid to late 1990s although strong labor market conditions from 1997 to 2000 appears to have

attracted more of them back into the labor force.

Implications of the Findings for Future Labor Market Research and Workforce Development Programs in New England

- The absence of any substantive labor force growth among men in the New England region, especially in the three southern New England states, during the decade of the 1990s helped lower the aggregate rate of unemployment and generate many of the labor shortage problems that appeared throughout the region at the end of the decade. The lack of any appreciable growth in the male labor force was unique to the New England region and the Mid-Atlantic division. The weak labor force growth among men was attributable to a combination of slow growth in the male working-age population and to actual declines in the civilian labor force participation rates of working-age men in the region. Native born men in New England were considerably less likely to be seeking work at the end of the decade.
- The sources of the declines in the labor force participation rates of men in New England need to be more fully understood. Each state in the region should undertake a rigorous, comprehensive analysis of the changing labor force behavior of men over the past two decades, identifying changes in both the incidence and intensity of the labor force behavior of key demographic and socioeconomic subgroups of men, especially those groups for whom public policy interventions may be needed to boost their attachment to the labor market. A diverse array of education and workforce development strategies in both the private and public sectors will likely

be need to boost the future labor force attachment of men in New England.

- First, sustained efforts must be made by high schools across the region to reduce the relatively high school dropout rates among men. In Massachusetts and other New England states, dropout rates at the end of the 1990s were markedly higher among men than women. Males who lack high school diplomas are considerably less likely to participate in the labor force than their better-educated counterparts, more likely to face unemployment problems when they do seek work, and they encounter a higher incidence of underemployment and low wage problems when they do work. These strong links between formal schooling and labor market outcomes hold true for both young adults and all working-age adults. For example, in New England during calendar year 2001, among all 16-24 year old out-of-school youth, civilian labor force participation rates ranged from only 69% for high school dropouts to 85% for high school graduates and to a high of nearly 93% for those young adults holding a bachelor's or higher degree. Unemployment rates among these same educational groups ranged from a low of 4 percent for college graduates to a high of just under 18 percent for those young adults lacking a high school diploma.
- Second, similar to developments across the nation, the numbers of women obtaining associate degrees, bachelor degrees, and Masters degrees in New England in recent years have substantially outpaced those for men. In Massachusetts during the 1999-2000 academic year, there were 170 associate degrees awarded to women for every 100 men, 130 bachelor degrees for every 100 awarded to men, and 143 Master degrees for every 100 granted to men. Increasing

both men's access to post-secondary educational programs and their retention in such programs must be seen as a critical strategy for boosting the future supply of male workers in the region. The higher market wages of better-educated men induce more of them to seek work and to work more hours during the year, and better-educated adult men also remain much more strongly attached to the labor market from ages 50-64 and their post-65 years.

- Third, workforce development programs should review their existing policies toward recruiting and serving adult immigrants. While working-age male immigrants in the aggregate in Massachusetts in the late 1990s were participating in the civilian labor force at a rate approximately equal to that of native born men, they faced unemployment rates about one-third higher than those of native born men. There also were substantial differences in male immigrant labor force participation rates and unemployment rates by years of schooling completed. The less educated immigrants and those with limited English-speaking abilities were considerably less likely to be employed, and they earned substantially less during the year than their better-educated and more literate counterparts when they did work. Workforce development programs, including adult basic education programs, English-as-a-Second Language programs, and WIA employment and training programs for out-of-school youth, low income adults, and dislocated workers, can play a role in improving the future labor supply of male and female immigrant workers.
- Fourth, employment and training programs for dislocated workers, including the labor exchange functions of

the one stop career centers, WIA Title One training programs, and those funded under the Trade Adjustment Assistance Act, can play a role in improving future male labor supply in the region by retaining dislocated workers in the civilian labor force and strengthening their re-employment prospects. Even during the strong labor market conditions over the 1997-99 period, approximately 210,000 males were permanently displaced from their jobs in New England, a displacement rate equivalent to nearly 6 of every 100 male workers throughout the region.

- The re-employment rates of these dislocated workers tended to vary markedly by age group and educational attainment, with older men (55 and older) and those with no high school diploma facing the most severe re-employment problems. Successful strategies for boosting the re-employment prospects of older male dislocated workers could help improve the future labor supply of New England.
- More research is needed on the effectiveness of alternative service delivery strategies in improving the re-employment prospects of older dislocated workers, especially males. Previous evidence from the JTPA system for New England for those dislocated workers with 12 or fewer years of schooling revealed that the provision of occupational skills training in the classroom, on the job training, and multi-training strategies (education plus skills training) tended to significantly improve both re-employment probabilities and wage replacement rates relative to the receipt of counseling, assessment, or job search training alone. Longer-term follow-up data on the post-program employment and earnings experiences of former

participants in dislocated worker programs is needed to inform future policy-making and program planning.

- Finally, success in increasing the labor supply of men in New England will be critically dependent on strengthening the labor force attachment of older males in the region. Over the past three decades, the labor force attachment and full time employment rates of 45-69 year olds in Massachusetts and the U.S. have declined precipitously, especially among those men with no post-secondary schooling. Given the aging of the New England working-age population over the current decade, the ability of the region to strengthen the labor force participation rates of older men will have a critical bearing on the region's labor supply growth. Between 2000 and 2008, we project that more than 100% of the region's 305,000 net increase in its resident labor force will come from men and women in the 45-64 age group. The region's ability to achieve any substantive labor force growth over the current decade will thus depend heavily on its success in improving the labor force participation rates of its older workers. A reversal in the declining labor force attachment of older males would help the region achieve stronger labor force growth and reduce its heavy reliance on new immigrant workers. Changes in the labor force attachment of older males likely will not occur in the absence of fundamental changes in private firms' and government agencies' hiring, training, and retention policies, in labor union support of older workers training and retention, in workforce development policies toward older workers, and in the behaviors of older workers themselves, including a strengthened work ethic.

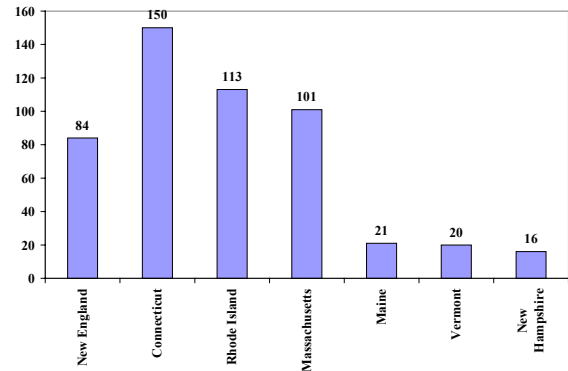
Immigrant Workers in New England Labor Markets: Implications for Workforce Development Policy

The decade of the 1990s witnessed a massive, historically unprecedented new wave of foreign immigration into the U.S. and the New England region. Between 1990 and 2000, more than 13.6 million new foreign immigrants arrived in the U.S., accounting for nearly 42 percent of the nation's entire population growth, the largest share in the past 100 years. Between 1990 and 2000, somewhat over 600,000 new foreign immigrants moved into the New England region, accounting for 84 percent of the region's population growth, the highest share of population growth in the twentieth century. Key findings of our analysis of the impacts of new foreign immigration on population, labor force, and employment growth in New England between 1990 and 2000 are presented in this section of the executive summary.

- The contributions of new foreign immigration to population growth in the region varied markedly by state. Population growth in the 1990s in the three southern New England states, Connecticut, Massachusetts, and Rhode Island was entirely attributable to new foreign immigrants. In the three northern states, only one-fifth to one-sixth of the population growth was generated by new immigrant arrivals.

Chart 1:

The Share of Growth in the Resident Population of New England and Individual New England States Between 1990 and 2000 Attributable to New Foreign Immigrants Who Arrived During the Same Time Period



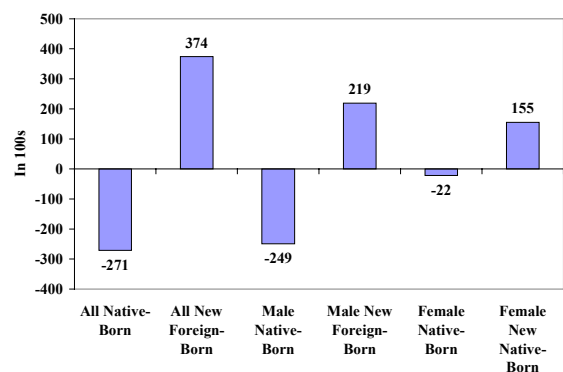
- During the decade of the 1990s, the New England region was characterized by very modest growth in its resident labor force. As noted in the preceding section, between 1990 and 2000, the resident civilian labor force increased by only 179,000 or 2.5%, a growth rate that was well below the national labor force growth rate of 11.5% over the same time period. New England's labor force growth rate in the 1990s was the lowest in the past 50 years.
- In 2001, there were 374,00 new foreign immigrants in the region's labor force who had arrived in the U.S. at some time since 1990. New immigrants accounted for all of the net growth in the region's civilian labor force between 1990 and 2001 while the share of growth in the nation's labor force attributable to new foreign immigrants was only 48%. In fact, the native-born labor force in New England is estimated to have declined by 271,000 over this time period.

- Foreign immigration's contribution to civilian labor force growth in New England was only 11% and 24% in the 1970s and 1980s, respectively. However, New England labor force likely would have declined in the 1990s without the inflow of new foreign immigrants into the labor force. The New England and Middle Atlantic divisions were the only two divisions in the U.S. whose labor force growth in the 1990s was entirely attributable to new immigrants in the labor force.
- The impacts of new immigration on labor force growth varied considerably across individual New England states over the past decade. The estimated number of new foreign immigrants in the labor force of the six New England states in 2001 ranged from lows of three to four thousand in Vermont and Maine to highs of 81,000 in Connecticut and 249,000 in Massachusetts. Two states in New England- Connecticut and Rhode Island- experienced labor force decline between 1990 and 2001. All of Massachusetts' civilian labor force growth over this 11-year period was attributable to new foreign immigration. In contrast, less than 10 percent of the labor force growth in Maine and Vermont was due to new foreign immigration while close to one-fifth of New Hampshire's labor force growth between 1990 and 2001 was generated by new foreign immigrants.
- During the 1990s, the estimated number of males in the labor force of New England actually declined, primarily as a result of reduced labor force attachment by working-age men over the decade. While the total number of male labor force participants between 1990 and 2001 fell by 30,000, the number of new male immigrants increased by 219,000, indicating the number of native-born

labor force participants in New England must have declined by 250,000 over this 11-year period.

- The female labor force within New England increased by 133,000 between 1990 and 2001, a growth rate of approximately 4 percent. All of this growth, however was attributable to 155,000 female new foreign immigrants in the region. The number of native-born female labor force participants in the region declined by 22,000 over the decade.

Chart 2:
Growth of the Civilian Labor Force in New England 1990-2001 by Gender and Nativity Status (Numbers in 1,000s)

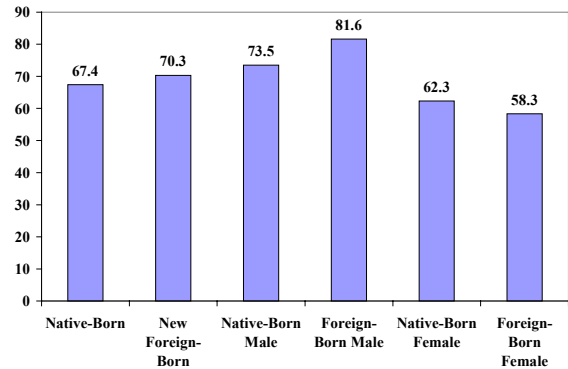


- The new foreign-born immigrant labor force were younger than their native-born counterparts. Nearly one in five young immigrant workers in New England were under the age of 25 versus only 15 percent of the native-born, and close to 60 percent of these new young immigrant labor force members were under 35 years of age versus only 35 percent of the region's native-born participants. At the upper end of the age distribution, native-born workers over 65 comprised 15 percent of the labor force versus only 3 percent of new foreign immigrants. The New England labor force would have aged more considerably in the absence of

the influx of new immigrant workers during the past decade.

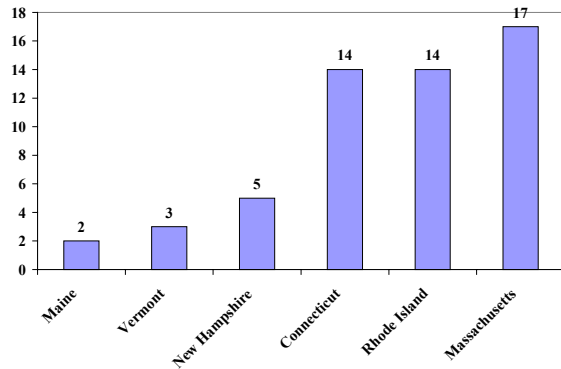
- Nationally, many of the new immigrant workers were poorly educated, frequently lacking a high school education from their home countries. The educational backgrounds of new immigrant workers in New England were quite diverse. One in every four new immigrants in New England lacked a high school diploma/GED certificate versus only 9 percent of native-born workers in the region. At the upper end of the educational distribution, recent immigrants were nearly as likely as native-born workers to have obtained a bachelor's or higher degree (31% versus 34%).
- During calendar year 2000-2001, slightly over 70 percent of new immigrants of working age in New England were actively participating in the labor force, i.e., either working or actively looking for work. The participation rate of these new foreign immigrants was nearly 3-percentage points above that of their native-born peers (70.3% versus 67.6%). However, among new foreign immigrants, only 58% of foreign female immigrants were participating in the labor force versus 82% of their male foreign born counterparts. Newly arrived foreign born male immigrants were 8 percentage points more likely than their native-born male counterparts to be active participants in the labor force (82% versus 73%) while new female immigrants were 4 percentage points less likely than their native-born female peers to be active participants in the labor force (58% versus 62%).

Chart 3:
Civilian Labor Force Participation Rates of the
Native Born and New Foreign Born Working-
Age Population in New England by Gender,
2000-2001 Averages (Numbers in %)



- During calendar years 2000-2001, approximately 1 of every 8 employed persons in New England was foreign born. This ratio was nearly identical to the 13% immigrant share of the employed across the entire country in calendar years 2000 and 2001. Within our region, the immigrant shares of the employed varied widely across individual states from lows of only 2 to 3 percent in Maine and Vermont to highs of 14 percent to 17 percent in Connecticut, Rhode Island, and Massachusetts, respectively.

Chart 4:
The Foreign-Born Share of the Resident
Employed in Each New England State, Calendar
Year 2000-2001 (In %)



- Of these employed new immigrants, nearly 90 percent were employed in private sector, wage and salary jobs versus only 76% of the native-born. New foreign-born immigrant workers were less likely than their native-born peers to be employed by government or to be self employed. The higher incidence of non-citizenship among recent immigrants also reduces their ability to compete for many public sector jobs.
- While both native-born and foreign-born workers were heavily concentrated in the region’s private service industries, new immigrant workers were nearly twice as likely as native born workers to be employed in several segments of the service industries, particularly business and repair and personal/entertainment industries (22% versus 11%). New immigrants also were heavily over-represented in the region’s manufacturing industries (22% versus 14%), especially in southern New England. In contrast, new foreign-born workers were less likely than their native-born peers to be employed in the finance/insurance/real estate sector, professional service industries, and public administration.

- Native-born workers were considerably more likely than new foreign immigrants to be employed as managers, high-level sales workers, and administrative support/clerical workers (39% versus 16%). Both groups, however, were employed at nearly identical rates in professional occupations, reflecting the high representation of immigrants among engineers and physical scientists, computer programmers and systems analysts, and college teachers. New immigrants tended to be substantially over-represented in several major occupational groups, including most blue-collar occupations, especially production, machine operatives, assemblers, fabricators, and laborer positions, and service occupations. Thirty-one percent of new immigrants were employed in blue-collar occupations versus only 20 percent of the native-born, and new immigrants were twice as likely as the native-born to be employed in service-related occupations (24% versus 12%).

Chart 5:
The Distribution of Native-Born Employed in
New England by Major Occupational Group,
2000-2001 Monthly Averages

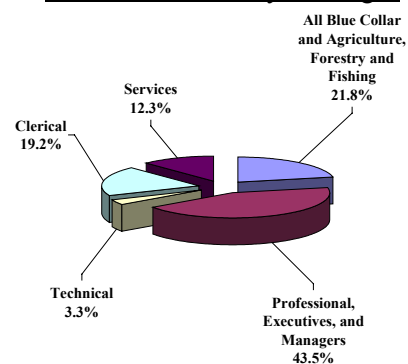
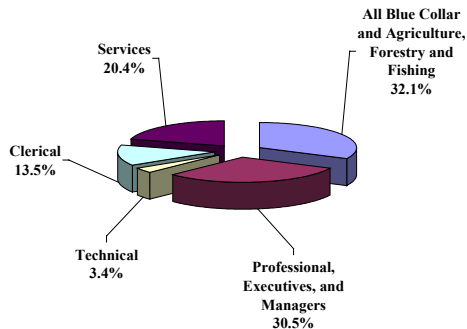


Chart 6:
The Distribution of Foreign-Born Employed in
New England by Major Occupational Group,
2000-2001 Monthly Averages



- Foreign immigrants had become a major new source of labor supply in many blue-collar operative, fabricator, assembler, and machine operative positions in the region's manufacturing industries during the 1990s. New foreign immigrants were substantially over-represented in semi-skilled blue-collar jobs (assemblers, fabricators, machine operators, packagers, production operatives). In each state, with the exception of Vermont, foreign immigrants were employed in these occupations at rates two to three times their share of total employment. In Connecticut, Massachusetts, and Rhode Island, foreign born workers held 40 to 50 percent of all blue-collar production and operative positions in calendar year 2001. Immigrants served as the backbone of production workers in manufacturing in southern New England. The substantial presence of immigrant workers in front-line positions in manufacturing industries has created a growing need for literacy, English-as-second language, and occupational skills upgrading in many of these firms to boost the productivity of production workers in many of the region's key export base industries. An expansion of workplace literacy programs appeared to be needed to increase the

participation rates of immigrant workers in such programs and to improve prospects for wage upgrading.

Implications of the Findings for Future Workforce Development Programs in New England

- The findings in this research report have revealed that the New England region has become entirely dependent on new flows of immigrant workers for its labor force growth in the 1990s. The rapid and historically unprecedented growth of the region's immigrant workforce has a number of important current and future implications for the region's workforce development system.
- First, new foreign immigrants now comprise a large segment of the region's labor force and especially of its unemployed, economically disadvantaged, and working poor populations. Solving the problems of the unemployed and the working poor will require greater attention to the labor market needs of immigrant workers.
- Second, a relatively high share of new foreign immigrants lack a high school diploma/GED, and they often have very limited English speaking abilities. Limited formal schooling and English-speaking proficiencies reduce the labor force attachment, employability, and annual earnings of employed immigrants. Adult basic education and English-as-a-Second Language instruction services will need to be integrated more closely into public and private workforce development strategies in our region. Unfortunately, relationships between adult basic education and workforce development programs remain quite limited.

- Third, immigrant workers have become a critical source of labor supply for many of the region's manufacturing industries. To boost the future competitiveness of the New England region's manufacturers, intensive occupational and literacy training program will likely be needed to boost the productivity of incumbent workers.
- Fourth, there is a critical need to improve our knowledge base on the degree of services provided to immigrant workers and the effectiveness of such services in improving their employability and earnings. The current WIASRD reporting system of the U.S. Department of Labor should be revised to include information on the nativity status of program enrollees, the countries of the birth of these foreign immigrants, the timing of the arrival in the U.S. of the foreign-born, and their citizenship status.
- Fifth, the high incidence of school dropouts among recent immigrant workers has increased the supply of less educated workers in our region and pushed down the real and relative earnings position of all employed school dropouts, including the native born, resulting in increased exposure to poverty and economic dependency. Regional workforce development policies need to address the growing economic plight of less educated native-born adults in our region and strengthen their labor force attachment, employability, and earnings.
- Finally, there is a clear need to review the nation's current immigration policies, including its labor certification and H1-B, J-1, L-1 visa programs, especially in light of existing labor market conditions. Our nation's existing immigration policies are not strongly based on the skill needs of the nation's economy, and even our labor market oriented visa programs have not been carefully evaluated to determine the extent to which they are supportive of key regional and national economic and labor market goals. A comprehensive, objective, and substantial public policy debate on the current and desired future role of immigrant labor in the regional and national economy needs to be undertaken in the very near future.

The Deterioration in the Employment Position of Teens and Non-College Educated Young Adults in New England from the Boom in 2000 to the Bust in 2003

Introduction

The New England labor market abruptly reversed course from that of growing labor shortages in the late 1990s and 2000 to one of labor surplus in by mid-2001 and thereafter. The labor shortages were caused by a combination of a strong labor demand and a weak growth in labor supply.

A slow population and labor force growth characterized the 1990s decade in the New England region. The region's labor force grew by only 2.5 percent compared to a 12 percent growth in the nation's labor force. The slow labor force growth enabled the region's labor market to absorb most jobseekers resulting in a 2.5 percent unemployment rate in 2000.

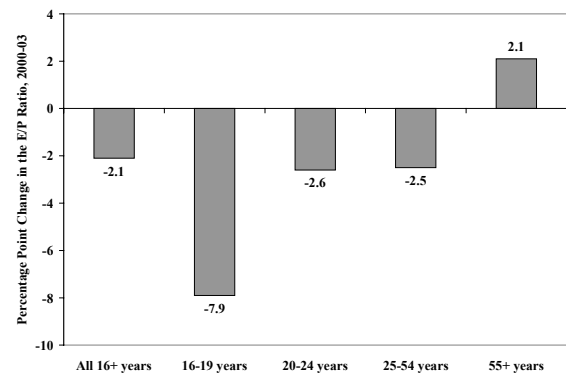
After reaching an economic peak in 2000, the region experienced a sharp economic downturn. The economic recession that began in mid-2001 and the resulting joblessness has been particularly severe among teenagers and young adults. This chapter provides an assessment of the changes in employment outcomes for teens and young adults in the New England region between 2000 and 2003.

Trends in the Employment to Population (E/P) Ratio by Age

The employment to population ratios of the working-age population in New England declined between 2000 and 2003 as the region's unemployment rate nearly doubled. The magnitude of employment rate change varied widely by age group. The younger the age group, the more substantial was the decline in the employment rate. These variations by age group in the rate of

deterioration of employment opportunities were also evident in the nation.

Changes in the Employment to Population Ratios of All Persons 16+ in Selected Age Groups in New England, 2000-2003



- Between 2000 and 2003, the employment to population ratio of New England's working-age population declined by 2.1-percentage points. This rate of decline was equal to that of the nation and 5th highest among the nine geographic divisions in the nation.
- The largest decline in the E/P ratio occurred among the region's teens. Between 2000 and 2003, the teen employment rate declined by nearly 8-percentage points or four times as large as the decline in the employment rate of all working-age adults in the region.
- Young adults in New England witnessed a 2.6-percentage point decline in their employment rate. This group fared better than their national counterparts among whom the employment rate declined by 4.4-percentage points.
- The E/P of prime working-age adults in

the region declined by 2.5-percentage points while older residents (55+ years old) saw their employment rates increase by more than 2 full percentage points.

The Declining Labor Market Fortunes of the Region’s Teens

The shrinking of the New England job base as the economy lost jobs had a severe impact on the teen labor market. Because they are usually at the bottom of the labor queue, teens and poorly educated young adult workers are at the highest risk of joblessness, which frequently results in their exit from the labor force.

Changes in the E/P Ratio of Teens in New England by School Enrollment Status

Teen Group	2000	2003
All teens	49.9	42.0
Enrolled	43.4	36.2
Not enrolled	66.3	59.3
	Absolute Change	Relative Change
Teen Group	2000-03	2000-03
All teens	-7.9	15.8
Enrolled	-7.2	16.6
Not enrolled	-7.0	10.6

- The overall teen employment rate in New England declined by 8-percentage points from nearly 50 percent in 2000 to only 42 percent in 2003, representing a 16 percent decline.
- Teens who were enrolled in school as well as their non-enrolled counterparts witnessed a 7-percentage point decline in their E/P ratios. However, the relative decline was higher among teens attending school. In 2003, only 36 percent of the region’s school-going teens and 59 percent of out-of-school teens were employed.

- Joblessness among out-of-school teens means that these youth are disconnected from the two major activities in which most of their peers are engaged—school and work.
- Between 2000 and 2003, the number of disconnected (jobless and out of school) teenagers in New England grew by 14 percent or twice as fast as the rate of growth of the total teen population in the region (7 percent).
- The deleterious consequences of teen joblessness are not just restricted to loss of earnings but extend into the future through reduced future employability and earnings due to reduced work experience and through the participation of jobless and out of school youth in socially deviant behaviors.
- A serious commitment to raise employment opportunities for teens will provide these youth with important early labor market experience and expose them to the world of work, which in turn will facilitate their transition from school to work. Early employment experiences among teens also contribute to the growth of the future labor force of the region by reducing the likelihood that these young adults, particularly those who are out of school, will disengage from the labor market.

The Declining Labor Market Fortunes of the Region’s 16- to 24-Year Old Out of School Youth

As the economy weakened, the employment rate of out-of-school young adults in New England declined sharply which secured the region the dubious distinction to be tied with the East South Central division for fourth largest decline in out-of-school youth employment among the nine divisions. The deterioration of employment among out-of-

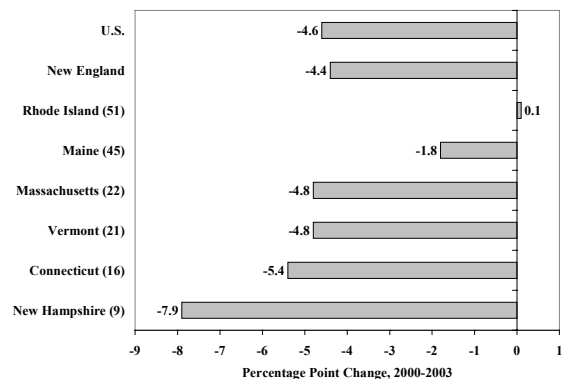
school youth varied widely by their educational attainment. High school dropouts saw the steepest declines in the E/P ratios and college graduates witnessed the smallest declines in the employment rate.

The E/P Ratio of 16- to 24-Year Old Out of School Youth In New England, 2000-2003

Educational Attainment	2000	2003	Absolute Change
16-24 out-of-school	77.1	72.7	-4.4
High school dropouts	61.1	49.8	-11.3
High school graduates	76.8	74.4	-2.4
1-3 years college	85.1	82.2	-2.8
Bachelor's degree or higher	89.1	87.8	-1.3

- Between 2000 and 2003, the E/P ratio of New England's out-of-school youth fell from 77 percent to 72.7 percent, representing a 4.4-percentage point decline.
- The sharpest decline (11.3-percentage points) occurred among high school dropouts whose employment rate fell from over 61 percent in 2000 to under one-half in 2003. The E/P ratio of college graduates declined by only 1.3-percentage points.

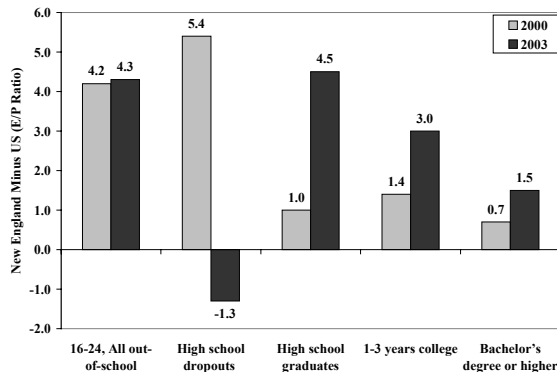
Change in the E/P Ratio of 16- to 24-Year Old Out of School Youth 2000-2003



(Rank out of 50 States and DC in Parenthesis)

- In New Hampshire, the out-of-school youth employment rate declined by nearly 8-percentage points between 2000 and 2003. This was the 9th largest decline out of 50 states and the District of Columbia. Youth in Connecticut saw the 16th largest decline in their employment rate. Four New England states were in the top half of the distribution of states with the largest declines in the out-of-school youth employment rate.
- The remaining two New England states (Rhode Island and Maine) were among 5 states with the smallest decline in the out-of-school youth employment rate. Rhode Island had the distinction of being the only state where the out-of-school youth employment did not decline between 2000 and 2003.

Gaps Between the E/P Ratio of 16- to 24-Year Old Out of School Youth in New England and the U.S., 2000 and 2003



- In 2000, the employment rates of out-of-school youth in New England in each educational subgroup were higher than that of their national counterparts. The overall E/P ratio of New England youth was 4.2-percentage points higher than that of out-of-school youth in the nation. The gap was 5.4-percentage points among high school dropouts, 1-percentage point among high school graduates, and 7/10th-percentage point among college graduates.
- By 2003, these employment rate differences changed sharply. Among high school dropouts the decline in employment was much sharper in New England than the nation. As a result, the employment difference reversed from 5.4-percentage points *higher* among New England youth in 2000 to 1.3-percentage points *lower* in 2003.
- The 2003 E/P ratios of the remaining three educational groups continued to remain higher among New England youth and the differential widened in favor of New England youth.

Implications for Future Workforce Development Policies and Programs

Deteriorating labor market conditions in New England during the 2000 to 2003 time period have substantially reduced employment opportunities for teens and out-of-school young adults. Teens were most adversely affected by these developments than any other age group. The job losses among out-of-school young adults were also quite substantial with the largest declines in employment occurring among those who had dropped out of high school.

In addition to the actual loss of employment, many teens and young adults who did remain employed saw a deterioration in the quality of their employment in the form of fewer hours, lower wages, fewer benefits and the employment of college graduates in occupations outside the college labor market.

- There is substantial room for improving employment rates of youth in our region especially those who are poorly educated, from poor and economically disadvantaged background, low income neighborhoods, and race-ethnic minorities.
- Improved school to work transition services, including more jobs for youth in high school, job placement and training services for out-of-school youth, and subsidized job creation programs, will be needed to boost employment among teens and young adults.
- Renewed job growth in the region would benefit youth with higher levels of skills and education. However, substantial investments in education and training in less educated young adults will be needed to boost their employment and earnings potential.

Industry and Occupational Employment Developments in New England, 1989-2002: Implications for Current and Future Workforce Development Policy

Introduction

Most economic analysts view the ability of a state or geographic region of the nation to create new employment opportunities for its residents as a fundamental benchmark measure of its economic success. New job creation is frequently associated with an array of positive economic and social outcomes including increasing the rate of labor force participation and employment among residents, lowering unemployment and underemployment rates, increasing the real earnings and incomes of its workers, and increasing the state's real output.

Knowledge of on-going wage and salary employment developments by industry and occupational category at the state and local level also is indispensable for workforce development policymaking and program planning. Job training and job placement efforts ideally should be targeted upon industries and occupations where employment opportunities are growing and where labor shortages might be expected.

Sectoral training strategies need to be based upon knowledge of job developments within specific industries and the types of skills required by employers in such industries. The labor exchange operations of the Job Service and WIA one stop centers also should be geared to the distribution of available job openings by industry and occupation in local labor markets to match job seekers and job openings more efficiently.

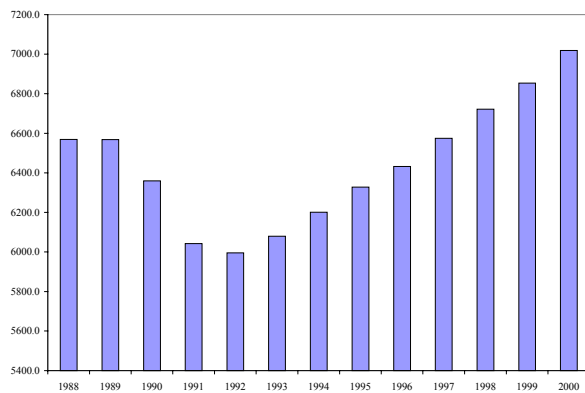
This summary presents an assessment of industry and occupational key findings of employment trends in New England, the

overall educational characteristics of the region's workers, and shifts in the educational characteristics of workers within major occupational groups. This analysis establishes a connection between industry and occupational employment developments and the demand for workers with different levels of formal educational attainment.

Industry and Occupational Employment Developments in New England, 1988-2004

New England experienced substantial job losses between 1989 and 1992, far exceeding those for the nation over the same time period. This period was followed by a struggle over the next five years to regain lost jobs while the national economy generated new wage and salary jobs at a much more rapid pace. Job growth accelerated in the region during the last three years of the 1990s decade. Strong job growth and slow labor force growth propelled New England into an 'over-full' employment situation characterized by very high job vacancy rates, record low unemployment rates, and widespread labor shortages in the region at the end of the decade.

Trends in Total Non Agricultural Wage and Salary Employment Levels in New England, 1988 to 2000 (Numbers in 1000s)



The New England economy’s recovery from the recession of the early 1990s was highly unbalanced. The 1992 to 2000 period of economic expansion in the region saw continuing job losses in the manufacturing sector and the failure of the construction sector to recover all of the wage and salary jobs lost during the recession despite rapid rates of job growth. Offsetting these adverse developments in New England’s good’s producing sector were rapid gains in employment in the region’s private service industries.

Trends in Non Farm Wage and Salary Employment in New England by Major Industry Group, 1992-2000 (Annual Averages, in 1000s)

Industrial Sector	1992	2000	Absolute Change	Relative Change
Mining	2.6	2.9	0.3	11.3%
Construction	181.9	281.5	99.6	54.8%
Manufacturing	1,094.4	1,015.1	-79.3	-7.2%
Transp., comm., utilities	253.3	299.6	46.3	18.3%
Trade	1,372.2	1,599.5	227.4	16.6%
FIRE	430.0	478.2	48.3	11.2%
Private services	1,797.1	2,377.5	580.4	32.3%
Government	863.6	963.4	99.9	11.6%
Total	5,995.6	7,018.4	1,022.9	17.1%

- Employment within the region’s private service industries increased by more than 580,000 jobs between 1992 and 2000. This sector accounted for 57 percent of the net payroll employment increases in the region over the above time period. This gain was in addition to the 77,000 additional jobs created in private services industries during the recession between 1989 and 1992.
- The trade sector created 227,000 net new jobs between 1992 and 2000, offsetting the previous loss of 176,000 jobs during the recession and resulting in 51,000 new positions since 1988.
- Between 1989 and 2000, New England added about 450,000 jobs, with nearly all of this increase generated by growth in private services (657,000), government (85,000), and retail trade (51,000).
- The New England’s region’s job creation performance over the entire 1988 to 2000 period was quite poor compared to other regions of the nation. Wage and salary employment in the nation increased by 26.5 million between 1988 and 2000 while New England added 454,000 payroll jobs, capturing just 1.7 percent of all the new jobs created in the nation. Employment in the U.S. increased by more than 25 percent over this twelve-year period while the pace of job growth in the region was only about one quarter the national pace.
- The Rocky Mountain region had especially rapid rates of new job creation during this time period. In 1988, the Mountain region had about four-fifths of the number of jobs in New England region. By 2000, employment in the Mountain region was one fifth greater than that of New England. The Mountain

region's employment growth rate of 56.6 percent was 8 times as high as that of New England over the same period of time.

Trends in Non-Farm Wage & Salary
Employment in the U.S. by Division, 1988-2000
(Annual Averages in 1000s)

	1988	2000	Absolute Change	Relative Change
New England	6,569	7,018	449	6.8%
Mid Atlantic	16,878	18,322	1,444	8.6%
E. N. Central	18,179	22,177	3,998	22.0%
W. N. Central	7,689	9,861	2,172	28.2%
S. Atlantic	18,869	24,597	5,728	30.4%
E. S. Central	5,928	7,639	1,711	28.9%
W. S. Central	10,185	14,001	3,816	37.5%
Mountain	5,420	8,490	3,070	56.6%
Pacific	15,700	19,639	3,939	25.1%
U.S.	105,202	131,719	26,517	25.2%

- The industrial pattern of job growth and decline in New England over the 1988 to 2000 period had powerful impacts on the occupational mix of new employment opportunities and the educational attainment levels of the employed. Staffing patterns of many private service and government employers are dominated by executive, administrative and managerial workers as well as by workers in professional skill areas.
- Over the entire 1988 to 2000 period, employment of workers in these two occupational fields increased rapidly. Executive, administrative and managerial employment in the region increased by nearly 193,000 or 21% while employment among professional workers increased by more than 200,000, or 19%. Both of these growth rates were five times as high as that for workers in all occupations in the region.

- Private service firms also utilize substantial shares of workers in service occupations, jobs that frequently require lower educational levels, including occupations such as food service workers, parking lot attendants, security guards, and janitors. The substantial expansion of employment in the region's service sector resulted in an above average rise in employment of workers in service occupations over the 1988 to 2000 period.

Trends in Employment in New England by
Major Occupational Group, 1989-90 to 2000-01

Occupational Group	1989-90	2000-01	Absolute Change	Relative Change
Exec., Admin., Manag.	905,348	1,098,141	192,793	21%
Professional	1,031,567	1,232,514	200,947	19%
Technical	227,964	215,074	-12,890	-6%
High level sales	453,786	445,339	-8,447	-2%
Low level sales	227,490	189,890	-37,600	-17%
Admin. Support	917,747	827,955	-89,793	-10%
Services	621,124	715,135	94,011	15%
Skilled blue-collar	703,079	682,426	-20,653	-3%
Semi-skilled blue-collar	604,586	500,104	-104,482	-17%
Unskilled blue-collar	135,812	152,625	16,813	12%
Total Employment	5,888,285	6,140,928	252,643	4%

- Reflecting the poor job generating performance of the region's manufacturing sector, employment levels of blue-collar workers fell sharply between the end of the 1980s and 2000. Even among skilled blue-collar workers, employment fell by over 20,000 reflecting the less than full job recovery in the region's construction industry and continued steep job losses in manufacturing employment. Semi-skilled blue-collar jobs also are heavily concentrated in the region's manufacturing sector. Continued long term job losses in the New England manufacturing employment base have led to a loss of more than 100,000 semi-skilled production jobs in the region, sharply reducing middle class incomes for workers with no more than a high school education.

Trends in Employment by Level of Educational Attainment of Workers in New England, 1989-1990 to 2000-2001

Educational Attainment	1989-90	2000-01	Absolute Change	Relative Change
All employed	5,888,285	6,140,928	252,643	4%
High school dropouts	639,712	437,637	-202,075	-32%
High school graduates	2,171,410	1,871,100	-300,311	-14%
Some college	1,160,294	1,569,852	409,559	35%
Bachelor's or higher degree	1,916,869	2,262,339	345,470	18%

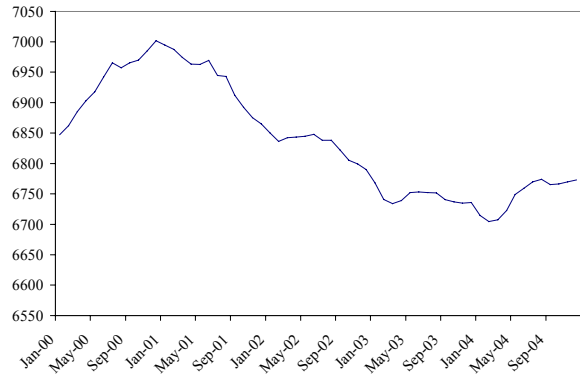
- The transformation of the industrial and occupational structure of employment that took place in New England during the 1990s resulted in a sharp increase in the demand for workers with higher levels of educational attainment, but a sharp reduction in the level of demand for workers with fewer years of schooling, especially among high school dropouts.
- The number of employed persons with some post-secondary schooling increased by more than 750,000 between the end of the 1980s and 2000 while employment levels fell by over 200,000 among high school dropouts and by more than 300,000 among high school graduates.
- Access to high skilled and high paid employment in the region was becoming increasingly associated with completing some type of post-secondary schooling. The earnings gaps between college graduates and high school graduates/dropouts widened over the decade among both men and women.

Employment Changes from 2000-2004

- Beginning in early 2001, the region's economy entered a downturn, and most labor markets once again began to experience employment losses. Between

the first quarter of 2001 and the first quarter of 2004, the New England region experienced continuous job losses, far greater in relative terms than those affecting the nation.

Trends in Non Agricultural Wage and Salary Employment in New England, January 2000 to December 2004, (Seasonally Adjusted)



- In New England, aggregate wage and salary employment levels fell by 277,000 or about 4 percent over this three-year period. In the nation, payroll employment levels fell by just under 2 million, but the relative size of the decline in national employment over these three years was just 1.5 percent. Thus, the rate of job loss in New England over the 2001-I to 2004-I period was 2.6 times as high as that of the nation.
- Since the beginning of 2004, the regional economy has begun to recover some of the jobs lost during the downturn. The region has added about 60,000 wage and salary jobs between 2004-I and 2004-IV, regaining about one-fifth of the jobs lost during the prior three years. In contrast, the nation has added 1.8 million jobs, recovering 90 percent of the employment decline experienced nationally during the recession. Slow job recovery in New England is once again associated with severe losses in the region's manufacturing sector, but also in a

number of high technology services industries.

The Projected Outlook for Employment by Major Industry and Occupational Group, 1998– 2008

- For the region as a whole, total employment was projected to rise 752,000 or nearly 10.8% between 1998 and 2008. This represents an annual average growth rate of slightly over 1.0%, which is well below the 2.0% employment growth rate during the economic boom from 1992 to 2000. Even this more modest growth in projected employment could lead to labor shortage problems in some parts of the region due to slow projected labor force growth.
- The nation is projected to add 20.3 million jobs over the same time period, representing a 1.4 percent annual rate of growth.
- Projections of employment growth by major industrial sector in New England for the 1998-2008 period range from declines of 4 percent in mining and six percent in manufacturing to growth rates of 7 percent in construction, 10 percent in finance/insurance/real estate, 14 percent in agriculture, forestry, and fishing, and slightly over 20 percent in private services.
- The high share of projected employment growth in the service industries of New England should have very favorable effects on the employment of workers in professional and paraprofessional occupations, given the very intensive use of such workers by employers in the service industries.
- Projected estimates of employment levels in New England in 2008 vary considerably by major occupational group, ranging from lows of 3 to 4 percent for blue-collar and administrative support workers to highs of 13 percent for service workers and 20 percent for professional, paraprofessional, and technical workers. Workers in professional and technical occupations are projected to account for nearly half (46%) of all job growth in the region between 1998 and 2008. As was true of the 1990s, the region's occupational employment structure would shift toward professional and service occupations and away from blue-collar and clerical-related positions under these projections.
- Overall, the U.S. economy was projected to create jobs at a faster rate than the New England economy over the decade. However, the pattern of projected job growth rates for major occupational groups in the U.S. is quite similar to that for New England.
- Both nationally and regionally, the occupational employment structure is projected to tilt toward professional and service occupations over the decade at the expense of blue-collar and clerical/administrative support jobs. The highly variable skill and educational requirements of professional and service occupations have been accompanied by a high degree of wage and earnings inequality between these two sets of workers. In 2000, the median annual earnings of full-time, year-round professional workers in the U.S. were \$45,000 versus only \$20,000 for service workers. In the absence of a substantive reduction in inter occupational wage differentials in the near future, the shifting occupational employment structure will likely add to wage and

earnings inequality in the U.S. and the region.

Implications for the Workforce Development System

A summary of the implications of the above findings for the future workforce development system of New England is presented below.

- The changing industrial structure of employment in New England together with the impacts of technological change, corporate restructuring, and outsourcing in the workplace will alter the region's occupational structure of employment over the decade. The fastest growing sets of occupations are projected to be in professional/technical and service occupations while employment of semi-skilled blue-collar workers is projected to increase only modestly. A majority (55%) of all net new jobs created over the 1998-2008 period would be in the professional/technical/managerial occupations, and nearly another 20 percent would be in service occupations. The high projected share of new jobs in the college labor market should boost the demand for workers with at least some college education, especially associate and bachelor degree holders, but there is greater uncertainty over the specific occupational composition of these jobs, given recent trends in job displacement, contract employment, and labor outsourcing.
- Ideally, the available CES and ES-202 data on employment developments by major industry in state and selected local labor markets would be supplemented by current job vacancy data that identified the number of available job openings by industry and occupation. Over the past four years, the U.S. Bureau of Labor Statistics has been engaged in a series of demonstration efforts to produce monthly

estimates of job vacancy rates by major industrial sector for the entire U.S. and for four major geographic regions including the Northeast. The national job vacancy data are, however, not available by major occupational group or for the New England region separately. In the past few years, both the state of Maine and the state of Massachusetts had been involved in efforts to produce comprehensive job vacancy statistics for their states and selected substate areas. The Massachusetts job vacancy survey is quite comprehensive and should be replicated in every New England state. Innovative use of vacancy data also could assist in improving the operations of the Wagner-Peyser labor exchange programs and the WIA-funded one stop career centers, the design of job training programs, and the job placement efforts of staff in such programs.

- Finally, there is a need to improve the existing knowledge base on the industries and occupations in which participants in WIA-funded employment and training programs, Wagner-Peyser labor exchange activities, Job Corps programs, Welfare-to-Work programs, and other DOL-funded programs are placed upon termination from the local workforce development system. How do job placements in particular industries and occupations independently influence the post-program employment and earnings experiences of program terminees? Past evaluations of JTPA training efforts in New England revealed the importance of the duration and occupational nature of the training provided. Knowledge of the links between the types of jobs obtained by program terminees and their post-program labor market success would be very helpful in designing future workforce development programs in our region.

Job Growth in New England During the Economic Recovery and Economic Boom from 1992 – 2000: The Case of the Missing 500,000 Workers

Introduction

Assessment of the overall strength of a region's labor markets are frequently based on changes in employment and unemployment levels over time. Employment is measured by three different data sources: the monthly Current Population Surveys (CPS) of households, the Current Employment Statistics program (CES) that measures wage and salary employment in non-agricultural establishments each month, and data on wage and salary employment reported by private firms and public agencies covered by the provisions of federal and state unemployment insurance laws (ES-202).

The employment concepts underlying the CPS household survey's employment estimates are broader in scope than those used in the CES or the ES-202 surveys and, thus, typically yield larger estimates of the number of employed. The CPS employment measures include wage and salary workers, self-employed workers, unpaid family workers, agricultural workers as well as non-agricultural workers, and private household workers. The CES monthly establishment survey only covers wage and salary workers in non-agricultural establishments.

Over the 1992-2000 period, total employment in New England as measured by the ES-202 data base increased by 1.028 million versus an increase of only 512,000 employed persons from the CPS surveys, resulting in a gap of 516,000 net new jobs between these two surveys. This is a relative difference in employment growth of over 100%.

The CPS and ES-202 employment trends in New England were characterized by substantial discrepancies between 1989 and 1992 as well as between 1992 and 2000, with the ES-202 employment data being much more cyclically sensitive than the CPS employment data for the New England region.

The size of the gap between these two employment growth estimates for New England during the 1992-2000 time period is historically unprecedented. It also far exceeds the relative size of the employment growth gaps between these two data series for the nation and other geographic divisions.

This summary present key findings of a more comprehensive analysis of the size of the gaps in these employment growth estimates for the New England region and the six New England states and the role of various labor market and demographic factors in contributing to the size of these discrepancies. The workforce development implications of these findings are briefly discussed.

Regional Employment Growth Estimates from the ES-202 and CPS Surveys, 1992–2000

According to ES-202 data, the New England economy created 1.024 million net new wage and salary jobs between 1992 and 2000 while the CPS estimated that number of employed persons in New England rose by only 512,000 over the same time period.

- The ES-202 employment growth estimates were higher than those of the CPS in each New England state, with

very large gaps prevailing in the three southern New England states.

- The ratios of the change in ES-202 employment to the change in CPS employment were higher than that of the nation in 5 of 6 states in the region.
- The three southern New England states ranked among the top seven states in a ranking of all states based on the ratio of the change in ES-202 employment to the change in CPS employment between 1992 and 2000. Vermont and Maine ranked in the upper half of the distribution while New Hampshire's ratio of 1.30 ranked only 32nd highest.

Estimated Increases in CPS Employment and ES-202 Employment by State in New England, 1992 to 2000 (Numbers in 1000s)

State (Rank among all states in parentheses)	Employment Change, 1992- 2000		Ratio of ES-202 employment change to CPS
	CPS	ES- 202	
CT (1 st)	28	170	6.07
RI (2 nd)	9	48	5.60
MA (7 th)	278	542	1.95
VT (20 th)	34	50	1.47
ME (23 rd)	62	87	1.40
NH (32 nd)	101	131	1.30
New England	512	1,028	2.01
U.S.	16,670	22,505	1.35
New England's rank out of 9 divisions			First

- A comparison of the findings for all nine divisions across the nation reveals that New England's ratio of the ES-202 to CPS employment change was the highest and substantially exceeded that for the entire nation (2.01 vs. 1.35).

- New England's experience in the 1990s also stands as unique in comparison to the region's experience in the 1980s. The gaps between these two sets of employment estimates grew strongly between the 1980-1989 and the 1992-2000 time periods within every state in the region, especially in the three Southern New England states, but also in Maine and Vermont.

Potential Sources of the Gap Between the ES-202 and CPS Employment Growth Estimates for the New England Region

(i) Growth The number of multiple jobholders.

- Changes in multiple jobholding has been identified by earlier national studies as the main factor underlying differences between CES and CPS employment growth estimates. A person holding multiple jobs is counted only once in the CPS survey but could be counted two or more times in the CES survey. An increase in the number of multiple jobholders will typically increase the CES employment count but not the CPS count, creating a gap in favor of the CES survey.
- This explanation does not seem to hold for New England. The multiple jobholding rate for New England workers remained unchanged over the 1994-2000 period. However, the increase in the number of employed residents over the past eight years would have modestly increased the total number of multiple jobholders. Applying the 2000 multiple jobholding rate to the growth in the number of employed residents in New England between 1992 and 2000 yields an estimate of 34,000 additional multiple jobholders. This increase in multiple jobholding, however, represents at most only 7 percent of the gap between the

employment growth estimates of the ES-202 and CPS employment surveys for our region. It, thus, cannot explain any substantive share of the regional gap between the CES and CPS employment growth estimates in the 1990s.

(ii) Growth in the number of self employed persons.

The CPS survey includes all self-employed individuals in its count of the employed. The CES survey and the ES-202 data do not include the self-employed unless they became incorporated and are employed as salaried officers of their companies. If the number of self-employed in the region rises over time, this would increase the CPS employment count, but would not raise the CES payroll estimates, creating a gap in favor of the CPS survey.

- Over the eight-year period between 1992 and 2000, self-employment in New England increased from 521,000 to 540,000, a net gain of 19,000 which would have raised CPS employment growth estimates above those generated by the ES-202 or CES employment series. However, the rise in self-employment only widens the unexplained gap between the ES-202 and CPS employment growth estimates for the region.

(iii) A change in the number of unpaid family workers.

The CPS employment count includes unpaid family workers; i.e., employed persons working 15 or more hours per week in a family-owned business without pay. Such workers are not counted as employed in either the CES survey or in the ES-202 employment data.

- Between 1990 and 2000, the estimated number of unpaid family workers in New

England fell from 18,300 to 14,500, a decline of nearly 3,800 or 21%. Even if we assume that all of these former unpaid family workers shifted into the ranks of the wage and salary employed, they could not have accounted for as much as one percent of the gap between the employment growth estimates of the ES-202 and CPS surveys for New England.

(vi) The number of employed 14- to 15-year olds in wage positions covered by unemployment insurance laws.

The CPS surveys only collect monthly data on the labor force status of working-age individuals; i.e., persons 16 and older in the civilian non-institutional population. Youth between 14 and 15 years old who work will be included in the CES and ES-202 employment counts if they hold non-agricultural wage and salary jobs covered by the unemployment insurance laws. These individuals would not be counted among the employed by the CPS survey.

- The estimated number of employed 14-15 year olds in New England increased from under 50,000 in 1990 to over 60,000 in calendar year 2000, representing a gain of nearly 11,000 such workers over the decade. Even if we assume that all of this growth took place between 1992 and 2000 and all held wage and salary jobs covered by the CES surveys, the increased numbers of 14-15 year olds could only account for a small portion of the remaining gap between the ES-202 and CPS employment growth rates.

(v) Underestimates of the size of the working-age population

The national, regional, and state employment estimates from the CPS surveys are based on a sample of households. To convert findings from the sample of

households to population estimates of the resident civilian labor force and employed, the U.S. Bureau of Labor Statistics relies on independent estimates of the working-age population provided by the U.S. Census Bureau. If the Census Bureau underestimates the size of the region's (or a state's) working-age population, then the CPS employment estimates for that region will be too low and will create a gap between the CPS and CES employment growth estimates over time.

- The 2000 Census found a working-age population in New England that was 228,000 or 2.2% higher than that earlier estimated by the U.S. Bureau of Labor Statistics.
- The 2000 Census found a resident, civilian labor force in New England that was 180,000 greater than in 1990. In comparison, the civilian labor force estimate from the 2000 CPS surveys was only 49,000 higher than those from the 1990 CPS surveys, a civilian labor force change that was 131,000 below that of the decennial Censuses.
- Despite the higher estimates of growth in the civilian labor force from the 2000 Census compared to that of the CPS (131,000), the 2000 Census estimate of employment growth over the decade was only 23,000 higher than the CPS estimate of employment growth over the same time period. The 2000 decennial Census found a much higher level of unemployment in New England than the CPS surveys did. Most of the higher labor force growth found by the 2000 Census was, thus, attributable to higher unemployment.
- The regional unemployment rate from the 2000 Census was nearly 4.8% versus a 2.8% unemployment rate for calendar

year 2000 from the CPS. The size of the gap between these two unemployment rate estimates for New England was much higher than that for the nation. This raises a number of very important questions about the accuracy of the CPS unemployment rate estimates for our region, which can have an adverse effect upon the level of federal resources devoted to New England from various workforce development programs, including those funded under the Workforce Investment Act, that rely on allocation formulas which use state and local unemployment data.

Reconciling the Gap Between the Employment Growth Estimates of the ES-202 and CPS Surveys for New England

Taking into account all of the above adjustments to the gross gap between the ES-202 and CPS employment growth estimates, we are still left with an adjusted gap of 463,000, which is only 10% less than that of the unadjusted gap.

Reconciling the Gap Between the ES-202 and CPS Estimates of Employment Growth in New England, 1992 to 2000

Gap or Adjustments to Gap	Size
Existing gap between ES-202 and CPS employment growth estimates	516,000
- Increase in multiple job holding between 1992 and 2000	34,000
+ Increase in self-employment between 1992 and 2000	19,000
- Reduction in the number of unpaid family workers	4,000
- Increased wage employment among 14 – 15 year olds	11,000
- Increased resident employment found by 2000 Census	23,000
= Adjusted size of gap between ES-202 and CPS employment growth estimates	463,000

- The size of the unexplained gap between these two employment growth estimates is extraordinarily large and historically unprecedented. What other factors might account for this large unexplained gap?

Possible Sources of the Remaining Large Discrepancy Between the ES-202 and CPS Employment Growth Estimates

(i) 2000 Census underestimates of the working-age population and resident employed population of New England, including undocumented immigration.

Nationally, the U.S. Census Bureau has recently estimated that the “net undercount” for the nation’s 2000 resident population was less than .1%, well below the 1.6% estimated undercount for the 1990 Census. Estimates of “net undercount” rates for individual states from the 2000 Census were not available at this time; however, given the relatively low undercount rates for all New England states in 1990, it is highly unlikely that any of the 2000 undercount rates for the New England states will be higher than .1%.

(ii) CPS underestimates of true rates of multiple jobholding among workers in New England in 2000

Higher multiple jobholding rates than currently estimated could explain part of the remaining discrepancy between the CPS and ES-202 employment growth estimates; however, the observed trend in the multiple jobholding rates for New England between 1994 and 2000 closely mirrored that for the nation as a whole. The CPS would have to be underestimating multiple jobholding rates for both the nation and New England. There is no known downward bias in the CPS methodology for estimating multiple jobholding rates.

(iii) ES-202 over-reporting of the number of wage and salary workers on the payrolls of

private and public firms covered by the federal and state unemployment insurance laws

Several state and national LMI analysts have claimed that the increasing use of private payroll firms to prepare the UI reporting forms for many private sector firms may result in some over-reporting of the number of employees on the payrolls of firms to the UI offices. Part of this over-reporting may be attributable to higher rates of job turnover, resulting in workers being covered by overlapping payrolls for two firms. Such over-reporting by anyone firm, however, would not be in the economic interest of any firm since its UI tax liability is dependent in large part on the number of workers on its payrolls and the size of the wage payments to them. Any over-reporting of the number of employees would increase the UI tax liability of these firms.

(iv) CPS underestimates of the true number of “unemployed” workers and overestimates of the number of “employed” workers in 1992

As noted above, between 1989 and 1992, the CES survey revealed a much larger decline in employment in the region than the CPS survey did, a gap of more than 300,000. Despite the steep wage and salary job losses reported in the CES and ES-202 survey, the CPS revealed a much smaller employment decline, keeping the regional unemployment rate surprisingly low.

Some jobless residents, especially well-educated and high skilled workers, may have mis-reported their true labor force status to the CPS interviewers, thereby exaggerating the resident employment count and under-estimating unemployment.

Some of the laid-off professional and managerial workers may have reported

themselves as self-employed rather than unemployed at the time of the 1992 surveys, and others may have obtained part-time irregular work as contract workers, temporary help, or independent consultants.

True resident employment may have actually increased faster over the 1992-2000 period than the CPS data suggest. When the regional economy began to improve after 1992 and New England firms began to add considerable numbers of workers to their formal payrolls, these former part-time employees, consultants, labor contractors, and “ghost workers” shifted their status to full-time, wage and salary workers. The numbers of workers employed part-time for economic reasons declined considerably between 1992 and 2000 and even self-employment fell after 1996. Such shifts in the employment structure would not be captured by the aggregate CPS employment numbers since they do not add to the count of “employed residents”, but they would be reflected in the growth of jobs in the CES establishment survey and the ES-202.

The findings for New England were radically different from those in most other regions of the U.S., reflecting the uniqueness of the region’s labor market conditions in 1989-92. Three other large states that were hard hit by the economic downturn during this time period (California, New Jersey, and New York) also showed similar large gaps between CPS and ES-202 employment changes. This explanation we believe has the greatest potential for accounting for the large gap between the ES-202 and CPS employment growth estimates for the 1992-2000 period.

Implications for Future Workforce Development Policies and Programs

If the above explanations for the large discrepancies between the CPS and ES-202 employment growth estimates for New England at two different points in time over the past 12 years are valid, they have important implications for the region’s workforce development policies and programs in the coming decade

- These findings imply that there was no major under-reported growth in the region’s civilian labor force between 1990 and 2000. Some modest under-estimates did occur as a result of the underestimates of the growth of the working-age population of the region. However, the region faced severe labor shortage problems at the end of the 1990s due in large part to the very limited net growth in its resident labor force over the decade, especially among men and native born workers.
- The high growth of covered wage and salary employment in New England between 1992 and 2000 was made possible by a steep decline in unemployment and the shift of workers out of irregular, informal, off the books, and contract labor positions, often of a part-time and part-year nature, and out of disguised unemployment (the newly self-employed) into regular full-time, wage and salary jobs. During the labor market downturn over the last three years the number of such workers may once again be on the rise.

- By 2000, the region's labor force was more fully employed than at any time in the past 50 years. We simply ran out of available workers, despite the influx of a substantial number of new foreign immigrants. The outlook for labor force growth over the next ten years is also quite limited due to the modest projected growth in the working-age population and the aging of the region's labor force due

to the influx of the baby boomers into their pre-retirement years. Workforce development policymakers need to pay more serious consideration to strategies for boosting the rate of labor force participation among New England residents over the coming decade to bolster the size of the region's labor force.

The Real Output Performance of the New England Economy, 1989-2000

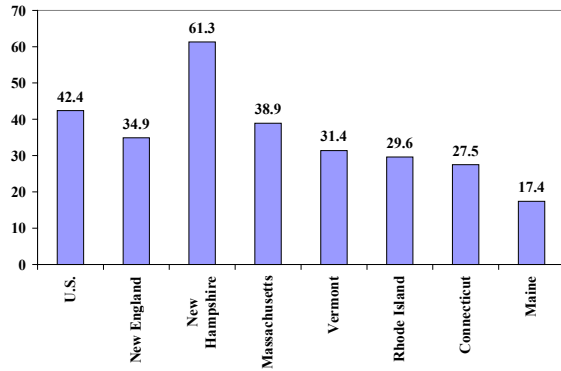
The Gross Domestic Product (GDP) of the nation, which represents the annual domestic output of final goods and services valued at market prices, is viewed as the most important measure of its overall macroeconomic performance. At the regional and state level, the comparable output measures are the Gross Regional Product (GRP) and Gross State Product (GSP). These regional aggregate output measures are influenced by the labor force behavior of the working-age residents of the region, their labor force utilization rates, their annual hours of employment, and their labor productivity; i.e., real output per hour at work. By raising the values of any of the above variables, workforce development programs can help raise aggregate real output and ultimately the living standards of the residents of our region. This section summarizes key findings of our analysis of the real output performance of the New England economy and that of the six individual New England states over the 1989-2000 period.

- The New England region's real output as measured by its Gross Regional Product (GRP) increased from \$407.2 billion in 1989 to \$549.2 billion in 2000, an increase of nearly \$142 billion or 35 percent over this 11-year period

- compared to a 42.4 percent increase for the nation over the same time period.
- As a result of its lower real output growth rate, New England's share of national GDP declined from 6.2 percent in 1989 to 5.9 percent in 2000 and ranked seventh lowest among the nine geographic divisions in the U.S in 2000.
- The annual growth rate of GRP in the New England region during the 1989-2000 period was 2.8 percent, lagging behind the annual GDP growth rate of 3.3 percent during the same time period.
- During the regional recession between 1989 and 1991, real output in the New England region declined by nearly 5 percent while national GDP grew by 1 percent.

Growth rates of GSP varied markedly across New England states during the 1989-2000 period, ranging from lows of 17 percent in Maine and 27 percent in Connecticut to highs of 39 percent in Massachusetts and 61 percent in New Hampshire.

Chart 1:
Growth Rates of Real Output in the U.S., New England, and Individual States in New England, 1989-2000 (Numbers in Percent)

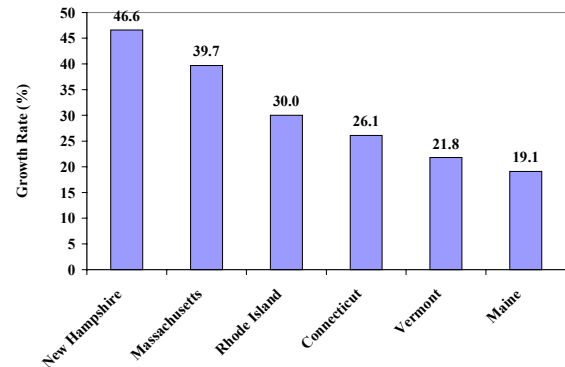


- Due to slower population growth than the nation, the region's per capita output performance over the past decade exceeded that of the nation. Per capita real output in New England region increased from \$30,893 in 1989 to \$39,934 in 2000, an increase of 27.5 percent. New England was the star performer among the nine divisions of the U.S. on this measure, and its rank remained first from the late 1980s through the end of the 1990s. The per capita growth rate of New England exceeded that of the nation by nearly 3 percentage points between 1989-2000 (27.5% versus 24.6%).
- Per capita real output in New England in 2000 was \$6,379 higher than the nation's per capita real output during the same year.
- Per capita real outputs in 2000 among the six New England states ranged from lows of \$26,000 in Maine and \$28,761 in Vermont to highs of \$42,364 in Massachusetts and \$43,884 in Connecticut.

During the economic boom from 1992-2000, the per capita real GSP growth rates in New

Hampshire, Massachusetts and Rhode Island were among the ten best in the country; however, Maine and Vermont lagged far behind the country.

Chart 2:
Growth Rates of Per Capita Output in the States of New England, 1989-2000 (Numbers in Percent)

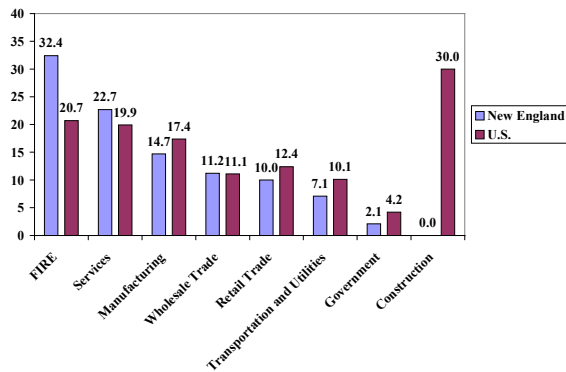


- Within the New England region, the share of Gross Regional Product (GRP) originating from private industries rose from 89.1 percent in 1989 to 91.4 percent in 2000, an increase of 2.3 percentage points; however, the increase in private industries' share of national GDP surpassed New England's increase by 0.6 percentage points.
- In 2000, sixty-five percent of New England's real GRP was produced by the region's finance/insurance/real estate (FIRE), private services, and manufacturing sectors combined compared to a 56.5 percent share for the same sectors in for the entire nation.
- The finance/insurance/real estate sector in New England was the only sector that outperformed the U.S. in the growth rate of its real output during 1989-2000 period. The growth of real output in every other industrial sector lagged behind that of the nation.

- Among the nine major industrial sectors, the FIRE sector in New England accounted for nearly one-third of the growth in the region's real GRP between 1989 and 2000 versus a contribution of only 21 percent of real output growth for that sector in the entire nation over the same time period.
- Over 55% of the region's entire output growth in the 1990s was generated by two industrial sectors: FIRE and private services. Nationally, these same two sectors contributed only 40% of the growth in the nation's GDP. Our region was becoming increasingly dependent on these two sectors for its real output growth, a potentially risky development.

Chart 3:

The Share of Increased Real Output Between 1989 and 2000 Generated by Selected Major Industrial Sectors, New England and the U.S.
(Numbers in Percent)



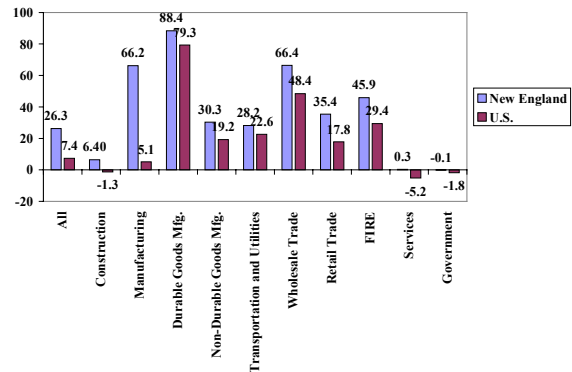
- Between 1989 and 2000, labor productivity growth in New England was quite strong. It substantially outpaced the productivity growth rate of the nation (26% versus 17%) and ranked second highest in the nation among the nine geographic divisions.
- Labor productivity growth rates varied quite widely across major industrial sectors, ranging from 28% in the transportation and utilities sector and 30%

in non-durable manufacturing to 66% in wholesale trade and 88% in durable goods manufacturing. Only three industrial sectors (construction, government, and the private services sector) had labor productivity growth rates below 28% over the 1989-2000 period.

- Labor productivity was the critical source of real output growth in the 1990s in New England. All the gain in real GRP per capita was due to higher labor productivity.

Chart 4:

Growth Rates of Labor Productivity in New England and the U.S. by Industrial Sector, 1989-2000 (Numbers in Percent)



Implications of the Findings for Future Workforce Development Programs in New England

- (i) Due to projected low rates of labor force growth and difficulties in further increasing hours per employed worker, gains in labor productivity (real output per hour of work) in New England will hold the key to future aggregate output growth in the region. Aggregate labor force growth in the New England region, especially in the three southern states, will be quite limited over the current decade, and annual hours of work per employed person has likely reached a peak.

(ii) Gains in labor productivity in New England were heavily concentrated in the durable manufacturing and finance/insurance/real estate sectors. These two sectors have experienced employment declines in the most recent time period (2000-2003) and will likely have difficulties in matching their very strong past productivity gains during coming decades. Future productivity gains will have to come from private services, construction, and retail trade. These three sectors will likely hold the key to future economic growth and future wage growth.

(iii) Workforce development programs should focus more intensively on boosting productivity growth through upgrading the occupational skills and technical abilities of incumbent workers. The provision of technical/occupational, basic education, and soft skills training to incumbent workers can help raise productivity. Higher productivity, in turn, should help improve the real wages and earnings of New England workers, thus, allowing more uniform wage gains across key earnings subgroups and preventing a further rise in earnings inequality in the future. There is a clear need, however, to improve our capacity to evaluate the impacts of incumbent worker training programs on workers' productivity, their real wages, and earnings.

Unemployment Developments in New England from the Late 1980's to 2003; An Overview and Assessment of Their Implications for Future Workforce Development Policies and Programs in Our Region

Introduction

Knowledge of state and local unemployment problems is indispensable for the effective planning and implementation of many workforce development programs. Since their inception in the early 1960s, many workforce development programs in the U.S. were aimed at reducing the incidence of unemployment problems among various groups of workers either by preventing their entry into the ranks of the unemployed in the first place or by speeding up the re-employment process for those who became unemployed, thereby reducing the durations of unemployment experienced by the unemployed. Key findings of our analyses of the changing levels, character, and composition of the unemployed in the New

England from the late 1980s through 2003 are presented below.

- A careful review of employment and unemployment developments in the New England region since the late 1980's reveals a number of substantial cyclical swings, frequently exceeding those for the nation as a whole. During the full employment conditions prevailing from the mid to late 1980s, the New England region's unemployment rate was below 4%, ranking lowest in the country. By 1988, the region's unemployment rate had plummeted to 3.1%, nearly 2.5 percentage points below that of the nation. The region, however, faced a severe economic downturn beginning in early 1989 and lasting through 1992. The

unemployment rate of New England rose sharply during the 1989-1992 period, reaching 8% in 1991, the highest among the nation's nine geographic regions. The region's unemployment rate, thus, went from last to first.

- The national economic recession ended in March 1991. While the New England region's economy initially lagged somewhat behind the recovery of the nation, it created one million net new wage and salary jobs between 1992 and 2000. The high levels of job growth combined with modest labor force growth brought down the region's unemployment rate to 2.8% in calendar year 2000, the lowest unemployment rate among the nine geographic divisions of the U.S. during that year. The region's ranking in unemployment rate, thus, shifted from first to last over the decade.
- During the late 1980s, each New England state experienced lower unemployment Rates than the nation. Five of the six New England states fell in the bottom fifth of the unemployment rate distribution in the late 1980s. During the regional recession in the late 1980s, each New England state experienced sharply higher unemployment rates. From 1992 through 2000, unemployment rates in each New England state would fall steadily and steeply. (Table 1). By 2000, five of the six New England states had achieved unemployment rates below the national average, and Rhode Island's rate was statistically identical to that of the nation (4.1% versus 4.0%). In 2000, four New England states (Connecticut, Massachusetts, New Hampshire, and Vermont) had unemployment rates between 2.3 and 2.9 percent, ranking them among the eight lowest unemployment rate states in the entire country.

Table 1:
Trends in Unemployment Rates in the U.S. and
New England, and Individual New England
States, 1989-2000 (Annual Averages, in %

Geographic Region	1989	1992	2000
U.S.	5.3	7.5	4.0
New England	3.8	8.1	2.8
Connecticut	3.7	7.6	2.2
Maine	4.1	7.2	3.5
Massachusetts	4.0	8.6	2.6
New Hampshire	3.5	7.5	2.8
Rhode Island	4.1	9.0	4.1
Vermont	3.7	6.7	2.9

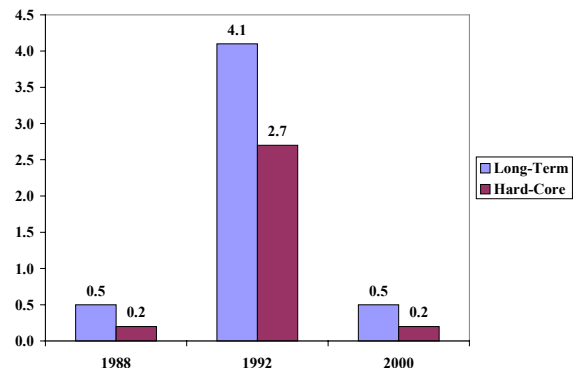
- The steady drop in unemployment levels and the rates in the New England region between 1992 and 2000 was fueled by a combination of the creation of a substantial number of new wage and salary jobs (nearly 1 million) and limited growth in the region's labor force (144,000). There were only 200,000 unemployed persons in a typical month during calendar year 2000, down from 562,000 in 1992, representing a nearly two-thirds decline.
- In 1992, the estimated annual average number of unemployed dislocated workers in the New England region was 294,000, but by 2000, their number had fallen to only 66,000, a more than 75% reduction. The nature of unemployment problems in New England changed markedly over the decade. Unemployed workers who were permanent job losers declined sharply over the decade.
- At the peak of the regional labor market boom in the late 1980s, only 17 percent of the unemployed in New England were out of work for 15 or more consecutive weeks and the long-term unemployment rate (the number of unemployed for 15 or more weeks as a percent of the labor force) was

only .5%. The hard-core unemployment rate (those unemployed for more than six months) in 1989 was only .2%. However, by 1992, a slight majority of the unemployed in New England were long-term unemployed and nearly one-third were out of work for 27 weeks or longer. The long-term unemployment rate (those unemployed for 15 or more weeks as a percent of the labor force) in New England in 1992 rose to 4.1%, nearly eight times higher than in 1988.

- As the New England economy began to recover from the severe regional recession in 1992, unemployed persons found it easier to obtain jobs, and the average duration of unemployment spells declined sharply. In 2000, less than one-fifth of the much smaller number of unemployed persons in New England were out of work for 15 or more weeks, and the long-term unemployment rate in the region had declined to .5%. The hard-core unemployment rate fell from 2.7% in 1992 to .25% in 2000, a 90% reduction in this key unemployment rate. During the super full-employment year of 2000, only 1 in every 400 members of the New England labor force had been unemployed for more than six months, a low for the past 30 years for which such data were available.
- The average duration of unemployment in New England in 2000 was 15.2 weeks compared to 17.4 weeks for the entire nation.
- The unemployment rates in New England in 2000 varied widely by age group, ranging from lows of 2.5 percent among 45-64 years old to high of 13.1 percent among 16-19 years old.
- Unemployment rates also varied considerably by educational attainment

level of the unemployed. In New England in calendar year 2000, unemployment rates were highest for high school dropouts (9%) and lowest for persons with college degrees (1.8%).

Chart 1 :
Trends in Long-Term and Hard-Core
Unemployment Rates in the New England
Region, 1988, 1992, and 2000
(Numbers in Percent)



- Between 1992 and 2000, unemployment rates of New England workers declined substantially in each major occupational group. Rates of unemployment in 2000, however, were far from uniform across major occupational groups.
- During calendar year 2000 in New England, unemployment rates tended to vary fairly considerably across major occupational groups, with professional and management related workers typically facing the lowest unemployment rates (1.5%) while semi-skilled operatives/fabricators/ machine tenders and laborers/cleaners/ helpers confronted the highest unemployment rates (11.3%).
- The long labor market boom of the 1990s came to an immediate halt in both the U.S. and New England during the early winter of 2001 and the incidence of unemployment problems increased

steadily in both areas between 2000 and 2003. The aggregate number of unemployed persons in the U.S. increased by more than 3 million between 2000 and 2003, thereby raising the unemployment rate from 4% in 2000 to 6% in 2003. In the New England region, the total number of unemployed persons increased by 207,000 over the same time period, more than doubling the region's unemployment rate from 2.6% to 5.4%.

- Each state in the New England region experienced double-digit growth in the number of unemployed persons and its unemployment rate between 2000 and 2003. (Table 2). The absolute size of the increase in the number of unemployed persons in New England states between 2000 and 2003 ranged from a low of 6,000 in Vermont to a high of nearly 111,000 in Massachusetts.

Table 2:
Trends in Unemployment Rates and the Number
of Unemployed Persons in the U.S., New
England Region, and Individual New England
States 2000 -2003 (Unemployment Rates in
Percent, Annual Averages)

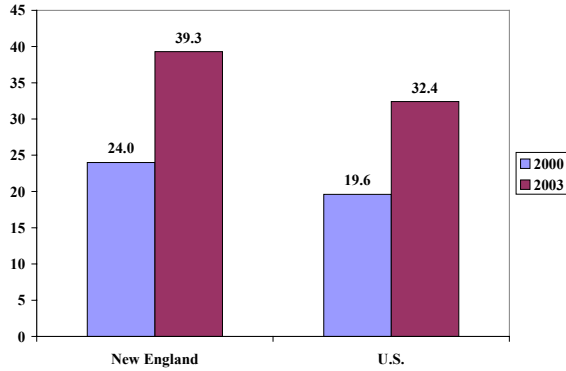
	2000	2003	Absolute Percentage Points Change	Percent Change
Geographic Region				
U.S.	4.0	6.0	2.0	50.2
New England	2.8	5.4	2.7	96.7
Connecticut	2.2	5.5	3.3	144.7
Maine	3.5	5.1	1.6	46.3
Massachusetts	2.6	5.8	3.2	119.5
New Hampshire	2.8	4.3	1.5	54.1
Rhode Island	4.1	5.3	1.2	28.4
Vermont	2.9	4.6	1.7	57.4

Table 2: (Continued)

Unemployed Persons	2000	2003	Absolute Change	Percent Change
Geographic Region				
U.S.	5,686,250	8,776,667	3,090,417	54.3
New England	202,675	409,550	206,875	102.1
Connecticut	40,208	99,192	58,983	146.7
Maine	23,683	35,017	11,333	47.9
Massachusetts	87,642	198,383	110,742	126.4
New Hampshire	19,192	30,725	11,533	60.1
Rhode Island	22,242	30,167	7,925	35.6
Vermont	9,717	16,100	6,383	65.7

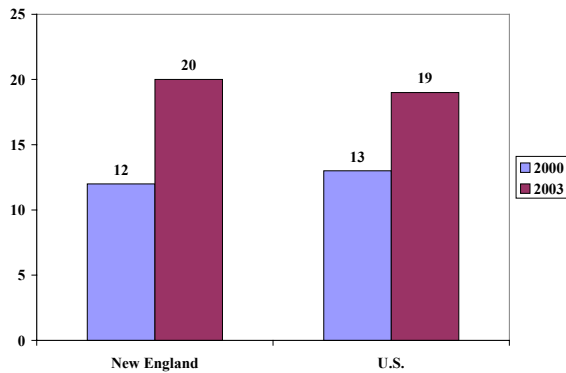
- Between 2000 and 2003, the number of permanent job losers in the New England region increased to 162,000 from just 48,000 in 2000, an increase of 234%, the highest rate of increase among the nine geographic divisions of the U.S. during this time period. The number of permanent job losers in the entire nation increased by 1.74 million or 155% during the same time period. The share of permanent job losers among the total unemployed in the New England region has increased from nearly one-quarter in calendar year 2000 to 39% in 2004 while for the entire nation their share increased from 20% to 32% during the same time period. (Chart 2). A higher share of New England's pool of unemployed were dislocated workers in 2003.

Chart 2:
Trends in the Permanent Job Loser Share of Total Unemployment in the New England Region and the U.S., 2000-2003 (Annual Averages)



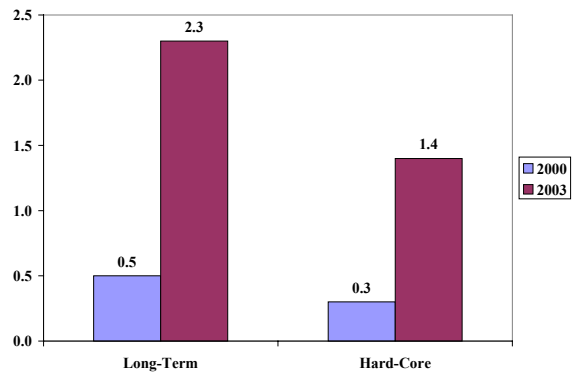
- The mean duration of unemployment spell of New England workers increased substantially after the end of full-employment in 2000. The mean number of weeks spent looking for a job by unemployed New England workers in 2000 was only 12 weeks, one week below the national average. The mean weeks spent on looking for a job by New England workers in 2003 was 21 weeks, one week more than the average duration of unemployment among unemployed workers in the nation.

Chart 3:
Trends in Mean Durations of Unemployment in the New England Region and the U.S., 2000-2003 (Numbers in Weeks)



- In 2003, 41% of all unemployed persons in New England were out of work for 15 or more weeks, and the long-term unemployment rate in the region rose to 2.3%. The hard-core unemployment rate rose more dramatically from .3% in 2000 to 1.4% in 2003, a near five-fold increase. During calendar year 2003, nearly one-quarter of the New England labor force had been unemployed for more than six months. Workforce development policy makers should view this high long-term and hardcore unemployment rate as a troublesome omen since these workers often experience a substantial earnings losses, which further reduces their ability to meet family budget adequacy. These workers also drain the insurance trust fund of their states and often end their unemployment spell by withdrawing from the labor force. If this problem is not addressed, the region will experience a smaller labor force in the future.

Chart 4 :
Trends in Long-Term and Hard-Core Unemployment Rates in the New England Region, 2000-2003 (Numbers in Percent)



Labor Force Underutilization Problems in the New England Region From the End of the Regional Labor Market Boom in 2000 Through 2003

Workforce development policymaking and program planning at the state and local level is dependent upon the availability of both timely and statistically reliable information on the numbers and demographic/socioeconomic characteristics of workers experiencing various types of labor market problems. Such types of information are indispensable for identifying the potential need for workforce development services and the types of services that might be needed to boost their employability and earnings.

This chapter of the Workforce Development Report for New England was primarily focused upon identifying changes in the overall incidence and types of labor market problems experienced by New England workers between calendar years 2000 and 2003. The regional labor market boom reached its peak in calendar year 2000, and labor market conditions in most New England states began to deteriorate in early 2001 as the national and regional economies entered a recession. Deteriorating employment conditions led to a sharp rise in a number of labor market problems in the region over the 2000-2003 period, including growth in the numbers of unemployed and overall unemployment rates, a sharp rise in the number of unemployed dislocated workers, and a substantial increase in the average durations of the unemployment spells faced by these workers.

The review of the changing magnitude and character of unemployment problems was accompanied by an analysis of changes in other types of labor underutilization problems in the region, including underemployment, the rise in the labor force reserve (a type of hidden unemployment

problem), and the decline in multiple job holding. Estimates of the rise in the incidence of a combined set of labor underutilization problems (unemployment, underemployment, and the labor force reserve) were presented for all New England adults and for those in selected educational subgroups.

Another type of underutilization problem involves people working in jobs that do not fully utilize their existing skills or education. This problem often has been referred to as “mal-employment” or “over education” in the human resources literature. The problem of mal-employment is largely ignored by the media, labor market analysts, and even most policy makers. The aforementioned groups should, however, address this type of labor market problem because “mal-employment” or over education reduces the productivity and annual earnings of workers, thereby lowering the nation’s Gross Domestic Product (GDP). Key findings of the analysis presented in this chapter of the Workforce Development Report for New England are summarized below.

- Strong conditions in regional labor markets from the mid 1990s in New England through the end of the decade helped to substantially reduce both the level and rate of unemployment. By 2000, the region’s unemployment rate had been reduced to 2.8%, the lowest in the past 30 years for which regional CPS-based unemployment data were available. However, following the end of the labor market boom in 2001, the number of unemployed persons in the New England region doubled from 201,000 in 2000 to 412,000 in 2003. The growth rate of unemployed persons in New England

substantially surpassed the national growth rate in unemployment (104% versus 55%) during this time period. Within individual New England states, the growth rate in the level of unemployment ranged from a low of 42% in Maine to a high of 144% in Connecticut. (Table 1).

Table 1:
Number of Unemployed Persons in the U.S., New England, and Individual New England States, 2000-2003 (Annual Averages)

State/ Region	2000	2003	Absolute Change	Percent Change
Ct.	39,225	95,867	56,642	144.4
Maine	24,786	35,219	10,433	42.1
Mass.	89,118	202,686	113,568	127.4
N.H.	18,956	30,998	12,042	63.5
R.I.	19,975	30,986	11,011	55.1
Vt.	9,347	16,181	6,834	73.1
N.E. Total	201,407	411,937	210,530	104.5
U.S. Total	5,725,033	8,851,809	3,126,776	54.6

Source: Monthly Current Population Surveys (CPS) public use files, 2000 and 2003, tabulations by authors.

- The types of unemployment problems experienced by unemployed workers in 2003 in our region have changed markedly in a number of key respects from those encountered by their counterparts in 2000, especially in terms of the reasons for unemployment and the average durations of unemployment spells. There has been a steady rise in the number of permanent job losers or dislocated workers in New England in the past three years. These are individuals who became unemployed because their job was permanently eliminated. This group of unemployed workers is frequently referred to in the workforce development literature as “dislocated workers”. The number of unemployed,

dislocated workers in New England more than tripled from 48,000 in 2000 to 162,000 in 2003, an increase of 234% in three years, substantially surpassing the growth rate of 155% in the number of dislocated workers in the entire nation. The growth rates in the number of dislocated workers in individual New England states between 2000 and 2003 ranged from lows of 151% in Rhode Island and 220 % in Maine to highs of 278% in Connecticut and 378% in Vermont. (Table 2).

Table 2:
Trends in the Number of Unemployed Permanent Job Losers in the U.S., New England, and Individual New England States, 2000-2003 (Annual Averages)

State/ Region	2000	2003	Absolute Change	Relative Change
Ct.	10,165	38,446	28,281	278.2
Maine	3,160	10,121	6,961	220.3
Mass.	26,346	85,850	59,504	225.9
N.H.	3,679	13,024	9,345	254.0
R.I.	4,272	10,744	6,472	151.5
Vt.	738	3,527	2,789	377.9
N.E., Total	48,360	161,712	113,352	234.4
U.S., Total	1,123,751	2,869,599	1,745,848	155.4

Source: Monthly Current Population Surveys (CPS), 2000 and 2003, tabulations by authors.

- The changing character of unemployment in New England in recent years has altered the composition of unemployed workers. What percent of all unemployed workers in New England were permanent job losers or dislocated workers in 2003? Findings of our analysis on this issue revealed that 39 percent of all of the unemployed in 2003 were permanent job losers, an increase in their share of all unemployed persons by 15 percentage points since 2000. Four of the six states in New England had a higher share of

unemployment accounted for by permanent job losers in 2003 than the nation (32%). Many of these permanent job losers tend to experience greater difficulties in finding immediate re-employment, thereby lengthening the average durations of their unemployment spells, and they often incur larger wage losses when they do become re-employed. The sharp rise in the number of unemployed, dislocated workers in need of re-employment services also has placed greater strains on the state and local workforce development systems in our region, especially the WIA one stop career centers and Title One dislocated worker training programs.

- Another key characteristic of the unemployment problems faced by workers is the average duration of their on-going spells of unemployment; i.e., the consecutive number of weeks that they have been unemployed. The “average” duration of unemployment spells can be measured in two different ways: the median or the mean duration. These two measures frequently differ quite substantially since the probability of re-employment falls with the duration of unemployment. In both New England and the U.S., the mean duration of unemployment spells has typically been twice as high as the median duration in recent years. For example, in 2003, the median duration of unemployment spells in New England was only 11 weeks versus 20 weeks for the mean duration.
- In New England, the median and mean durations of on-going unemployment spells have nearly doubled over the past three years. In calendar year 2000, the mean duration of unemployment spells in New England was only 11 weeks; however, by 2003, the mean duration had risen to 20 weeks. All states in New

England experienced increases in their mean durations of unemployment, indicating greater difficulties faced by the unemployed in securing re-employment due to deteriorating labor market conditions over the past three years.

- Underemployment problems in New England (persons employed part-time for economic reasons) had declined considerably during the labor market boom from 1992 to 2000. By 2000, only 128,000 workers were working part-time for economic reasons each month, accounting for only 1.8 percent of all employed workers. Underemployment problems between 2000 and 2003 intensified in New England and each individual state. The annual average number of workers employed part-time for economic reasons increased from 128,000 in 2000 to 206,000 in 2003, a 61% increase versus a 47% rise in underemployment for the entire nation over the same time period. The share of employment attributable to underemployed workers rose to 2.9% in 2003. The growth rates in the number of workers employed part-time for economic reasons between 2000 and 2003 ranged from lows of 18 percent in Maine and 19 percent in Vermont to highs of 52 percent in Rhode Island and 154 percent in Connecticut. (Table 3).

Table 3:
Comparisons of the Number of Persons
Employed Part-Time for Economic Reasons in
the U.S., New England, and Individual New
England States, 2000 and 2003
(Annual Averages)

State/ Region	2000	2003	Absolute Change	Percent Change
Ct.	23,922	60,770	36,848	154.0
Maine	20,224	23,901	3,677	18.2
Mass.	54,825	80,612	25,787	47.0
N.H.	11,061	15,931	4,870	44.0
R.I.	10,267	15,570	5,303	51.7
Vt.	7,867	9,361	1,494	19.0
N.E., Total	128,166	206,145	77,979	60.8
U.S., Total	3,194,478	4,705,717	1,511,239	47.3

Source: Monthly Current Population Surveys (CPS), 2000 and 2003, public use files tabulations by authors.

- A third type of labor underutilization problem involves those workers who want a job but are not actively looking for work and, hence, are not classified as unemployed. This group of potential labor force participants is referred to as the labor force reserve. The labor force reserve in New England rose from 144,000 in 2000 to 183,000 in 2003, a 33% increase over this three-year time period, surpassing the national growth rate for this group during the same time period (9%). (Table 4). The growth rates in the labor force reserve in individual New England states ranged from 9 percent in Maine to 63 percent in Connecticut. The labor force reserve increased most strongly in those states characterized by a more substantial rise in unemployment. This evidence clearly indicates that depressed labor market conditions in the region in recent years have discouraged a growing number of working-age adults from actively looking for work. There is, thus, a growing pool

of jobless persons in the region whose numbers are not captured by the official unemployment statistics. Some of these individuals could benefit from employment and training services.

Table 4:
Size of the Labor Force Reserve in the U.S.,
New England, and Individual New England
States, 2000 and 2003 (Annual Averages)

State/ Region	2000	2003	Absolute Change	Percent Change
Ct.	33,046	53,717	20,671	62.6
Maine	17,177	18,741	1,564	9.1
Mass.	56,047	74,254	18,207	32.5
N.H.	12,788	14,708	1,920	15.0
R.I.	13,065	16,467	3,402	26.0
Vt.	8,390	8,446	56	0.7
N.E., Total	140,513	186,333	45,820	32.6
U.S., Total	3,940,173	4,290,222	350,049	8.9

Source: Monthly Current Population Surveys (CPS), 2000 and 2003, tabulations by authors.

- One can combine the estimates of the number of unemployed, underemployed, and labor force reserve to form a pool of underutilized labor in the region. The underutilized labor force (labor force reserve, working part-time for economic reasons, and unemployed) rose from 470,000 in 2000 to 804,000 in 2003, a nearly 80% increase. The combined pool of New England residents with an underutilization problem as a percent of the region's adjusted labor force (labor force and labor force reserve combined) increased from 6.4% in 2000 to 10.3% in 2003. (Table 5). Thus, more than one in every 10 members of the region's adjusted labor force were experiencing an underutilization problem in 2003. This pool excludes the number of mal-employed individuals.

Table 5:
Number of Labor Force Participants in the New England Region Who Were Unemployed, A Member of the Labor Force Reserve, or Working Part-Time for Economic Reasons, 2000 and 2003 (Annual Averages)

Group	2000	2003
Total Civilian Labor Force	7,168,383	7,610,546
Labor Force Reserve	140,513	186,333
Working Part-Time for Economic Reasons	128,166	206,145
Unemployed	201,407	411,937
Labor Force Reserve, Working Part-Time for Economic Reasons, and Unemployed Combined	470,086	804,415
Adjusted Civilian Labor Force Including the Reserve Members	7,308,896	7,796,879
Percent of the Adjusted Labor Force Who were Unemployed, A Member of the Reserve Labor Force or Working Part-Time for Economic Reasons	6.4%	10.3%

Source: Monthly Current Population Surveys (CPS), 2000 and 2003, tabulations by authors.

- Labor underutilization problems have increased sharply in each New England state over the past three years. The incidence of these underutilization problems, however, varied somewhat across individual New England states. (Table 6). In calendar year 2003, estimated underutilization rates ranged from a low of 8.5% in New Hampshire to highs of about 11% in Connecticut, Maine, and Rhode Island

Table 6:
Percent of Labor Force in the U.S., New England, and Individual New England States Who Were Unemployed, A Member of the Reserve Labor Force or Working Part-Time for Economic Reasons, 2000 and 2003

State/Region	2000	2003	Change
U.S.	8.9	11.8	+3.0
N.E.	6.4	10.3	+3.9
N.H.	6.1	8.5	+2.3
Vt.	7.5	9.5	+2.0
Mass.	6.1	10.0	+4.0
R.I.	8.4	10.8	+2.3
Maine	8.8	11.0	+2.2
Ct.	5.5	11.4	+5.8

Source: Monthly Current Population Surveys (CPS), 2000 and 2003, tabulations by authors.

- The decline in the number of available jobs in our region has adversely affected the number of workers holding multiple jobs. The multiple job holding rate (ratio of number of employed persons holding two or more jobs to the total pool of the employed) declined between 2000 and 2003. The multiple job-holding rate of New England workers declined from 6.8% in 2000 to 5.8% in 2003. This one percentage point decline in the multiple job holding rate in the New England region is equivalent to a drop of approximately 70,000 multiple job holders. Each state in New England experienced some decline in multiple job holding rates between 2000 and 2003, with Connecticut workers faring the worst.

Implications of Findings for Current and Future Workforce Development Policymaking and Program Operations

During the past three years (2000-2003), New England labor markets weakened considerably with all states experiencing job losses, especially Connecticut,

Massachusetts, and New Hampshire. Unemployment levels rose considerably, accompanied by a more than doubling of the number of unemployed, dislocated workers, a doubling of the median and mean durations of unemployment spells, and a sharp rise in the number of underemployed workers and the labor force reserve. The combined underutilization rate (the unemployed, underemployed, and labor force reserve) rose above 10 percent of the region's adjusted, resident civilian labor force in 2003.

This steep jump in the pool of underutilized labor has a number of important implications for the region's workforce development system.

- First, the increased number of unemployed workers, especially dislocated workers, has placed increasing demands on the region's workforce development system, especially the One Stop Career Centers, Wagner-Peyser funded labor exchange services, and WIA Title One programs for dislocated workers. The demand for job placement, training, and re-training services for such unemployed and other jobless workers has far outstripped the increase in available resources for serving such individuals. Despite an influx of funds from the National Emergency Grants Program, training dollars for dislocated and economically disadvantaged adults have fallen far short of available demand for such resources. An innovative search for other funding services to meet the education and training needs of these individuals has become necessary.
- Second, while the demand for job placement assistance has intensified, the number of new job opportunities available to place these job seekers has declined. Information on available job

vacancies, including their occupational and industrial characteristics and their geographic locations across each state, has become more important to assist the job placement services of workforce development agencies. Only the state of Massachusetts continuously operated a formal job vacancy survey in calendar years 2003 and 2004 although Maine and Rhode Island had undertaken ad hoc job vacancy surveys in recent years. More states in our region should be encouraged to undertake job vacancy surveys and to utilize the findings of these surveys to assess the degree to which the job placement efforts of workforce development programs are properly focused on those industries and occupations experiencing the highest job vacancy rates. More efficient matching of the unemployed with available job vacancies could assist in achieving a variety of labor market and economic goals, including a reduction in the number of unemployed, the average duration of unemployment spells, and the average length of time it takes firms to fill vacancies as well as an increase in real output and the quality of services provided by firms experiencing labor shortages.

- Third, the substantial rise in the average duration of unemployment in the region should be viewed as particularly troublesome. The longer the spell of unemployment, the lower is the probability that a jobless worker will become re-employed and the greater the likelihood that he will withdraw from active labor force participation. These labor force withdrawals will reduce the future labor supply in our region and increase burdens on the federal government's and each state's income transfer systems, including the Social Security disability, SSI disability, food

stamps, and Medicaid systems. Older workers (45 and older) are most likely to withdraw from active labor force participation after an unsuccessful attempt to obtain employment during months of job search. As revealed in earlier chapters of this study, the region cannot afford to lose more members of its current labor force. Future labor supply will be quite limited as a consequence of fundamental demographics and severe constraints on increasing labor force participation rates for many subgroups.

- Fourth, in addition to the substantial rise in overall unemployment, the labor force reserve also has increased to a considerable degree in our region, including a large number of 16-24 year olds. The labor market downturn of the past three years has taken a severe toll on job opportunities for the region's teenagers, many of whom have given up looking for work altogether. The WIA one stop centers and the local WIBs should make increased outreach efforts for youth, both in-school and out-of-school, and more aggressively extend job placement assistance on their behalf. More extensive summer job placement services are also needed, given the

deterioration in summer job prospects over the past four years.

- Fifth, in the past few years, additional demands have been placed on the one stop centers in some states to provide job placement assistance to all unemployment insurance claimants. The impacts of substantially increased enrollments on the quantity and quality of services received by one stop center users should be carefully evaluated. How does a higher caseload increase the ability of one stop centers to fill available job openings, provide quality assistance to applicants for services, and improve the ability of applicants to obtain employment through the one stop centers? Are there tradeoffs between an intensive services approach? States should be encouraged to experiment with alternative approaches to services delivery by their one stop centers to estimate the benefits and costs of various registration procedures and service mixes for one stop career centers.

The Downturn in the Summer Job Market for the Region's Teens, 2000-2004: Teen Job Losses and Their Workforce Development Implications

Introduction

Since the initial days of the War on Poverty in the mid-1960's, a number of federally-funded employment and training initiatives were designed to generate summer job and learning opportunities for economically disadvantaged youth. The WIA legislation of 1998 eliminated a separate funding stream for summer job programs but allows youth monies to be used in part to finance summer jobs programs for eligible youth.

The downturn in the regional job market for teens since 2000 likely has adversely impacted the ability of the region's teens to secure employment during the summer months. Thus, a separate analysis of the summer job market (June-August of each year) for the region's teens over the 2000-2004 period was undertaken. Key findings of our analysis are summarized below.

Decline in the Nation’s, Each Geographic Region’s and the New England States’ Teen Summer Employment Rates, 2000-2004

- The nation’s teen summer employment rate (not seasonally adjusted) fell from 52.2 percent in the summer of 2000 to 42.3 percent in the summer of 2004, a decline of nearly 10 full percentage points. This 42.3 percent employment rate for the summer of 2004 was the lowest for the nation’s teens in the past 57 years.
- Every one of the nine geographic regions in the country experienced a decline in their teen employment rate over this time period, with the size of these declines ranging from 5.4 to 12.4 percentage points (Chart 1). The New England region experienced the second lowest percentage point decline, with the teen employment rate falling by only 6.1 points, while the neighboring Middle Atlantic region had the lowest decline, 5.4 percentage points.
- Teens in all six New England states had lower E/P ratios in the summer of 2004 than they had in 2000 (Table 1). New Hampshire teens experienced the most substantial decline, with their E/P ratio falling from 68.2 percent in 2000 to 54.3 percent in 2004, a drop of nearly 14 percentage points. Vermont teens encountered the second largest decline at -9.4 percentage points, followed by Connecticut (-8.8), Rhode Island (-7.7) Massachusetts (-3.6), and Maine (-2.8).

Chart 1:
Changes in the Summer E/P Ratios of 16-19 Year Old Teens Between 2000 and 2004 by Geographic Division (in percentage points)

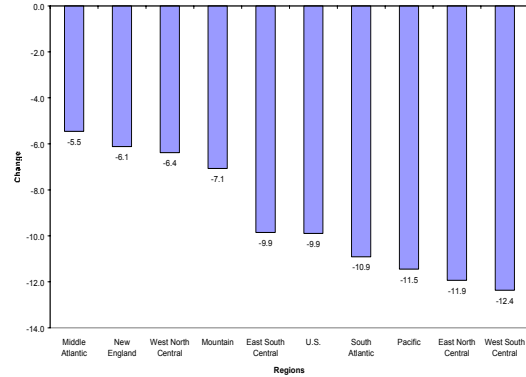


Table 1:
The Employment Rates of New England Teens by State of Residence in the Summers of 2000, 2003, and 2004 (in %)

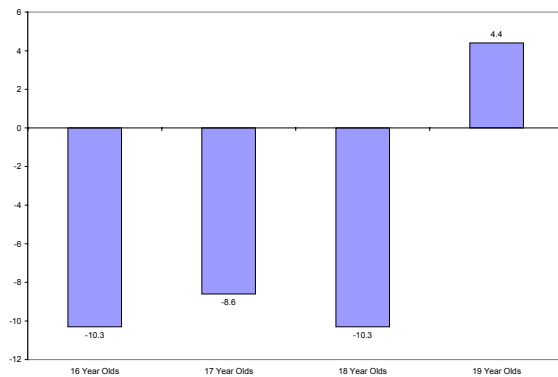
State	(A) 2000	(B) 2003	(C) 2004	(D) Percentage Point Change 2000-2004 (Column C-A)
Connecticut	54.9	48.5	46.1	-8.8
Maine	61.1	56.8	58.3	-2.8
Massachusetts	56.8	49.9	53.2	-3.6
New Hampshire	68.2	57.8	54.3	-13.9
Rhode Island	60.0	57.0	52.9	-7.7
Vermont	69.3	58.8	59.9	-9.4

Who Worked During the Summer of 2004 in New England? Variations in Teen Employment Rates by Age, Race-Ethnic Group, and Household Income

- The 2004 summer E/P rates for teens ranged from a low of 33.8 percent for 16 year olds to a high of 72.3 percent for 19 year olds. When comparing the 2004 E/P ratios to those for the summer of 2000, it can be seen that teens 16-18 years old accounted for all of the decline

in the overall teen E/P ratio (Chart 2). Nineteen year olds in our region actually experienced an increase in their E/P ratio between the summers of 2000 and 2004. In contrast, 16-18 year olds were characterized by very steep declines in their E/P ratios of 9 to 10 percentage points.

Chart 2:
Changes in the Summer E/P Ratios by Single Age Group for New England Teens Between 2000 and 2004 (in Percentage Points)



- Members of each race-ethnic group experienced a substantive drop in their employment rates between the summer of 2000 and the summer of 2004, but the declines were larger for minority youth. The E/P ratio for the region’s White teens fell by 5.5 percentage points versus 8.1 percentage points for Black teens, 11.1 percentage points for Asian teens, and 12.8 percentage points for Hispanic teens. In the summer of 2004, only one of every four Black and Asian teens was employed. The E/P ratios for these two groups were 30 percentage points below that of White teenagers in New England. Slightly more than one of every three Hispanic teens was employed during the past summer, an employment rate that was 22 percentage points below that of White teenagers.

- New England teens living in households with incomes between \$20,000 and \$60,000 experienced the steepest declines in their E/P ratios over the 2000-2004 period. The E/P ratios of teens in these low-middle to middle income families fell by 11 to 14 percentage points.
- Surprisingly, teens with family incomes below \$20,000 actually experienced a slight though statistically insignificant increase (0.7 percentage points) in their E/P ratio. However, only 44 of every 100 such teens worked in the past summer, which was the lowest E/P rate of the five income groups.

Table 2:
The Employment Rates of New England Teens by Household Income, Summers of 2000 and 2004 (in Percentage Points)

Household Income			Percentage Point Change
	(A)	(B)	
Under \$20,000	43.1	43.8	+0.7
\$20,000-\$39,999	62.4	51.3	-11.1
\$40,000-\$59,999	64.9	51.3	-13.6
\$60,000-\$74,999	64.4	66.4	+2.2
\$75,000+	63.4	56.9	-6.5

Estimating the Potential Number of Employed Teens in New England During the Summer of 2004

- Estimates of the additional number of teens in New England that would have been employed during the summer of 2004 are calculated under the following two labor market scenarios:
 - The summer 2004 E/P ratio for teens in each New England state would have been the same as that prevailing in the summer of 2000.

2. New England teens living in families with incomes under \$60,000 in the summer of 2004 would have been employed at the same rate as their peers living in households with incomes greater than \$60,000 in the summer of 2000.

- Under the first scenario, the hypothetical level of employment was 52,000 higher than the actual level of teen employment prevailing during the summer of 2004.

Table 3:
Estimating the Hypothetical Increase in the Number of New England Teens That Would Have Been Employed in the Summer of 2004 if the Summer 2000 E/P Ratio Had Been Maintained In Each New England State

	2000	2000	2004	2004	2004
	Teen	Teen	Teen	Teen	Teen
	Pop.	Employed	Pop.	Actual	Hypothetical
				Employed	Employed
CT	183,137	100,472	190,747	87,880	109,720
Maine	66,980	40,897	68,740	40,095	42,000
Mass.	353,011	200,437	378,488	201,301	214,981
NH	63,276	43,182	80,357	43,606	54,803
RI	47,450	28,467	63,628	33,660	38,176
VT	36,184	25,081	37,297	22,332	25,847
N.E.	750,037	438,536	819,258	428,874	480,527

- Under the second scenario, an additional 17,298 teens living in households with incomes below \$20,000 would have been working in the summer of 2004 as would an additional 1,286 teens with incomes between \$20,000 and \$40,000. The additional increase in teen employment for the two groups combined would have been 18,584. Combining the results for the two scenarios yields an additional 70,000 employed teens.

Implications of the Above Findings for Future Youth Workforce Development Policymaking and Program Administration

The growing summer joblessness problems for New England teens pose a number of important challenges for the region's workforce development system, particularly given reduced funding for youth summer jobs programs by state and local governments as well over the past few years. There are a variety of strategies that local and state WIA agencies may wish to pursue to boost summer job opportunities for the region's teens:

- (i) Work with governors and state legislatures to obtain monies for connecting activities that will utilize staff to work with high schools and private sector firms to place more teens into summer jobs with close ties to paid internships during the school year.
- (ii) Have one stop career centers outreach more aggressively to jobless teens to help them secure summer job opportunities.
- (iii) Have the governors, mayors, and other local officials actively promote the hiring of youth by local businesses during the summer months. Boston Mayor Tom Menino's efforts in this area over the past decade are exemplary and should be replicated across the region.

- (iv) Local WIB's may wish to use part of their WIA youth monies to subsidize the hiring of economically disadvantaged youth by private for profit firms. Disadvantaged teens seem to benefit more from such placements in private firms. Local WIB's also may seek to actively promote the Work Opportunity Tax Credit to employers for the hiring of eligible youth for summer jobs.
- (v) Work closely with employers hiring youth for the summer to integrate summer job opportunities with year-round employment. Economic payoffs from employment during the teen years appear to be more consistently favorable for year-round than for summer only jobs.

The Rising Tide of Wage Inequality in New England: An Assessment of Key Trends in Wage Inequality in Our Region Over The Past Three Decades

Introduction

Since the end of the so-called Golden Era of the U.S. economy in 1973, the degree of inequality in all major national, economic reward distributions has increased. Over the past decade, a burgeoning body of empirical literature has identified the rising degree of inequality and analyzed the sources of growing inequality in the weekly wage, annual earnings, annual incomes, and wealth distributions. Neither the Northeast region nor New England have been exempt from these rising inequality problems.

Given the importance of real weekly earnings from employment for the economic well-being of most New England workers and their families, a separate chapter of the Workforce Development Report for New England was devoted to a study of key trends in the level and distribution of weekly wages in the New England region over the past three decades. Their implications for the future design and implementation of workforce development programs were discussed. The chapter attempted to provide answer to the following three key research questions. How much had wage inequality increased among full-time workers in New England since the end of the so-called

Golden era in 1973? Did the changing degree of inequality vary along the wage distribution or have increases in inequality been fairly uniform between the top, middle, and bottom of the wage distribution? How did the degree of wage inequality in New England in 2002 compare to that of the nation and the other eight major geographic divisions?

All of the weekly earnings measures appearing in this paper are based upon findings of the monthly CPS household surveys. Each month, the U.S. Census Bureau conducts a national household survey for the U.S. Bureau of Labor Statistics that collects data on the labor force and employment status of all working-age household members (16+). The CPS household survey also collects data on the hourly and weekly earnings of a large sample of employed wage and salary workers. Weekly earnings data are not collected from the self-employed, and unpaid family workers are excluded from the analysis. The weekly earnings measures include regular hourly or weekly pay, overtime pay, tips, commissions, and regular production bonuses, but do not include annual profit sharing payments, annual bonuses, or stock options. The reported

wage data are measured pre-tax and before any other payroll deductions. Our analysis of the weekly earnings of New England and U.S. workers is confined to those who worked full-time during the reference week of the survey; i.e., those who were employed for 35 or more hours per week. Key findings of the analysis of the changing weekly wage distribution among New England workers are presented below.

- The median weekly earnings for all full-time, wage and salary workers in calendar year 2002 were \$692, but they ranged from a low of \$192 for those workers at the lowest percentile of the wage distribution to a high of \$2,884 for those at the 99th (top) percentile, a relative difference of fifteen times. The weekly earnings of New England workers at the 95th percentile of the distribution were 5.65 times as high as those of workers at the 10th percentile, the weekly earnings of those at the 90th percentile were 4.52 times as high as those of workers at the 10th percentile and 2.22 times as high as those of workers at the 50th percentile, i.e., the middle of the weekly earnings distribution. In comparison, workers in the middle of the distribution obtained weekly earnings that were slightly more than twice as high as those of their counterparts at the 10th percentile of the distribution (\$692 vs. \$340).

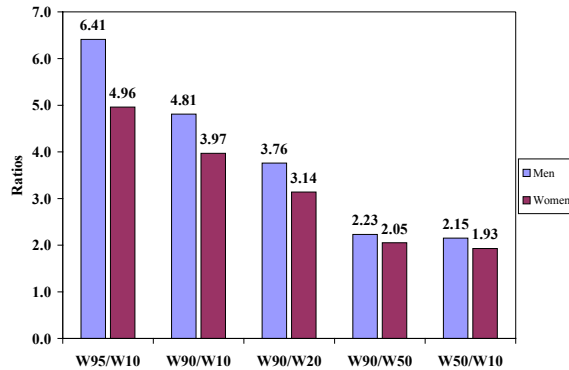
Table 1:
Weekly Earnings of Full-Time Wage and Salary
Workers in New England at Various Points
Along the Wage Distribution, 2002
(Annual Averages)

	(A)	(B)	(C)
Percentile	All	Men	Women
1	192	200	175
5	285	300	264
10	340	360	310
20	420	460	392
30	500	576	450
40	600	673	519
50	692	775	600
60	800	900	682
70	961	1,074	800
80	1,154	1,338	961
90	1,538	1,731	1,230
95	1,923	2,307	1,538
99	2,884	2,884	2,308

Source: Monthly CPS surveys, 2002, tabulations by Center for Labor Market Studies.

In calendar year 2002, there clearly was a high degree of inequality in the weekly earnings distribution for both men and women in New England. However, for every one of the relative wage differentials, the degree of inequality was higher in the male earnings distribution, especially for those inequality measures representing wage differences between those at the top (90th, 95th percentiles) and those at the lower end of the wage distribution (the 10th and 20th percentiles) (Chart 1).

Chart 1:
Relative Wage Differences Among Male and Female Full-Time Wage and Salary Workers in New England at Various Points Along the Distribution, 2002



- Over the 1973-2002 period, the real weekly earnings of full-time, New England workers increased across the board, with the median real weekly wage rising by 21 percent. New England's real wage performance sharply outpaced that of the nation over the same time period, making the region a relatively high wage performer at the end of this period. Yet, the growth rates of the real weekly earnings of New England workers varied considerably across the distribution over the past 30 years. The real weekly earnings of full-time workers at the 10th percentile rose by only 4% while those of workers at the 20th and 30th percentiles increased by 9 to 10%. In contrast, the real weekly earnings of workers at the 80th and 90th percentiles rose by 35 and 40 percent, respectively, while those at the very top of the weekly earnings distribution (95th and 99th percentiles) rose even more markedly.

Table 2:
Trends in the Real Weekly Earnings of Full-time Wage and Salary Workers in New England at Selected Percentiles of the Distribution, 1973 to 2002 (in Constant 2002 Dollars)⁽¹⁾

	(A)	(B)	(C)	(D)	(E)
					Percent Change, 1973-2002
Percentile	1973	1989	1994	2002	
10	328	341	323	340	+4%
20	381	421	413	420	+10%
30	458	487	476	500	+9%
40	487	556	571	600	+23%
50	572	653	672	692	+21%
60	648	722	756	800	+23%
70	762	840	857	961	+26%
80	857	970	1,012	1,154	+35%
90	1,097	1,236	1,338	1,538	+40%
99	1,903	--	2,319	2,883	+52%

Sources: (i) May 1973 CPS survey
(ii) February, March, October 1989 CPS surveys
(iii) February, March, October 1994 CPS surveys
(iv) All 12 months 2002 CPS surveys

Note: For years prior to 1989, the CPI-UX1 index was used to convert nominal weekly earnings into their constant 2002 dollar equivalent.

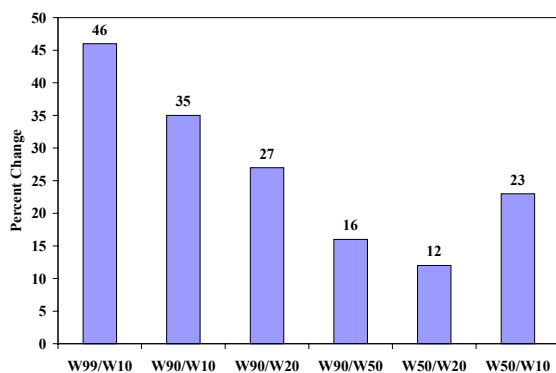
- The primary effect of these substantially divergent weekly earnings trends for workers was to sharply increase wage inequality in New England especially between workers at the top and bottom of the distribution. (Table 3 and Chart 3). For example, the weekly wages of workers at the 99th percentile relative to those at the 10th percentile increased from a multiple of 5.81 in 1973 to 8.48 in 2002, a rise of 46%. The wages of workers at the 90th percentile relative to those at the 10th percentile increased from 3.35 in 1973 to 4.52 in 2002, a rise of

35%. The relative size of the wage gaps between those at the 90th and 50th percentiles were more modest but still of policy significance. These increases in earnings inequality in New England took place in both the 1980s and during the economic boom years from 1994 through the end of the decade. Regional wage inequality has shown no signs of abating in recent years.

Table 3:
Trends in Wage Inequality Among Full-Time Wage and Salary Workers in New England, Selected Years 1973 to 2002

	(A)	(B)	(C)	(D)	(E)
Relative Wage Measure	1973	1989	1994	2002	Percent Change, 1973-2002
W_{99}/W_{10}	5.81	--	7.18	8.48	+46%
W_{99}/W_{50}	3.33	--	3.45	4.17	+25%
W_{90}/W_{10}	3.35	3.62	4.14	4.52	+35%
W_{90}/W_{20}	2.88	2.93	3.24	3.66	+27%
W_{90}/W_{50}	1.92	1.89	1.99	2.22	+16%
W_{50}/W_{20}	1.50	1.55	1.63	1.65	+10%
W_{50}/W_{10}	1.74	1.91	2.07	2.04	+17%

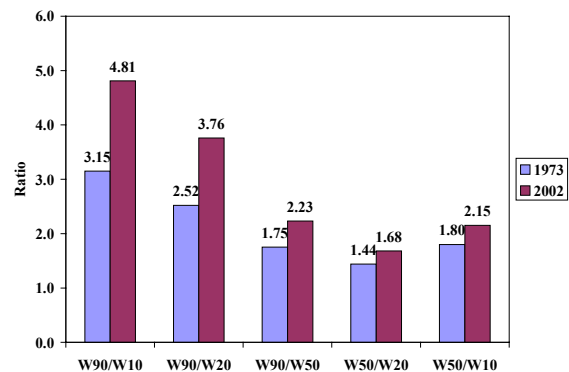
Chart 3:
Percent Growth in Wage Inequality at Various Points Along the Wage Distribution in New England, 1973 – 2002



- There were substantial differences in the weekly earnings growth rates of male workers at various points along the

earnings distribution. These divergent wage trends had profound impacts on the degree of wage inequality among men in the region, especially between males at the upper end of the distribution and their counterparts in the middle and lower ends of the weekly earnings distribution. The size of the wage advantages of male workers at the 90th percentile relative to their counterparts at the 10th and 20th percentiles rose by 50 percent or more while the relative earnings gaps between these high wage earners and their counterparts in the middle of the earnings distribution increased by 27 percent (Chart 4). In 1973, male workers at the 90th percentile obtained weekly earnings somewhat more than three times as high as those of workers at the 10th percentile, but by 2002 the relative earnings difference had increased to nearly five times. Wage inequality among males grew across the entire distribution, but the rise in inequality was smaller between workers in the middle and bottom segments of the distribution.

Chart 4:
Relative Wage Differences Among Male Full-Time Wage and Salary Workers in New England, 1973 and 2002

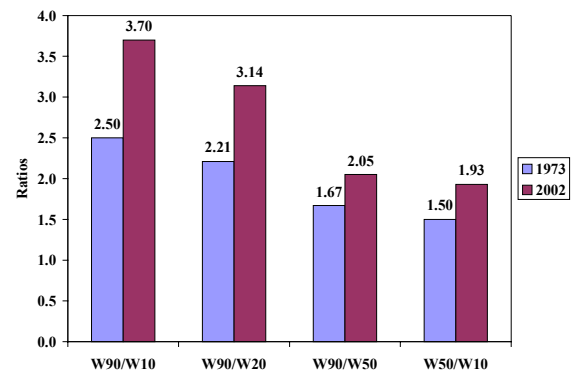


- As was the case among men, women in the highest weekly earnings categories experienced markedly higher wage growth than their peers in the middle and

lower segments of the wage distribution. The real weekly earnings of women at the 90th percentile rose by nearly 70 percent versus a 38 percent growth rate for women in the middle of the distribution and only a 7 percent growth rate for women at the 10th percentile.

- These substantial differences in the growth rates of the weekly earnings of New England women generated a substantial rise in weekly earnings inequality among women between 1973 and 2002, especially between women at the top of the distribution and their counterparts at the bottom of the distribution (Chart 5). In 1973, the weekly wages of New England women at the 90th percentile were only 2.5 times as high as those of women at the 10th percentile, but by 2002 they were nearly four times higher. The relative size of the earnings gap between women at the 90th and 20th percentiles was 2.2 times in 1973, but rose to nearly 3.2 times in 2002. Wage gaps between women at the 50th and 10th percentiles also increased sharply over the same time period. Clearly, wage inequality in New England rose considerably among both men and women over the past three decades.

Chart 5:
Trends in Wage Inequality Among Female Full-time Wage and Salary Workers in New England, 1973 to 2002



- For each of six key wage differentials, the degree of wage inequality in New England was nearly identical to that for the nation as a whole during calendar year 2002. New England’s weekly wage distribution in 2002 was modestly less unequal than the nation’s between the top and bottom segments of the distribution while the wage gaps between workers in the middle and bottom of the distribution were modestly higher in New England than in the nation (Table 4).

Table 4:
Comparisons of Wage Inequality Among Full-Time Wage and Salary Workers in The U.S. and New England, 2002
(Annual Averages)

	(A)	(B)	(C)
Relative Wage Measure	U.S.	New England	New England – U.S. as % of U.S.
W ₉₅ /W ₁₀	5.83	5.66	-3%
W ₉₀ /W ₁₀	4.62	4.52	-2%
W ₉₀ /W ₂₀	3.74	3.60	-2%
W ₉₀ /W ₅₀	2.31	2.22	-4%
W ₅₀ /W ₂₀	1.62	1.65	+2%
W ₅₀ /W ₁₀	2.00	2.04	+2%

- Wage inequality in New England, however, has risen more rapidly than in the nation over the past decade. In 1989, the degree of inequality in New England's weekly wage distribution was lower than that of the nation at each key point of comparison. The more rapid rate of growth in regional wage inequality since 1989, thus, has moved New England from having a more egalitarian wage structure in the 1970s and the late 1980s to a position where its degree of wage inequality is nearly indistinguishable from that of the nation.
- Comparisons of male wage inequality in New England and the U.S. during calendar year 2002 are even less favorable for the region (Table 5). For five of the six wage inequality measures, New England was characterized by a higher degree of wage inequality than the nation. On only the W_{90}/W_{50} wage measure did New England fare modestly better than the nation.

Table 5:
Comparisons of Wage Inequality Among
Male Full-Time Wage and Salary
Workers in the U.S. and New England, 2002
(Annual Averages)

	(A)	(B)	(C)
Relative Wage Measure	U.S.	New England	New England – U.S. as % of U.S.
W_{95}/W_{10}	5.84	6.41	+10%
W_{90}/W_{10}	4.62	4.81	+4%
W_{90}/W_{20}	3.74	3.76	+1%
W_{90}/W_{50}	2.31	2.23	-4%
W_{50}/W_{20}	1.62	1.68	+4%
W_{50}/W_{10}	2.00	2.15	+7%

- The degree of inequality in the female weekly wage distribution in 2002 in New England was very similar to that of the

nation (Table 6). On three of the six wage inequality measures, the differences in the size of the relative wage ratios for the region and the nation were one percent or less (Table 6). On the three other wage inequality measures, the differences were in the three to five percent range with New England faring modestly better than the nation on two of these three measures. Overall, however, the degree of inequality in the female wage distributions in 2002 for the nation and the region was remarkably similar.

Table 6:
Comparisons of Wage Inequality Among
Female Full-Time Wage and Salary Workers in
the U.S. and New England, 2002
(Annual Averages)

	(A)	(B)	(C)
Relative Wage Measure	U.S.	New England	New England – U.S. as % of U.S.
W_{95}/W_{10}	5.04	4.96	-1%
W_{90}/W_{10}	4.00	3.907	-1%
W_{90}/W_{20}	3.29	3.14	-5%
W_{90}/W_{50}	2.13	2.05	-4%
W_{50}/W_{20}	1.54	1.53	0
W_{50}/W_{10}	1.88	1.93	+3%

- The values of key wage inequality measures tended to vary fairly widely and consistently across the nine geographic divisions, with inequality being highest in the Pacific and Middle Atlantic divisions and lowest in the West North Central division of the Midwest and the East South Central division of the South. New England tended to rank in the middle of the regional wage inequality distribution. On four of the five measures, New England fell either right in the middle or in the rank next to the middle.

- We also compared New England's ranking among the nine geographic

divisions on five wage inequality measures for men. New England ranked third highest on four of these five wage inequality measures for men. Not only has male wage inequality within New England risen sharply over time, but it has tended to outpace the degree of male wage inequality that prevails throughout the nation as a whole and for all other divisions except the other two coastal divisions (Middle Atlantic and Pacific).

Findings in this chapter of the Workforce Development Report for New England have revealed that inequality in the weekly wage distribution for New England's full-time, wage and salary workers has been rising steadily over the past few decades, including the regional economic boom from 1993 to 2000. Wage inequality has risen among all workers, men, and women. While inequality has widened all along the wage distribution, the relative wage gaps rose most between workers at the top (80th, 90th, 95th percentiles) and workers at the bottom of the distribution (the 10th and 20th percentiles). New England's weekly wage structure is no longer more egalitarian than that of the nation. By 2002, the degree of inequality in New England's wage distribution was a mirror image of the nation's. Among men, New England was characterized by a greater degree of wage inequality than the nation, and the region typically ranked third highest among the nine geographic divisions in the degree of its wage inequality among males.

- The steep rise in wage inequality in New England over the past two decades has had a number of adverse economic and social consequences. The increased wage inequality has generated rising annual earnings inequality among workers in the region and underlies a major part of the increase in household and family income

inequality. The heightened degree of wage inequality among men has been accompanied by actual declines in the real weekly earnings of men in the bottom quintile (20 percent) of the distribution. This has contributed to a reduction in the labor force attachment of men, especially among younger, older, and less educated males, and contributed to the labor shortages that prevailed in the region at the end of the labor market boom of the 1990s. The poor earnings prospects of lower wage males has reduced their attractiveness as marriage partners and contributed to the decline in marriage rates and the formation of more single parent families, with their adverse implications for family and child poverty in the region.

- In recent years, a variety of policy proposals have been made to address the rising degree of wage and earnings inequality, including proposed increases in federal and state minimum wages and the passing of local living wage ordinances. Policies aimed at reducing wage inequality through increases in federal or state minimum wage laws or local living wage ordinances unfortunately would likely have minimal impacts on the overall degree of wage inequality in New England. During calendar year 2002, only the bottom one percent of full-time workers in New England earned weekly wages at or above the equivalent of the current federal minimum wage of \$5.15. Even a rise in the federal minimum wage to \$6.15 per hour in that year would only have affected the weekly wages of New England full-time workers in the bottom two percentiles of the distribution partly due to higher state minimum wages. Such a rise in the federal minimum wage would not have impacted any of the wage

inequality measures appearing in this chapter of the report. While higher local living wages in the \$8 to \$10 range would have some impacts on the average wages of workers in the bottom decile of the wage distribution, national research suggests that these wage effects are likely to be quite modest and have no significant favorable effects on raising worker or family earnings above the poverty line.

Workforce development programs in New England could potentially play a modest role in combatting future increases in wage inequality in our region. A variety of such strategies would have to be implemented simultaneously to have any measured impacts.

- First, U.S. Department of Labor-funded youth employment and training programs, including Job Corps and WIA, could strengthen the educational attainment, literacy skills, and vocational/technical skills of low income youth, thereby improving their ability to obtain higher market wages.
- Second, WIA Title One programs for adults by combining solid occupational training on and off the job with coordinated efforts to strengthen their literacy and numeracy skills could improve the prospects for participants to successfully complete such training and raise their future productivity, the key to future real wage growth.
- Third, federal and state-funded incumbent worker training programs could help strengthen the ability of existing workers to acquire new skills in their current firms, boost their labor productivity, and their long-term wages.

- Fourth, the U.S. Department of Labor could encourage greater experimentation with employment programs in industries to reorganize internal career ladders so that less skilled workers can take on more duties and responsibilities to bolster their productivity and real wages.
- Finally, there is a critical need to more carefully and rigorously estimate the longer-term wage and earnings impacts of WIA and other workforce development programs and to build a richer regional and state knowledge base on “what works” in raising the real wages and earnings of New England workers. Existing data bases, including the WIASRD system, are too limited in their scope and coverage to answer critical questions on the long-term performance of most workforce development programs, but the data from this system would be an essential element of an impact evaluation system. Recent efforts by the Commonwealth Corporation to estimate the long term employment and earnings impacts of education and training programs for disadvantaged adults should be replicated more widely across the region for a variety of programs. The regional office of the Employment and Training Administration should help convene semi-annual conferences on program evaluation efforts across the region to disseminate findings on state and local evaluations and share knowledge on what works.

The Uneven Tides of Economic Growth in New England: The Sharp Rise in Annual Earnings Inequality in New England During the 1990s

Introduction

Strong structural and cyclical forces during the 1990s changed the landscape of the New England labor markets. The economic downturn between 1989 and 1992 was accompanied by steep declines in employment, rising unemployment, high levels of out migration from the region, and declining incomes and earnings. After reaching an economic trough in 1992, the region's economy reversed course. Between 1992 and 2000, 1.02 million net new jobs were created, the unemployment rate declined from 8.1 percent to 2.8 percent, and long-term unemployment fell from 4.1 percent to only 0.5 percent.

As the region went through the different phases of the business cycle, it also experienced a fundamental change in the structure of jobs. Eighty percent of the net new jobs created in the region between 1992 and 2000 were in private services and trade sectors while the manufacturing sector shed 80,000 jobs. As a consequence, mid-level wage positions in semi-skilled blue collar and administrative support occupations were eliminated while higher skilled positions in managerial and professional occupations and lower skilled positions in service occupations and low level sales increased.

This chapter presents an assessment of how the above changes in the New England labor markets influenced the level and distribution of earnings of the region's workers. The analysis is restricted to 20- to 64-year old workers who were employed full-time and year-round (40 weeks or more during the year for 35 hours or more per week). All earnings data are presented in constant 1999 dollar equivalents.

Real Annual Earnings of Workers

The median earnings of New England's workers remained essentially unchanged between 1989 and 1999 while the earnings trends varied considerably across the earnings distribution.

- Between 1989 and 1999, the median annual earnings of workers increased by only \$68 or 0.2 percent.
- Nearly all workers in the bottom half of the earnings distribution experienced a decline in their annual earnings over the decade while workers in the top half saw their earnings increase with the size of these gains increasing substantially as we move to the top of the distribution.

Real Annual Earnings of Workers in New England at Selected Points Along the Earnings Distribution, 1989 & 1999

Percentile	1989	1999	Percent Change
Y ₁	6,718	6,000	-10.7
Y ₅	13,435	12,000	-10.7
Y ₁₀	16,767	16,000	-4.6
Y ₂₀	21,776	21,700	-0.4
Y ₃₀	26,871	26,000	-3.3
Y ₄₀	30,499	30,000	-1.7
Y ₅₀	34,932	35,000	0.2
Y ₆₀	40,306	40,600	0.7
Y ₇₀	47,024	49,000	4.2
Y ₈₀	53,742	60,000	11.6
Y ₉₀	71,208	80,000	12.3
Y ₉₅	95,392	110,000	15.3

- The decline in annual earnings of workers in the bottom half of the distribution ranged from -2 percent at the 40th percentile to -11 at the 1st and 5th percentile.

- In contrast, the relative gain for workers was 4 percent at the 70th percentile, 12 percent at the 80th and 90th percentile, 15 percent at the 95th percentile, and 25 percent for those at the 99th percentile.
- Annual earnings inequality in New England widened during the 1990s. The region's economic boom after 1992 bypassed workers in the bottom two-thirds of the earnings distribution. The economic boom during the 1980s, in contrast, resulted in real earnings gains for workers at all points along the earnings distribution.

Both gender groups saw markedly higher relative earnings gains for those at the upper end of the earnings distribution. However among women, gains in annual earnings took place from the 10th percentile on up while among men only those in the upper half of the earnings distribution saw an increase in their earnings during the 1990s.

Relative Change Between 1989 and 1999 in the Real Annual Earnings of Men and Women in New England, at Selected Points Along the Earnings Distribution

Percentile	Men	Women
Y ₁	-4.7%	-3.2%
Y ₅	-5.3%	-7.4%
Y ₁₀	-7.0%	+1.5%
Y ₃₀	-3.0%	+1.9%
Y ₅₀	-.7%	+6.3%
Y ₇₀	+2.3%	+10.3%
Y ₉₀	+12.2%	+12.4%
Y ₉₅	+16.0%	+21.9%
Y ₉₉	+32.9%	+46.9%

- Between 1989 and 1999, the region's male workers at the median and the lower half of the earnings distribution saw their real earnings decline while men in the

upper half saw an increase in their earnings ranging from 2 percent at the 70th percentile, 12 percent at the 90th percentile, 16 percent at the 95th percentile, and nearly one-third at the 99th percentile.

- Among the region's women, the bottom decile was the only group that failed to see an improvement in real earnings. Women in higher percentiles saw an increase in their earnings. The relative size of earnings gains were higher than those for men. The earnings gains of women ranged from 2 percent at the 30th percentile, 6 percent at the median, 12 percent at the 90th percentile, 22 percent at the 95th percentile, and 47 percent at the 99th percentile.

Relative Earnings Inequality

Over the 1990s decade, the size of relative annual earnings differences in New England rose across the board, but the increases in inequality were far more considerable between the top and bottom of the distribution than they were between the middle and bottom of the distribution.

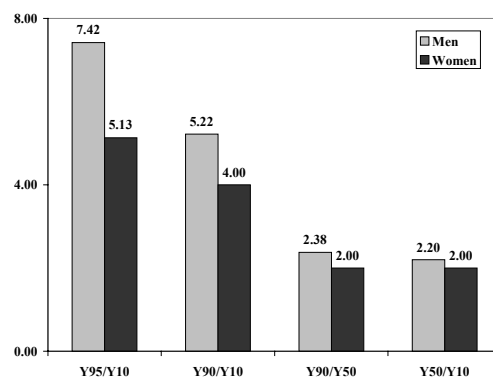
Trends in Relative Annual Earnings Inequality Among Workers in New England, 1989 to 1999

Earnings Ratio	1989	1999	Percent Change
Y ₉₉ /Y ₀₁	36.85	51.67	40
Y ₉₅ /Y ₁₀	5.69	6.88	21
Y ₉₀ /Y ₁₀	4.25	5.00	18
Y ₉₀ /Y ₂₀	3.27	3.69	12
Y ₉₀ /Y ₅₀	2.04	2.29	12
Y ₈₀ /Y ₁₀	3.21	3.75	17
Y ₈₀ /Y ₂₀	2.47	2.76	12
Y ₅₀ /Y ₁₀	2.08	2.19	5
Y ₅₀ /Y ₂₀	1.60	1.61	1

- Increases in earnings inequality were highest at the extreme tails of the distribution. In 1999, the annual earnings of workers at the 99th percentile were 52 times as high as those of workers at the 1st percentile; a relative increase of 40 percent since 1989 when the earnings ratio of workers at these percentiles was 37.
- The relative gap between workers at the 95th and 10th percentiles rose by 21 percent over the decade while the relative gap between workers at the 90th and 10th percentiles rose by 18 percent.
- The growth in relative earnings differences between workers at the middle and bottom of the distribution was quite small, being only 5 percent for the Y₅₀/Y₁₀ measure and only 1 percent for the Y₅₀/Y₂₀ measure.

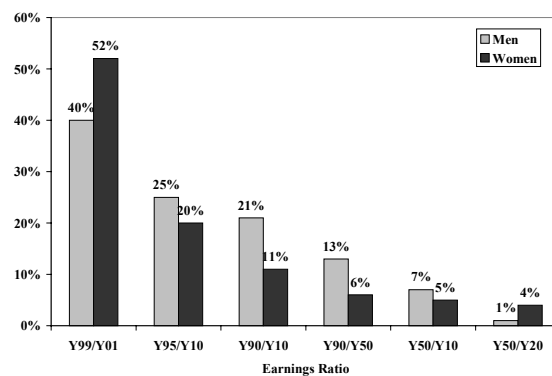
The size of the relative earnings differences of men and women in New England indicate that similar to the patterns for all workers, the increases in the earnings inequality for both genders were far greater between workers at the top and bottom of the distribution and those at the top and middle than they were between workers at the middle and the bottom of the distribution.

The Relative Earnings Differences of Men and Women at Selected Points Along the Earnings Distribution, New England, 1999



- A comparison between the relative earnings differences of men and women in the region reveal that the degree of relative earnings inequality in male earnings distribution was greater than that among women at each point along the earnings distribution. This was true in 1999 as well as in 1989.

Percent Change in the Relative Size of the Earnings Gap of Male and Female Workers in New England Between 1989 and 1999



- The region's male workers also experienced a greater rate of growth in the relative earnings gaps than female workers at most points along the earnings distribution. The only exceptions were at the Y₉₉/Y₀₁ and the Y₅₀/Y₂₀ measures, where the relative earnings gaps increased faster among women than among men.

Share of Annual Earnings in Deciles and Quintiles of the Earnings Distribution

Between 1989 and 1999, the earnings share of workers in the each of the bottom four earnings distribution quintiles declined. A comparison of the change in workers’ share of the cumulative earnings by decile reveals that workers in each decile except the highest received a lower share of cumulative earnings in 1999 compared to their share in 1989.

The increase in the earnings distribution inequality in New England during the 1990s far exceeded that during the regional boom of the 1980s. The economic benefits of the 1980s boom were more widespread among the region’s workers

Annual Earnings Shares of New England Workers by Earnings Distribution Quintiles

Quintile	1989	1999	Absolute Change
Lowest quintile	7.3	6.4	-.9
2 nd quintile	12.2	11.1	-1.1
Middle quintile	16.5	15.0	-1.5
4th quintile	21.8	20.5	-1.3
Highest quintile	42.3	47.0	+4.7
	<u>1979</u>	<u>1989</u>	
Highest quintile	42.1	42.3	+0.2

- Between 1989 and 1999, the share of the bottom quintile declined by 0.9-percentage points, from 7.3 percent in 1989 to 6.4 percent in 1999. The share of workers in each quintile except the highest quintile declined.
- Workers in the top quintile increase their share from 42 percent in 1989 to 47 percent in 1999, representing an increase of 5-percentage points. In contrast between 1979 and 1989, the earnings share of the top quintile increased by only 0.2-percentage points.

- In 1999, workers in the top fifth of the region’s earnings distribution received annual earnings equivalent to the total amount received by the bottom 75 percent of the earnings distribution.
- In 1999, the earnings distribution inequality was higher among the region’s male workers compared to female workers. However, both groups experienced an accelerated increase in earnings inequality during the 1990s compared to the 1980s decade.

Implications for Future Workforce Development Policies and Programs

Reduction in earnings inequality among workers has not been an explicit goal of past and present employment and training programs. However, the heightened degree of earnings inequality among New England workers suggests that future workforce policies must be aimed in part at reducing the widening degree of earnings inequality, especially among males since many male workers experienced declines in their annual earnings over the past decade. Efforts to boost the future real earnings of men and women could take a variety of forms.

- More intensive investments in formal education and occupational training both on and off the job particularly for jobless youth and adults entering or-re-entering the labor market to enhance their earnings potential.
- Skills training and educational interventions to prevent earnings substantial earnings losses among dislocated workers, especially those whose skills have become obsolete relative to the needs of the labor market.
- Training services to incumbent workers should particularly be targeted to those who fall in the lower half of the earnings distribution.

- There also is a clear need for more careful, systematic evaluations of long-term outcomes and impacts of such workforce development strategies.

Recent Trends in Poverty and Other Income Inadequacy Problems in New England: Implications for Future Anti-Poverty and Workforce Development Policies and Programs

Introduction

Many federally-funded employment and training programs over the past four decades have been designed to help combat poverty problems by investing in the human capital of workers and assisting them in obtaining access to unsubsidized jobs. Knowledge of the numbers, demographic characteristics, and labor market problems of the poor and economically disadvantaged population in a given state or local workforce development service delivery area is, thus, indispensable to the planning and design of workforce development programs.

This chapter of the Workforce Development Report for New England was primarily designed to describe and assess poverty/near poverty problems in New England during the past decade through calendar year 2000 and discuss their implications for workforce development programs.

Trends in Poverty Rates in New England and the US

Between the previous economic peak years of 1987-88 and the most recent economic peak of 1999-2000, the New England region lost ground in reducing poverty. While the nation was able to reduce the poverty rate among individuals, children, and families, New England witnessed an increase in the incidence of poverty across all three groups.

As a consequence of the above there was a narrowing of the region's advantage over the nation in alleviating poverty. Although

New England still had lower poverty rates compared to the nation, there has been a considerable narrowing of the gap between the nation's poverty rate and that of the New England region since 1987-88. After the sharp increase in the poverty rate during the recession and early recover years of the 1990s, the nation was much more successful in reducing poverty during the ensuing economic recovery than the New England region, resulting in a smaller gap between the nation's and the region's poverty rates at the end of the decade.

Trends in the Poverty Rates of Persons, Children, and Families in the U.S. and New England, 1987-88 to 1999-00
(Two Year Averages)

	U.S.	New England	Difference (US minus New England)
<u>Individual Poverty</u>			
1987-88	13.7	8.3	5.4
1999-00	11.7	9.4	2.3
<u>Child Poverty</u>			
1987-88	21.2	12.9	8.3
1999-00	17.2	14.2	3.0
<u>Family Poverty</u>			
1987-88	10.6	6.3	4.3
1999-00	8.9	7.0	1.9

- .Between 1987-88 and 1999-00, the New England region saw its person poverty rate increase from 8.3 to 9.4 percent while the nation's person poverty rate declined from 13.7 to 11.7 percent. The person poverty rate in New England was 5.4-

percentage points lower than that of the nation in the late-1980s. By the late-1990s, this gap was nearly halved to 2.3-percentage points.

- The nation’s child poverty rate declined by 4 percentage points between 1987-88 and 1999-00 while the poverty rate of children in New England rose by 1.3-percentage points. In 1999-00, the child poverty rate in New England was only 3-percentage points lower than that of the nation, a sizable reduction from the 8.3-percentage point advantage in 1987-88.
- Similar trends were seen in the family poverty rate with the advantage of New England over the nation reduced by half from over 4-percentage points in 1987-88 to less than 2-percentage points in 1999-00.

The remainder of the report focuses on poverty developments over the 7-year period between 1993-94 when the region’s economic recovery began and 1999-00, the economic peak. Major emphasis is placed on the poverty situation of families, and the report uses a broader definition of poverty that includes the poor as well as the near poor as measured by income levels below 125 percent of the official poverty line. This definition closely corresponded with the previous JTPA definition of being economically disadvantaged in New England.

The Poverty Rate and Poverty/Near Poverty Rate of Families in New England and the U.S., 1993-1994 to 1999-2000

	1993-94	1999-2000	Absolute Change (in Percentage Points)
<u>New England</u>			
Poverty rate	8.4	7.0	-1.4
Poverty/near poverty rate	11.2	10.1	-1.1
<u>U.S.</u>			
Poverty rate	11.9	8.9	-3.0
Poverty/near poverty rate	15.9	12.6	-3.3

- During the 7-year period of economic recovery and growth between 1993-94 and 1999-2000, the family poverty rate in New England declined by only 1.4-percentage points compared to a 3-percentage point decline in the nation. The decline in the poverty or near poverty rate in the region was only one-third the size of the decline in the nation (1.1-percentage points in New England versus 3.3-percentage points in the nation). The proportion of the region’s families that were near poor increased slightly indicating that some New England families who lifted themselves out of poverty did not secure income gains large enough to lift them far above the poverty line.

Poverty/Near Poverty Rates of Key Subgroups of Families in New England, 1993-94 to 1999-2000

The poverty/near poverty rate of New England families declined between 1993-94 and 1999-2000 for all major family types. The rate of decline, however, varied by type of family and characteristics of the family householder.

Poverty/Near Poverty Rate of New England
Families, 1993-94 and 1999-00

	1993- 1994	1999- 2000	Percentage Point Change
Total	11.2	10.1	-1.1
Family type			
Single parent	48.4	38.1	-10.2
Married couple	6.2	5.3	-0.9
Nativity status of householder			
Foreign born	20.1	17.0	-3.1
Native born	10.0	9.1	-0.9
Recent immigrant	26.4	20.9	-5.5
Education of householder			
High school dropout	26.0	24.7	-1.3
High school graduate	13.5	12.2	-1.3
College graduate	2.6	2.3	-0.4
Age of householder			
Under 30	31.9	26.2	-5.6
30-64	9.0	8.7	-0.3
65+	8.1	7.7	-0.5

- The poverty/near poverty rate declined more sharply among single parent families than married couple families. The passage of the welfare reform act legislation in 1996 and increased employment opportunities for these families resulted in higher rates of employment and earnings and sizable reductions in the incidence of poverty among them.
- The poverty/near poverty rates of families headed by immigrants and recent immigrants declined more sharply than that of native-born householders.
- Families headed by high school dropouts experienced a larger absolute decline in their poverty/near poverty rate than families headed by persons with more schooling; however, the relative size of the gap in these poverty/near poverty rates widened over the decade.

- Single parent families, families with poorly educated households, and young families) continued to remain poor or near poor at rates well above each of their respective counterparts.

Family Labor Supply and Poverty

A strong association exist between the labor market work efforts of families and their likelihood of being poor or near poor. The association between these two variables was stronger in New England than in the nation.

Poverty/Near Poverty Rate of Families by
Annual Hours of Family Labor Supply, 1999-00
(Families with Householder Under 65 Years)

	U.S.	New England
All	13.3	10.6
<u>Annual Hours of Family Labor Supply</u>		
None	61.3	67.2
1-999	61.8	52.7
1000-1999	36.8	27.6
2000-2999	13.2	8.2
3000-3999	4.1	2.6
4000+	1.5	0.6

- In 1999-2000, nearly two out of three non-elderly families in New England with no paid workers had an annual income below 125 percent of the poverty threshold compared to 61 percent among their national counterparts.
- A modest annual work effort among family members (under 1000 hours) resulted in little change in the incidence of poverty/near poverty problems in the nation partly due to the loss of some public assistance sources of cash income among families. In New England, however, even a small increase in family work effort resulted in a relatively sharp drop in their poverty/near poverty rate (from two-thirds to 53 percent).

- The gap between the poverty/near poverty rates of the nation’s families and their counterparts in New England was relatively higher at higher levels of labor supply. As the family labor supply increased, the incidence of poverty/near poverty problems declined falling to below .1% among New England’s families that supplied over 4000 hours of annual labor supply and 1.5 percent among their national counterparts.
- The likelihood of a family being poor or near poor declined steadily and strongly as their work efforts increased. This is primarily attributable to the higher hourly earnings of employed New England family members. The higher average level of wages in New England placed the region’s working families in a better position than their national peers to escape poverty, especially when the degree of participation in the labor market was quite strong.

Poverty and the Employment Experiences of Family Householders

Householders of poor/near poor families have a considerably weaker attachment to the labor market. They are less likely to participate in the labor market and, when they do participate, they are more likely to be unemployed..

The labor force attachment of New England’s poor/near poor family householders was much weaker than that of their national counterparts

The Labor Force Status of Non-Elderly Householders of Families by Their Poverty/Near Poverty Status, March 2000-2001 Averages

	PNP ^a	Non-PNP	Non-PNP minus PNP
<u>New England</u>			
LFPR	53.3%	87.5%	34.2%
UR	12.7%	2.6%	-10.2%
E/P ratio	46.5%	85.2%	38.7%
<u>U.S.</u>			
LFPR	60.1%	86.4%	26.3%
UR	12.6%	2.6%	-10.1%
E/P Ratio	52.5%	84.2%	31.7%

Note: (a) PNP= Poor or near poor (income below 125 percent of the poverty line)

LFPR=Labor force participation rate

UR=Unemployment rate

E/P ratio=Employment to population ratio

- The civilian labor force participation rate of New England’s poor/near poor family householders was 53 percent, a rate that was 7-percentage points lower than that of the nation’s poor/near poor family householders (60 percent).
- The unemployment rate of poor/near poor family householders in New England was relatively high (12.7%) in comparison to their more affluent counterparts, but there was no difference between the unemployment rates of householders of poor/near poor families in the U.S. and New England.
- Primarily due to difference in their labor force participation rates, householders of poor/near poor families in New England were less likely to be employed than their national counterparts (46 percent versus 52 percent). Fewer than half of the economically disadvantaged family heads in New England were employed in March 2000-2001.

When the householders of poor or near poor families are employed they work for fewer weeks during the year than their more affluent counterparts. The intensity of employment of New England's poor/near poor family householders was much weaker than their counterparts in the nation. In contrast, the region's non-poor family householders worked for more weeks during the year than their national counterparts.

Percentage of Poor/Near Poor and Non-Poor, Non-Elderly Family Householders in Selected Annual Employment Intensity Categories (1999-2000 Averages)

Annual weeks of employment	PNP ^a	non-PNP	Non-PNP minus PNP
<u>New England</u>			
1+ weeks	54.6	90.0	35.4
27+ weeks	41.5	85.4	43.9
Full-time, year round	24.5	72.6	48.1
1800+ hours	23.1	71.1	48.0
<u>U.S.</u>			
1+ weeks	63.1	89.1	26.0
27+ weeks	46.9	84.8	37.9
Full-time, year round	32.9	76.0	43.0
1800+ hours	30.6	74.3	43.7

Note: (a) PNP= Poor or near poor (income below 125 percent of the poverty line)

Full-time, year round=35+ weekly hours & 40+ annual weeks of employment

- Only 55 percent of the householders of poor/near poor families in New England were employed for at least one week during the year compared to 63 percent of their national counterparts.
- Among more affluent families, the proportion with some employment during the year was similar in the region and the nation. Ninety percent of these family householders in New England and 89 percent in the nation had some employment during the year.

- Only one-quarter of New England's poor/near poor family householders were employed full-time, year-round compared to one-third of their national counterparts and 73 percent of their regional non-poor counterparts.
- While 71 percent of the more affluent family householders in the region worked 1800 or more hours during the year, only 23% of the heads of economically disadvantaged families did so.
- An absence of substantial labor market commitment among disadvantaged family heads was the primary cause of their low incomes and poverty although low wages also played a role among the working poor. An increase in annual work effort could play an important role in reducing the future incidence of poor/near poor problems in our region.

The Workforce Development Implications of The Findings

Among the core missions of many federally-funded employment and training programs has been that of combating poverty. The incidence of poverty problems in the U.S. and New England historically has been cyclically sensitive, and the experience of the 1990's clearly bears this out. Although other policy initiatives including the Earned Income Tax Credits and welfare reform also played a role in reducing poverty.

The poverty rate among persons and families in New England rose sharply from 1989 through 1993 as the regional economy underwent a substantial economic downturn and a slow recovery through 1993. While progress in reducing poverty was quite mixed in our region through 1996, more substantive gains took place from 1996 through the end of the decade.

However, the region was less successful than the nation in reducing problems of poverty and near poverty during the entire decade of the 1990s. Although the poverty rates of New England residents continue to be lower than those of their national counterparts, the gap narrowed considerably during the 1990s when the poverty rates of persons and families in the nation fell sharply than those in the region.

Simple strong statistical associations existed between the incidence of poverty/ near poverty problems among New England families and family work effort.

Householders of poor/near poor families in New England were characterized by a comparatively low rate of labor force attachment, and, when employed, these householders of poor/near poor families did not work as intensively during the year as non-poor householders.

- Policymakers in the workforce development system of New England need to more rigorously and objectively study and understand the underlying causes of the weaker labor force attachment of poor family heads and formulate policies capable of increasing the labor force attachment of these families.
- Since average hourly earnings of adult workers in New England are above those of their U.S. counterparts, those families who worked 1800 or more hours per year in our region were less likely to be poor or near poor than their counterparts across the country. Limited annual work is the primary cause of poverty among New England's non-elderly families today. Efforts to boost the productivity and wages of low income family heads are likely to succeed in boosting their annual labor supply.

- The most substantive decline in poverty/near poverty rates occurred among single parent families, whose poverty/near poverty rate declined by 10-percentage points between 1993-94 and 1999-2000. National research evidence suggests that part of this decline was attributable to the effects of welfare reform and to expanded ETIC credits, which led to increased employment and earnings among former welfare recipients and part was due to the increased strength of New England labor markets.
- Most states in the New England region currently do not have any on-going initiatives to track the longer-term employment, earnings, incomes, and poverty experiences of those families who left the welfare rolls during the past decade. The economic fate of these former welfare recipients should be carefully documented and analyzed to allow policymakers to more fully understand the longer-term impacts of welfare reform initiatives in each New England state on the poverty status, earnings, disposable incomes and living standards of former welfare recipients and their families. Employment and training programs for poor persons also need to be more empirically grounded in the future. There is a clear need for long-term tracking and impact evaluation of the employment and earnings experiences of economically disadvantaged participants in adult WIA programs. The Commonwealth Corporation's recent initiatives in this area should be replicated across the entire region.