

**Family Income Developments in Massachusetts
During the 1990s: Mediocre Growth for the
Average Family Amidst Sharply Rising Income Inequality**

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Introduction

During the decade of the 1990s, the Massachusetts economy underwent a number of substantial cyclical fluctuations and structural adjustments. The early years of the decade were characterized by declining real output, severe job losses, rapidly rising unemployment, declining family incomes, and rising poverty problems. From 1992 to 2000, the economy generated eight years of real output growth, strong increases in wage and salary employment, and declining rates of unemployment.¹ Despite a record low rate of unemployment in calendar year 2000 and high levels of job openings, many Massachusetts workers were finding it difficult to secure higher skilled and higher wage jobs that would improve their personal real earnings and their families' real incomes.

The Boston Workforce Development Initiative was designed to address perceived skills gaps in Massachusetts labor markets that left workers unemployed, underemployed, or in low wage situations while a number of employers faced difficulties in filling their existing job openings.² One of the primary goals of the initiative is to improve the effectiveness of the city's and state's workforce development system in increasing the skills and earnings of workers through investments in education and training both on and off the job. Over time, these human capital investments hopefully will improve earnings sufficiently to enable these workers to obtain gains in their families' incomes that are sufficient to raise them out of poverty and into jobs that provide family supporting incomes.³

To build public support for future workforce development initiatives, we need to document the need for such services among current Massachusetts adults and help uncover

¹ The annual average unemployment rate in the state during 2000 was only 2.6%, the lowest over the 34 year period for which CPS-based labor force data have been available for the state. For an overview of key Massachusetts labor market, earnings, and income developments during the 1980s and 1990s,

See: (i) Andrew Sum, Paul Harrington, Neeta Fogg, et al., *The State of the American Dream in Massachusetts, 2002*, Massachusetts Institute for A New Commonwealth and Blue Cross/Blue Shield, Boston, 2003; (ii) Andrew Sum, Neeta Fogg, and Paul Harrington, *New England Labor Markets During the Miracle Decade*, Center for Labor Market Studies, Northeastern University, Boston, 1991.

² See: The Boston Funders Group, *Boston Workforce Development Initiative*, Request for Proposals: Public Policy Advocacy", Boston, 2003.

³ The Request for Proposals did use several different labels in describing its income goals, sometimes referring to "poverty", low incomes", and family supporting incomes". The income levels associated with those three adequacy standards can be expected to vary quite considerably.

evidence on the efficiency of such human capital investments. A variety of research issues need to be addressed in order to accomplish the above goals. In this paper, we will seek answers to the following four questions:

- How well has the typical family in Massachusetts fared in improving its real income position in recent years, especially during the decade of the 1990s?
- Which subgroups of families have succeeded the most and which have succeeded the least in raising their real median incomes over the past decade?
- What have been the primary sources of the real income gains to those families who have fared the best in recent years?
- What role did higher hourly earnings, more hours of work during the year and greater work effort of wives play in generating these income gains?

Our paper will begin with a brief review of the family income concepts, measures, and data sources underlying the income estimates appearing in this report. This discussion will be followed by an overview of key trends in the median real incomes of Massachusetts families in the 1990s and 1980s, together with comparisons with family income developments in New England and the U.S. over the same time period. Findings on family income developments for selected demographic and socioeconomic subgroups of non-elderly families in the state will be presented. The ability of key subgroups of married couple families to boost their real incomes over the past decade will be examined, and the increasingly important role of the earnings of wives in achieving these income gains will be identified.⁴ The final section also will present key findings on the changing family income distribution in Massachusetts over the past decade and assess the implications of a combination of mediocre real income growth and rising family income inequality for the Boston Workforce Development Initiative.

⁴ Several recent books have highlighted the growing importance of wives' earnings for maintaining family income standards throughout the nation in recent decades. For a review of these two works, See: Heather Boushey, "Reviews of The Betrayal of Work: How Low-Wage Jobs Fail 30 Million Americans and The Two Income Trap in *Challenge: The Magazine of Economic Affairs*, January – February 2004, pp. 107-113.

Income Data Sources, Concepts and Measures

The bulk of the data on family income developments in Massachusetts appearing in this paper are based on the findings of the 1990 and 2000 Censuses of Population and Housing. In conducting the decennial censuses, the U.S. Census Bureau utilizes two different questionnaires: the short form and the long form questionnaire. The short form questionnaire only captured limited data on the demographic characteristics of the population (gender, age, race-ethnic origin, and household relationship) and their housing tenure arrangements (owner/renter). The long form questionnaire was administered to a representative sample of approximately one of every six households in each city, town, county, and state. The long form questionnaire collected detailed information on the demographic and socioeconomic characteristics of respondents (nativity status, educational attainment, marital status), their labor market experiences in the prior calendar year, their earnings from employment and other sources of money income, and their labor force and school enrollment status at the time of the Census.⁵

The money incomes of all household members 15 and older are combined to form estimates of annual household and family income.⁶ The Census questionnaire collected data on money incomes in the form of wages and salaries, self-employment income, rental income, dividends, interest, cash income transfers from the government (public assistance, welfare, SSI benefits), and private/public pensions, including Social Security retirement benefits. The Census questionnaire, however, did not collect data on realized capital gains (or losses), stock options, or other forms of executive compensation. In-kind government benefits, such as food stamps, rental housing subsidies, energy assistance, or Medicare/Medicaid benefits are excluded as are employee benefits such as health insurance, pensions, use of company cars, etc. All of the incomes are measured prior to any taxes or other payroll deductions, such as health insurance or dental premiums. These incomes are, thus, pre-tax money incomes measured on an annual basis.

⁵ The school enrollment question asked respondents whether they have attended a regular school at any time since February 1, 2000. The labor force questions refer to activity status in the prior calendar week, typically the last week in March.

⁶ All persons occupying shared living quarters (apartment, house, condo) are considered members of the same household whether they are or are not related. A family household is a household containing two or more individuals who are related by blood, marriage, or adoption.

The incomes for any given year (e.g., 1999) are measured in the dollar values of that year. To compare the values of money incomes over time, we need to convert them into constant dollars of some year. In this paper, we convert money incomes of all years prior to 1999 into constant 1999 dollars via use of the national Consumer Price Index for All Urban Consumers, frequently referred to by its acronym the CPI-U index. There also is a CPI-U index for the Greater Boston area that covers all of Eastern Massachusetts and parts of central Massachusetts as well as southern New Hampshire and parts of Maine and Rhode Island. The CPI-U index for the Greater Boston area increased between 1989 and 1999 at essentially the same rate as the CPI-U index for the entire urban United States.⁷

Most of the family income measures presented in this paper are estimates of median family income. The median income is that income which divides the distribution into two equal parts. One half of the families will have incomes below the median while the other half will have incomes above the median. Unlike the mean income, the arithmetic average, the median income is not affected by extreme values at either tail of the distribution, especially at the upper end. The family income distribution in Massachusetts and the United States is heavily skewed to the right, implying the existence of a relatively small number of families that receive very high incomes; i.e., \$1 million or more. As a consequence of this skewness, the mean income is greater than the median, and the gaps between the mean and the median family incomes are growing over time due to increasing income inequality. There is a problem in accurately measuring the mean income of families with the Census 2000 data due to top coding of the incomes of the most affluent families by the U.S. Census Bureau.⁸ Since the median income truly reflects the income of the family right in the middle of the distribution, we will rely on median incomes to measure the income of the typical Massachusetts family. In the final section of the paper, we also will track changes in the real incomes of Massachusetts families at various points along the distribution over the past decade and present estimates of the changing shares of incomes received by families in each decile and quintile of the income distribution. The

⁷ The CPI-U for the urban U.S. increased by 34.3% between 1989 and 1999 while the CPI-U index for the Greater Boston area grew by 34.1% over the same time period.

⁸ As part of these top coding procedures, the U.S. Census Bureau assigned maximum values to personal earnings and property incomes of individuals on the public use files that it makes available to the research community. A top code of \$299,999 is used for personal earnings from wage and salary employment or self-employment while a top code of \$99,999 is used for property incomes (interest, dividends, and rents).

implications of these findings for the Boston Workforce Development Initiative will be briefly assessed.

Median Family Income Growth During the 1980s

The decade of the 1980s in New England and Massachusetts was characterized by strength in labor markets, real output growth, and real income growth.⁹ In many respects the notion of a “Massachusetts Miracle” was well grounded empirically, but most other New England states also performed well during the decade. The state weathered the national recession of 1981-82 quite well, generated 434,000 net new wage and salary jobs between 1983 and 1988, and the unemployment rate fell below 4% in the late 1980s, well below the U.S. average. The strong growth of employment, labor productivity, and real wages helped strongly boost the real annual earnings of the typical full-time, year round worker over the decade, with median real annual earnings rising by 16%.

In response to rising annual earnings and greater family labor supply, the median real income of Massachusetts families increased very strongly in the 1980s. Between 1979 and 1989, median family income (in constant 1999 dollars) rose from \$47,492 in 1979 to \$59,609 in 1989, a gain of \$12,117 or nearly 26% (Table 1 and Chart 1). This growth rate was modestly higher than that for all families in the entire New England region and far in excess of that for all families in the nation (5.5%). Families in Massachusetts from the 20th percentile on up experienced real income gains of 20% or more during the decade. The comparative median income advantage of Massachusetts families in 1989 was the highest in the post-World War II period. In 1979, the median income of Massachusetts families was only six percent higher than that of the nation; however, by 1989, the relative size of that income advantage had risen to 26 percent.

⁹ For an earlier review of family income developments in Massachusetts and New England during the 1980s decade, See: (i) Andrew Sum, Neeta Fogg, and Anwiti Bahuguna, *The Road Ahead: Emerging Threats to Workers, Families, and the Massachusetts Economy*, The Massachusetts Institute for A New Commonwealth and The John H. and Teresa Heinz Foundation, Boston, 1998; (ii) Andrew Sum, Paul Harrington, Neeta Fogg, et al., *The State of the American Dream in Massachusetts*, MassINC and Blue Cross/Blue Shield Massachusetts, Boston, 2003.

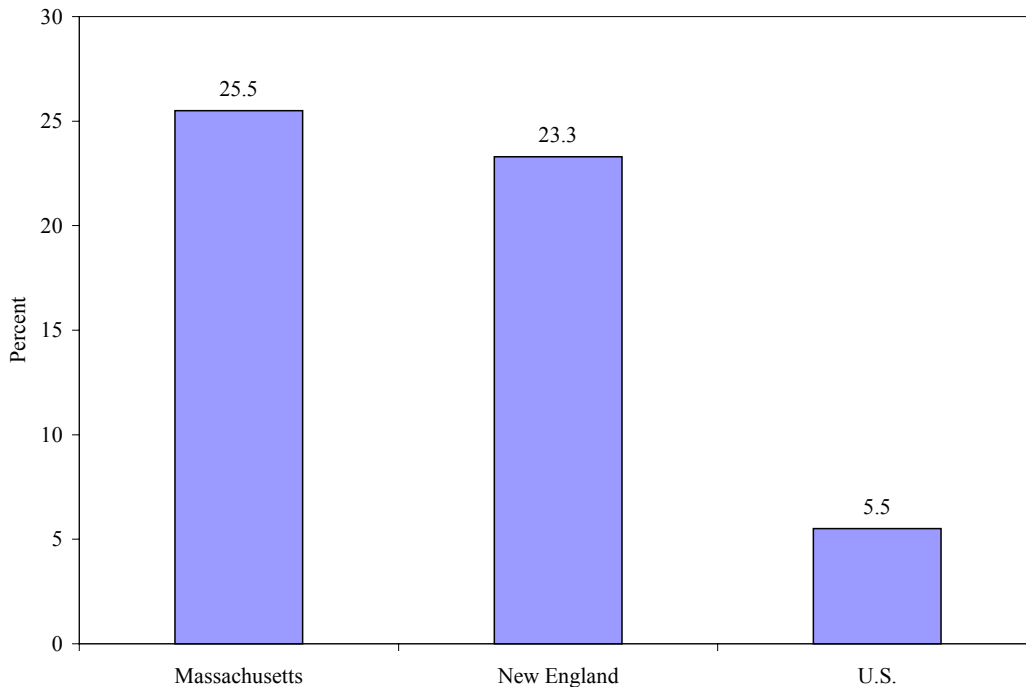
Table 1:
Growth in the Median Real Incomes of Families in Massachusetts,
New England, and the U.S., 1979 – 1989
(in Constant 1999 Dollars)

	(A)	(B)	(C)	(D)
Geographic Area	1979	1989	Absolute Change, 1979 – 89	Percent Change, 1979 – 89
Massachusetts	\$47,492	\$59,609	+\$12,117	+25.5%
New England	\$46,625	\$57,500	+\$10,874	+23.3%
U.S.	\$44,840	\$47,326	+\$2,486	+5.5%

Sources: 1980 and 1990 Census of Population and Housing, U.S. Census Bureau, tabulations by authors.

Notes: The national CPI-UX1 price index of the U.S. Bureau of Labor Statistics was used to convert 1979 and 1989 nominal incomes into their 1999 dollar equivalents.

Chart 1:
Percent Change in the Median Real Incomes of Families in Massachusetts,
New England, and the U.S., 1979 – 89



The 25.5% growth rate of median family income in the Commonwealth during the 1980s ranked third highest among the 50 states during that decade (Table 2). Massachusetts was joined by the rest of its New England counterparts at the top of the distribution in state family income

growth rates. Connecticut and New Hampshire ranked first and second highest among the 50 states in their median income growth over the decade while Vermont, Rhode Island, and Maine ranked fifth, sixth, and seventh highest, respectively. The New England regional economy was the star performer on this key economic measure during the 1980s.

Table 2:
Growth Rates of Median Family Incomes of New England States and their
Rankings Among the 50 States and the District of Columbia, 1979 – 1989
(Rates in %)

State	(A) Growth Rate	(B) Ranking
Connecticut	26.8	1 st
Maine	19.7	7 th
Massachusetts	25.5	3 rd
New Hampshire	26.0	2 nd
Rhode Island	20.2	6 th
Vermont	20.6	5 th

Source: 1990 and 2000 Census of Population and Housing, U.S. Census Bureau.

Family Income Developments in the 1990s

The economic prosperity of the 1980s decade unfortunately came to a sudden and immediate halt in Massachusetts and New England during the early part of 1989.¹⁰ The annual average number of wage and salary jobs in Massachusetts declined sharply by 335,000 or nearly 11 percent between 1988 and 1992, the state's unemployment rate rose above 9% in 1991, and steep declines took place in the median real incomes of the state's families. Even after two years of solid job growth and declining unemployment, the median real income of Massachusetts families in 1994 was estimated to be 6% below its 1989 level.¹¹ Continued strong job growth over the next five years accompanied by very modest labor force growth helped push the state's unemployment rate down close to 3% in 1998 and 1999. Rising labor productivity facilitated

¹⁰ For a detailed overview of labor market and income developments in New England and Massachusetts during the recessionary environment of the early 1990s,

See: Andrew Sum, Paul Harrington, et al., *The New England Economy in Recession: An Assessment of the Its Economic and Social Consequences*, Center for Labor Market Studies, Northeastern University, Boston, 1991.

growth in mean real wages and salaries. These labor market and wage developments helped boost real family income growth from 1994 to 1999. At the end of the decade, the median income of Massachusetts families had risen to \$61,664, a new historical high; however, this income only represented an increase of \$2,055 or 3.4% over its 1989 level (Table 3 and Chart 2). Massachusetts' income growth rate was modestly higher than that of the entire New England region (2.3%), but fell several percentage points below that of the nation and ranked far behind the growth rates of most other states. The weak growth of the income of the typical family in Massachusetts during the 1990s has to be viewed as a major disappointment, given larger estimated gains in mean wages and salaries and per capita personal incomes. As will be revealed in a following section, the highly uneven distribution of the economic gains of the 1990s played a key role in holding down the growth rate of median family income in our state.

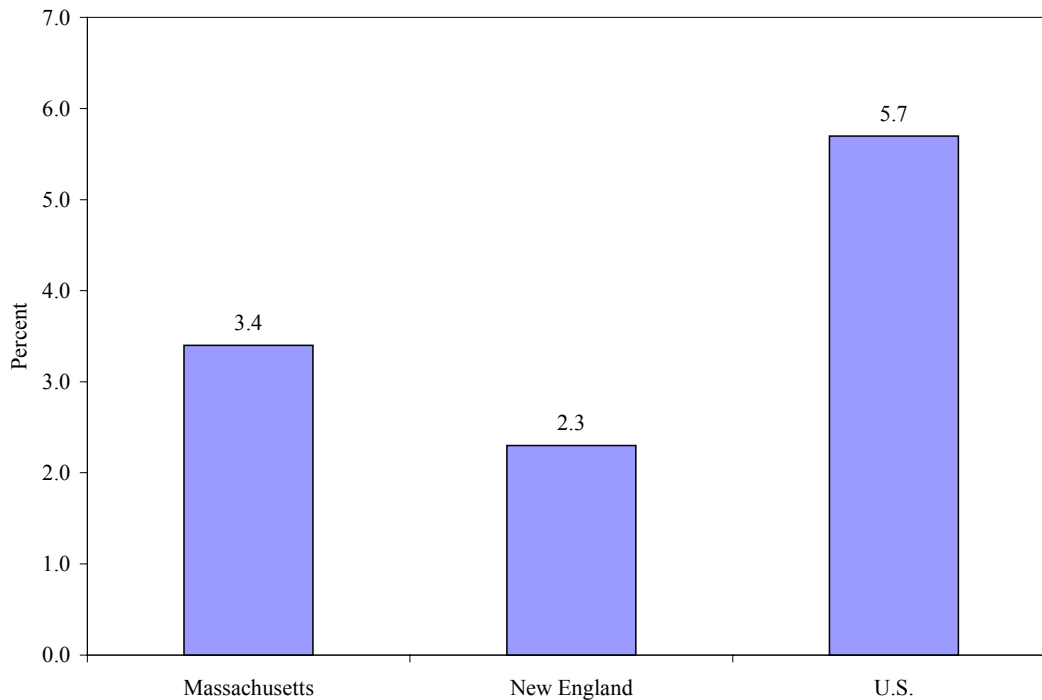
Table 3:
Growth in the Median Real Incomes of All Families in Massachusetts,
New England, and the U.S., 1989 – 1999
(in Constant 1999 Dollars)

	(A)	(B)	(C)	(D)
Geographic Area	1989	1999	Absolute Change, 1989 – 99	Percent Change, 1989 – 99
Massachusetts	\$59,609	\$61,664	+\$2,055	+3.4%
New England	\$57,500	\$58,836	+\$1,336	+2.3%
U.S.	\$47,326	\$50,046	+\$2,720	+5.7%

Sources: 1990 and 2000 Censuses of Population and Housing, U.S. Census Bureau, tabulations by authors.

¹¹ See: Andrew Sum, Neeta Fogg, Neal Fogg, Paul Harrington, et al., *The State of the American Dream in New England*, The Massachusetts Institute for A New Commonwealth, Boston, 1996.

Chart 2:
Percent Change in the Median Real Incomes of Families in
Massachusetts, New England, and the U.S., 1989 – 99



The 3.4% growth rate in the median income of Massachusetts families during the decade of the 1990s fell well below the average performance among the 50 states. The state only ranked 41st highest among the 50 states and the District of Columbia, a radical reversal from its ranking of 3rd highest in the prior decade (Table 4). Each of the New England states performed quite poorly in raising the real median incomes of its families during the 1990s. The best performance was turned in by Vermont with its 4.1% growth rate, but it ranked only 39th highest.

Table 4:
Growth Rates of Median Family Incomes of New England
States and Their Rankings Among the 50 States and the District of Columbia, 1989-99
(Rates in %)

State	(A) Growth Rate	(B) Ranking
Connecticut	-.9	47 th
Maine	+3.7	40 th
Massachusetts	+3.4	41 st
New Hampshire	+2.9	42 nd
Rhode Island	+.3	46 th
Vermont	+4.1	39 th

Source: 1990 and 2000 Census of Population and Housing, U.S. Census Bureau.

Median Incomes of Non-Elderly Families, 1989 and 1999

Given the fact that the Boston Workforce Development Initiative will overwhelmingly focus on the employment and training needs of non-elderly individuals (under age 65), the remainder of this paper will examine changes in the levels and sources of the median real incomes of the state's non-elderly families over the decade of the 1990s. Trends in the median real incomes of these non-elderly families by family type are displayed in Table 5. Families were assigned to one of the following three categories based on conventional U.S. Census Bureau classifications:

- Married couple families in which both the husband and wife were present in the home.¹²
- Families headed by men with no wife present in the home. Such families do include fathers living with their children, but many others involve men living with one or both of their parents or with their siblings.
- Families headed by women, with no husband present in the home. In some cases, the wife is married but separated from her husband. These families often include children under 18, but others involve women living with their parents or other relatives.

Over the decade of the 1990s, the median real income of the state’s non-elderly families increased from \$63,121 to \$66,000, a rise of nearly \$2,900 or 4.6% (Table 5). The growth rates of these median real incomes varied considerably by family type, ranging from an increase of 7 percent for married couple families to no change for female-headed families to a decline of 13 percent for families headed by men with no wife present in the home. As will be noted below, the typical married couple was able to improve its real income over the decade through increased annual earnings of the wife, more of whom worked and were employed for longer hours in 1999 than in 1989. The other two subsets of families (male and female-headed families with no spouse present) did not have the option of relying on additional work effort of the spouse. During 1999, there were substantial differences in the median incomes of Massachusetts families across these three family types. Married couple families had a median income (\$76,200) that was nearly 80% higher than that of male headed families and close to three times as high as that of female-headed families in the state. The absolute and relative size of these income gaps by family type widened over the decade.

Table 5:
Growth in the Median Real Incomes of Non-Elderly
Massachusetts Families, All and by Type of Family, 1989 – 99

Types of Family	(A)	(B)	(C)	(D)
	1989	1999	Absolute Change, 1989 – 99	Percent Change, 1989 – 99
All	\$63,121	\$66,000	+2,879	+4.6%
Married Couple	\$71,045	\$76,200	+5,155	+7.2%
Male head, no wife present	\$49,691	\$43,000	-6,691	-13.5%
Female head, no husband present	\$28,203	\$28,200	-3	0%

Source: 1990 and 2000 Censuses, PUMS files, tabulations by authors.

Given the growing importance of formal educational attainment for success in today’s labor markets, we also examined changes in the median real incomes of non-elderly Massachusetts families classified by the educational attainment of the family householder. The available data on the completed educational attainment of family heads from the 2000 Census

¹² In a married couple family, either the husband or the wife can be categorized as the family householder.

were used to assign each individual into one of the following six, mutually exclusive educational attainment categories:

- 0-12 years of schooling, but does not hold either a regular high school diploma or a GED certificate
- High school diploma, a GED, or its equivalent, but no completed years of post-secondary schooling
- 13-15 years of school, but no post-secondary degree
- Associate degree holder
- Bachelor degree recipient, but no advanced degree
- Master's, Ph.D., or Professional degree

The pattern of growth rates in median family income was strongly associated with the educational attainment of the family householder. Non-elderly families headed by an individual with less than 16 years of schooling experienced declines in their median real incomes, with the relative size of these declines ranging from -1% to those holding an Associate's degree to nearly -12% for those families headed by an individual lacking a high school diploma or its equivalent (Table 6). Families headed by persons holding a bachelor's or more advanced degree boosted their median real incomes by six to seven percent over the decade. During 1999, the median incomes of non-elderly families in the state ranged from a low of \$36,000 for those headed by persons lacking a high school diploma to a high of just under \$105,000 for those families headed by an individual with a Master's or higher degree (Table 6). The ratio of the median family income of the best educated householders to the least well educated was nearly 3 to 1. In 1979, the ratio of these two median incomes was 2.5 to 1.¹³ During both the 1980s and the 1990s, the income gaps among families widened by educational attainment category. While all families, except those headed by high school dropouts, experienced real income gains in the 1980s in our state, the growth rates of median family incomes were much stronger for those families with a head who possessed a bachelor's or more advanced academic degree.¹⁴

¹³ See: Andrew M. Sum, Paul Harrington, Neeta Fogg, et al., *The State of the American Dream in Massachusetts, 2002*, MassINC and Blue Cross/Blue Shield of Massachusetts, Boston, 2002.

¹⁴ For example, the median real income of all Massachusetts families headed by an individual with a high school diploma rose by 6 percent between 1979 and 1989 versus increases of 20 to 25 percent for those families headed by a person with a bachelor's or higher degree. *Ibid*, pp. 110-111.

Table 6:
Growth in the Median Real Incomes of Non-Elderly Families in Massachusetts by
Educational Attainment of the Family Householder, 1989 – 1999
(in Constant 1999 Dollars)

	(A)	(B)	(C)	(D)
Educational Attainment	1989	1999	Absolute Change, 1989 – 99	Percent Change, 1989 – 99
All	\$63,121	\$66,000	+2,879	+4.6%
0 – 12 years, no diploma or GED	\$40,827	\$36,000	-\$4,827	-11.8%
High school diploma or GED	\$55,063	\$52,000	-\$3,063	-5.6%
13 – 15 years, no degree	\$61,643	\$60,000	-\$1,543	-2.5%
Associate’s degree	\$65,807	\$65,250	-\$557	-.9%
Bachelor’s degree	\$80,580	\$86,200	+\$5,620	+7.0%
Master’s or higher degree	\$98,576	\$104,930	+\$6,354	+6.4%

Source: 1990 and 2000 Censuses of Population and Housing, PUMS files, tabulations by authors.

The Sources of the Growth of Incomes Among Married Couple Families, 1989-1999

Knowledge of the sources of growth (or decline) in the incomes of families over time is helpful in understanding how living standards have been improving and in identifying the need for workforce development strategies to boost future prospects for real income growth. The incomes of married couple families can increase as a result of higher annual earnings of the husband, the wife, or other family members, increased property income, or increased cash transfers from the federal or state government.¹⁵ Higher annual earnings of the family can be brought about by increased hours of work by family members or by increased real hourly earnings. Income gains from increased hours of work come with an opportunity cost, i.e., reduced leisure time, reduced home output, less time for other family members. In *The State of the American Dream in Massachusetts: 2002*, it was revealed that wives in married couple families had been working more in the 1990s and earning more, thereby allowing many middle and lower middle class families to maintain their living standards.

¹⁵ In a recent analysis of changes in the real incomes of New Hampshire families during the 1990s, CLMS research staff revealed that the bulk (77%) of the increase in the median real income of married couple families was attributable to the earnings of the wives in these families.

The availability of the 2000 Census PUMS data for Massachusetts allows us to examine these issues in greater depth. What were the key sources of growth in the incomes of those married couple families in Massachusetts where the wife was under 65 years of age? How much did the changing labor market behavior and annual earnings of wives contribute to the growth of family income over the decade of the 1990s? How did wives' contributions to family income growth vary by the educational attainment of the wife? How much would the real incomes of married couple families have changed in our state if wives had not worked and earned more over the decade? Let us begin our analysis with an overview of annual earnings trends among the husbands of these wives over the 1990s decade. How well did they fare in improving their real annual earnings over the 1989-99 period?

The 1989 and 1999 Annual Earnings of the Husbands of Wives Under Age 65

The primary source of the income of Massachusetts married couple families with a wife under 65 years of age is the earnings of the husband from employment in the labor market, including self-employment.¹⁶ For example, during calendar year 1989, we estimated that 60 percent of the income of the typical married couple family with a wife under 65 years of age was attributable to the annual earnings of the husband.¹⁷ Given the importance of the husband's earnings to family economic well-being, how well did the husbands of these wives fare in improving their real annual earnings over the past decade? To answer this question, we calculated and compared the median annual earnings of these men in both 1989 and 1999. Estimates were generated for all of these husbands and by educational attainment subgroup.

The median annual earnings of the husbands of Massachusetts wives under 65 years of age during 1999 were \$43,000 (Table 7). These median annual earnings varied considerably by educational attainment group, ranging from a low of \$23,000 for those men lacking a regular high school diploma/GED, to \$35,000 for high school graduates, to \$54,000 for bachelor degree

See: Andrew Sum, Ishwar Khatiwada, and Mykhaylo Trubs'kyy, *Family Income Growth in New Hampshire in the 1990s and Its Underlying Sources*, Report Prepared for the Massachusetts Institute for a New Commonwealth, Boston, December 2003.

¹⁶ Some of the husbands of these wives (approximately 5% of them) were 65 years of age or older in 1999. If we had confined our earnings analysis to those husbands under the age of 65, we would have found a modestly higher rise in their median annual earnings were the decade, but these gains only accrued to men with a bachelor's or higher degree (See Appendix A).

¹⁷ By 1999, the median husband's earnings would contribute less than 57 percent of the typical family's income.

recipients, and to a high of \$60,000 for those men holding a Master's or more advanced college degree. Median earnings during calendar year 1999 rose steadily as the educational attainment of these men improved.

Table 7:
Trends in the Median Real Annual Earnings⁽¹⁾ of the Husbands of
Massachusetts Wives Under 65 Years of Age from 1989 to 1999, by Educational Attainment
(in Constant 1999 Dollars)

	(A)	(B)	(C)	(D)
Educational Attainment	1989	1999	Absolute Change, 1989 – 99	Percent Change, 1989 – 99
All	\$41,902	\$43,000	1,098	+2.6
1-12 years, no diploma or GED	26,860	23,000	-3,860	-14.3
High school diploma, GED	39,046	35,000	-4,046	-10.3
1-3 years of college, no degree	42,976	42,000	-976	-2.3
Associate's degree	47,005	45,000	-2,005	-4.3
Bachelor's degree	53,720	54,000	+280	+0.5
Master's or higher degree	57,872	60,000	+2,128	+3.7

Source: 1990 and 2000 Censuses of Population and Housing, PUMS data files, tabulations by authors.

Note: ⁽¹⁾ Estimates include husbands with no paid employment experience during either 1989 to 1999.

Over the decade of the 1990s, however, the gains in the median annual earnings of these men were quite modest, and only those men with a bachelor's or higher degree were able to achieve any gain in their median annual earnings. Their 1999 median annual earnings level of \$43,000 was only \$1,100 or 2.6% higher than that prevailing in 1989 at the end of the regional economic boom of the 1980s.¹⁸ All men lacking a bachelor's degree experienced declines in their median real annual earnings over the past decade, with the size of these declines ranging from 2 to 4 percent for those married men with some post-secondary schooling to 10 percent for high school graduates and over 14 percent for those men lacking a regular high school diploma or a GED certificate. At the upper end of the educational attainment distribution, we find gains of under one percent in annual earnings for married men with a bachelor's degree and just under four percent for those with a Master's or more advanced degree.

¹⁸ The mean annual earnings of this group of men increased more strongly, rising by \$7,222 or nearly 15% over the decade, implying rising earnings inequality among these men.

One might wonder how the overall median annual earnings of these married men could have risen by 2.6 percent when only one educational subgroup (those men with a Master's or higher degree) experienced an earnings gain of over one percent. The answer to this seeming puzzle is that the educational attainment of the husbands of women under 65 improved over the decade as the older cohort (those 55 and older) were replaced by a younger group of married men who had obtained more years of schooling over time. At the time of the 1990 Census, slightly under 38 percent of these married men had obtained an Associate's or higher degree. By the year 2000, 47 percent of these married men in our state held an Associate's or higher degree. The rising educational attainment of these married men over the decade was sufficient to offset the earnings declines of men in all educational subgroups below the bachelor's degree level. The 1990s economic boom in our state largely bypassed those married men who did not hold a bachelor's or more advanced degree. The earnings distribution among married men also became considerably more unequal over the decade. Many of these families became increasingly dependent on the earnings of their wives to maintain or slightly improve their living standards over the decade.

The Changing Work Behavior of Wives in Massachusetts

Over the past few decades, married women have steadily and substantially increased their degree of attachment to the labor market. The long form questionnaires used in conducting the decennial censuses captured information on the work experiences of all household members 15 and older in the prior calendar year. We have analyzed the findings of the decennial censuses from 1960 through 2000 to identify the employment experiences of all non-elderly wives in the calendar year prior to the Census. Estimates of the percentage share of wives who worked at some time during 1959, 1969, 1979, 1989 and 1999 are displayed in Table 8. Over the past 40 years, the fraction of wives with some paid work experience has risen continuously and substantially. In 1959, only 43 percent of these wives worked at some point during the year. By 1969, this ratio had risen to 54 percent, and it would increase further to just under 64% in 1979, to 76% in 1989, and to 79% in 1999. The pace of change in these employment rates slowed sharply in the 1990s, especially among wives with some post-secondary schooling, and the state may be coming close to a maximum rate of employment for its non-elderly wives. In 1999,

nearly 8 of every 10 non-elderly wives in the Commonwealth worked at some point during the year, the highest such ratio in the state’s post-World War II history.

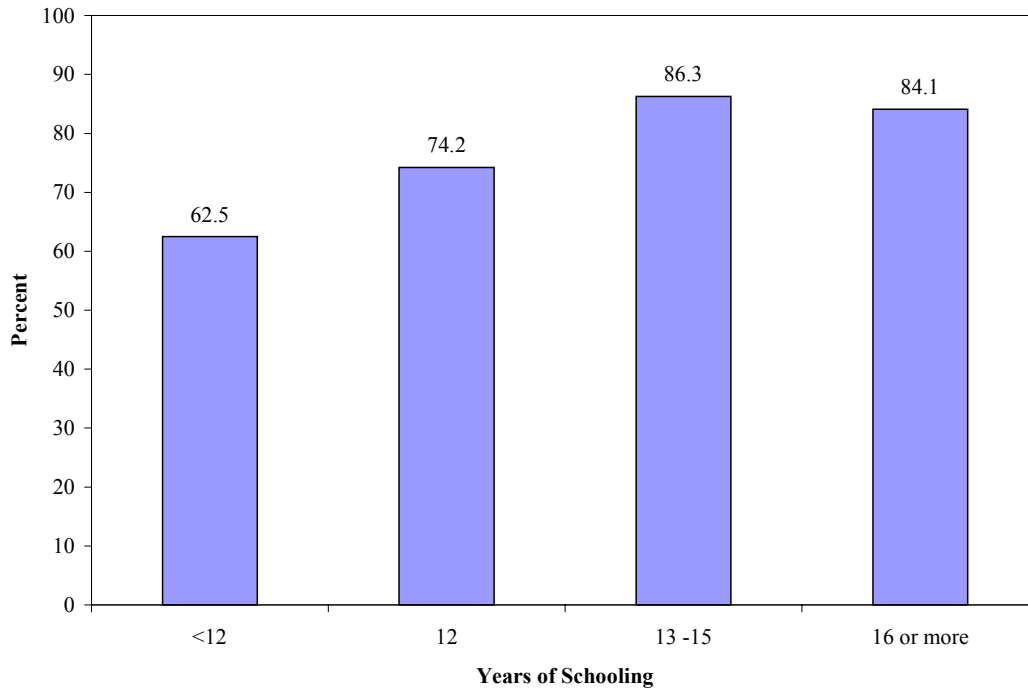
Over the past 40 years, gains in the employment rates of married women took place across all educational attainment subgroups, but were strongest among those women with some post-secondary schooling through 1989. However, during the 1990s, the fraction of married women holding a bachelor’s or higher degree who worked during the year was unchanged. Still, in 1999, these women were the most likely to have worked. Eighty-four of every 100 married women with a bachelor’s or higher degree worked at some point during 1999 versus only 74 percent of those with a high school diploma and only 62 percent of those lacking a diploma or a GED certificate (See Table 8 and Chart 3).

Table 8:
Percent of Massachusetts Wives Under 65 Who Worked at Some
Point During the Year by Educational Attainment, 1959 to 1999

	(A)	(B)	(C)	(D)	(E)
Educational Attainment	1959	1969	1979	1989	1999
All	43.3	54.2	63.8	76.2	79.0
<12 or 12 no diploma	47.1	52.6	53.9	60.7	62.5
12 or high school diploma	42.1	54.2	62.7	72.0	74.2
1 – 3 years of college	42.4	56.8	68.2	80.9	81.3
4 or more years of college	47.0	62.3	73.7	84.0	84.1

Source: 1960, 1970, 1980, 1990, and 2000 Censuses of Population and Housing, tabulations by authors.

Chart 3:
Percent of Wives Under Age 64 with Some Paid
Work Experience in 1999 by Years of Schooling



Not only do more married women work than ever before, but they also are employed for more hours during the year when they do work. Estimates of the median annual hours of work by employed married women in Massachusetts in 1979, 1989, and 1999 are displayed in Table 9.¹⁹ Findings are displayed for all employed, married women and for those in five educational groups. Over the past two decades, the median annual hours worked by employed, married women increased from 1,368 hours to 1,872 hours, with 208 additional hours worked between 1989 and 1999. This 208 work hours increase was equivalent to a 13% gain in their median annual hours of work over the 1990s. The average employed, married woman in Massachusetts was working full-time, year-round at the end of the 1990s.

¹⁹ These annual hours of work estimates were derived by multiplying weeks worked during the year by average hours of work per week. Weeks of employment include paid vacations.

Table 9:
Median Annual Hours of Work Among Employed Non-Elderly Wives in
Massachusetts by Educational Attainment, 1979, 1989, and 1999

	(A)	(B)	(C)
Educational Attainment	1979	1989	1999
All	1,368	1,664	1,872
0 – 12 years, no diploma	1,300	1,760	1,924
High school diploma, GED	1,362	1,664	1,820
1 – 3 years of college including Associate’s degree	1,248	1,664	1,820
Bachelor’s degree only ⁽¹⁾	1,400	1,664	1,840
Master’s or higher degree		1,800	1,924

Source: 1980, 1990, and 2000 Censuses, PUMS files, tabulations by authors.

Note: ⁽¹⁾ In the 1980 Census, we can only identify years of schooling completed by each respondent rather than their diploma or degree attainment status. We assigned all persons with 16 or more years of schooling to the bachelor’s degree category. This group will include persons with schooling beyond the bachelor’s level.

Median annual hours of work by married women rose in each educational group, with work hours rising by at least 124 hours in each group. Median hours of work were highest among high school dropouts (192) and Master’s degree or higher recipients (192). In each of the five educational groups, the typical, employed married women worked full-time, year-round in 1999. Full-time work is defined as working 35 or more hours per week while a year-round worker is conventionally defined by the U.S. Census Bureau as someone who was employed for 50 to 52 weeks. A woman who worked full-time at 35 hours for all 52 weeks would have been employed for 1,820 hours during the year. The median annual hours of work among all five educational groups equaled or exceeded 1,820 hours.

Given their increased hours of employment and their modestly improved real hourly wages, how well did these employed, married women fare in boosting their real annual earnings over the decade of the 1990s?²⁰ Estimates of the median annual earnings of these employed wives in 1989 and 1999 are displayed in Table 10. These earnings estimates are provided for all employed, non-elderly wives and for those in six educational subgroups. Median annual earnings of these employed wives rose from \$21,160 in 1989 to \$25,000 in 1999, a gain of

\$3,840 or 18% over the decade. Employed women in each of these six educational subgroups improved their median real annual earnings over the decade, with the absolute size of these earnings gains ranging from \$1,636 for those lacking a high school diploma to a high of just under \$3,800 for those women holding a bachelor's degree. Double-digit earnings gains were experienced by women in each subgroup, except for those holding a Master's or higher degree.²¹ During 1999, the median annual earnings of wives rose continuously with their level of educational attainment, varying from a low of \$17,000 for those women lacking a high school diploma/GED certificate to a high of over \$40,000 for those women holding a Master's or higher degree.

Table 10:
Median Annual Earnings of Employed Non-Elderly Wives in
Massachusetts by Educational Attainment, 1989 and 1999
(in Constant 1999 Dollars)

	(A)	(B)	(C)	(D)
Educational Attainment	1989	1999	Absolute Change, 1989 – 99	Percent Change, 1989 – 99
All	\$21,160	\$25,000	+\$3,840	+18.1%
0 – 12 years, no diploma or GED	\$15,364	\$17,000	+\$1,636	+10.6%
High school diploma or GED	\$17,459	\$20,000	+\$2,541	+14.6%
1 – 3 years of college, no degree	\$20,145	\$23,000	+\$2,855	+14.2%
Associate's degree	\$22,965	\$26,000	+\$3,035	+13.2%
Bachelor's degree	\$28,203	\$32,000	+\$3,797	+13.5%
Master's or higher degree	\$37,604	\$40,170	+\$2,566	+6.8%

Source: 1990 and 2000 Censuses of Population and Housing, PUMS data files, tabulations by authors.

The economic contributions of wives to the incomes of married couple families depend on both the share of wives who work during the year as well as the annual earnings of those who do work. The median annual earnings of all, non-elderly wives, including those with no paid work experience during the calendar year, were estimated for both 1989 and 1999 (Table 11).

²⁰ Dividing median annual earnings by median annual hours worked yields an estimated median hourly earnings of \$12.71 in 1989 and \$13.35 in 1999, an increase of \$.64 or 5 percent.

²¹ Again, one might seem initially puzzled by the fact that the percentage point increase in the earnings of women in each educational subgroup was less than that for all employed women (18%). The answer to this puzzle is similar to that for husbands. There was a shift in the educational composition of employed, married women over the decade, with a higher share of these women holding an Associate's or higher degree in 1999 than 1989.

The combination of more wives working and higher annual earnings among those who did work helped raise the median real annual earnings of wives from \$13,715 in 1989 to \$19,000 in 1999, a gain of \$5,285 or slightly more than 30 percent. Gains in these median real annual earnings occurred among married women in each educational subgroup, with the absolute size of these increases ranging from \$1,230 for those women lacking a high school diploma to highs of \$4,100 to \$4,500 for women holding bachelors or more advanced degrees. Each group of married women achieved double-digit percentage point gains in their median real annual earnings over the decade, with the size of these increases ranging from 13% to 21%.

Table 11:
Median Annual Earnings of All Non-Elderly Wives Including Non-Workers in
Massachusetts by Educational Attainment, 1989 and 1999
(in Constant 1999 Dollars)

Educational Attainment	(A)	(B)	(C)	(D)
	1989	1999	Absolute Change, 1989 – 99	Percent Change, 1989 – 99
All	\$13,715	\$19,000	+\$5,285	+38.5%
0 – 12 years, no diploma or GED	\$5,869	\$7,100	+\$1,231	+21.0%
High school diploma or GED	\$10,744	\$12,600	+\$1,856	+17.3%
1 – 3 Years of college including Associate’s degree	\$16,116	\$19,000	+\$2,884	+17.9%
Bachelor’s degree	\$21,488	\$26,000	+\$4,512	+21.0%
Master’s or higher degree	\$32,459	\$36,600	+\$4,141	+12.7%

Wives’ Contributions to the Income Growth of Married Couple Families During the 1990s

To identify the magnitude of wives’ contributions to the growth of the annual incomes of married couple families over the past decade, we will compare the median levels of the incomes of married couple families in Massachusetts in 1989 and 1999. We will estimate these incomes first by including and then excluding the earnings from the employment of wives in 1989 and 1999. Table 12 displays the median real annual incomes of all married couple families with a wife under 65 years of age in 1989 and 1999.²² Findings are presented for all such married

²² These income estimates differ slightly from those presented earlier for all non-elderly families in the state. These earlier income estimates reflected the incomes of all families where the householder was under 65 years of age. In most cases, the householder was the husband. In the table below, the estimates reflect the incomes of those families where the wife is under 65. In some cases the husband will be over 65.

couple families and for those in six educational groups, classified by the educational attainment of the wife rather than the husband in these families.

Table 12:
Median Annual Incomes of Massachusetts Families With a Wife Under
65 Years of Age by the Educational Attainment of the Wife, 1989 and 1999
(in Constant 1999 Dollars)

	(A)	(B)	(C)	(D)
Educational Attainment of Wife	1989	1999	Absolute Change, 1989 – 99	Percent Change, 1989 – 99
All	\$70,126	\$75,500	+\$5,374	+7.7%
0 – 12 years, no diploma or GED	\$49,002	\$45,000	-\$4,002	-8.2%
High school diploma/GED	\$63,121	\$61,300	-\$1,821	-2.9%
13 – 15 years, no degree	\$69,836	\$72,000	+\$2,164	+3.1%
Associate’s degree	\$74,805	\$75,900	+\$1,095	+1.5%
Bachelor’s degree	\$85,079	\$91,000	+\$5,921	+7.0%
Master’s or higher degree	\$100,723	\$109,200	+\$8,477	+8.4%

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

Between 1989 and 1999, the median real income of these married couple families rose from \$70,000 to \$75,500, a gain of \$5,400 or nearly 8 percent. The changes in the median incomes of such families varied quite widely by the educational attainment of the wife. Families with wives who had not completed any post-secondary education experienced real income declines over the decade. Those families with wives lacking a high school diploma were characterized by an eight percent decline in their median real incomes. All those families where the wife completed one or more years of college experienced some gains in their median real incomes; however, the absolute and relative sizes of these improvements were greatest for those families in which the wife held a bachelor’s or higher academic degree. In comparison to income developments in the 1980s, however, each of these married couple family groups fared considerably worse in the 1990s.

How well would these non-elderly married couple families in Massachusetts have fared economically over the past decade if wives had not worked? To answer this key public policy question, we subtracted the earnings of the wives from total family income in both 1989 and

1999 and calculated the median family incomes that would have resulted. Findings are displayed in Table 13. The median incomes of Bay State families with a wife under 65 years of age would have essentially remained unchanged over the past decade if these wives had not worked. However, all those families where the wife had not completed four or more years of college would have experienced real income declines over the past decade, with the relative size of these income declines ranging from 7 to 11 percent for those families where the wife had not completed any schooling beyond high school. Only those families in which the wife held a bachelor's or higher degree would have experienced a rise in their median real incomes over the decade if the wife had not worked. But the size of these income gains would have been quite modest (3 to 4 percent). The husbands in these families had achieved gains in their real earnings over the decade.

Table 13:
Median Annual Incomes of Massachusetts Families with a Wife Under 65 Years of Age
Excluding the Wife's Earnings by Educational Attainment of the Wife
(in Constant 1999 Dollars)

	(A)	(B)	(C)	(D)
Educational Attainment of Wife	1989	1999	Absolute Change, 1989 – 99	Percent Change, 1989 – 99
All	\$51,168	\$51,000	-\$168	-.3%
0 – 12 years, no diploma or GED	\$38,515	\$34,200	-\$4,315	-11.2%
High school diploma/GED	\$48,348	\$45,135	-\$3,213	-6.6%
13 – 15 years, no degree	\$51,034	\$50,000	-\$1,034	-2.0%
Associate's degree	\$53,634	\$51,000	-\$2,634	-4.9%
Bachelor's degree	\$58,420	\$60,020	+\$1,600	+2.7%
Master's or higher degree	\$65,294	\$68,000	+\$2,705	+4.1%

Sources: 1990 and 2000 Censuses of Population and Housing, PUMS data files, tabulations by authors.

How dependent were married couples in Massachusetts upon the earnings of wives to achieve real income gains over the past decade. In Table 14, we compare the actual growth in the median incomes of non-elderly, married couple families in Massachusetts over the decade of the 1990s with the growth that would have taken place in the absence of the earnings of the wife. The change in these families' median incomes attributable to the increased earnings of wives is

then calculated. Estimates are presented for all such married couple families and for those in selected educational attainment subgroups, classified by the educational attainment of the wife.

Table 14:

Wives' Contributions to the Growth in the Median Real Incomes of Non-Elderly Massachusetts Married Couple Families, by the Educational Attainment of the Wife, 1989 – 1999

	(A)	(B)	(C)	(D)
Educational Attainment of Wife	Growth in Median Real Income Including Wives' Earnings	Growth in Median Real Income, Excluding Wives' Earnings	Growth in Median Real Income Due to Increased Earnings of Wives	Percent of Change in Family Income Due to Additional Wives' Earnings
All	\$5,374	-\$168	+\$5,542	103%
0 – 12 years, no diploma or GED	-\$4,002	-\$4,315	+\$312	-- ⁽¹⁾
High school diploma/GED	-\$1,821	-\$3,213	+\$1,392	--
13 – 15 years, no degree	+\$2,164	-\$1,034	+\$3,198	148%
Associate's degree	+\$1,095	-\$2,634	+\$3,729	340%
Bachelor's degree	+\$5,921	+\$1,600	+\$4,321	73%
Master's or higher degree	+\$8,477	+\$2,705	\$5,772	68%

Source: 1990 and 2000 Censuses of Population and Housing, PUMS data files, tabulations by authors.

Note: -- implies that wife's contribution's not defined due to negative growth in income of family.

For the typical married couple family in which the wife was under 65 years of age, median family income rose by \$5,374 over the 1990s decade. Excluding wives' earnings from employment from the incomes of these families yielded a net change of -\$168. Thus, all of the net gain in the median real income of married couple families over the 1990s decade was attributable to the earnings of the wives in these families.²³ The median incomes of married couple families in which the wife had not completed any years of schooling beyond high school declined over the decade despite higher earnings of the wives. In the absence of these wives' higher earnings, these families' incomes would have declined even further.

²³ One might have expected the median income of such families to have improved slightly over the decade since the median earnings husbands in these families rose by \$1,000 over the decade. Several factors can account for this difference. First, there are others sources of family income, such as other family members' earnings, property income, and cash transfers, which may have declined over the decade, and second, the husband with median earnings is not the same as the husband in the family with the median income, wives' earnings in the middle frequently pushup family income the most in relative terms.

Among those families in which the wife had completed one to three years of college or held an Associate's degree, all of the gains in family income were attributable to the increased earnings of the wife. In those married couple families where the wife held a Bachelor's or higher degree, wives contributed between two-thirds and three-fourths of the gain in the median annual incomes of such families. Not one educational group of married couple families would have experienced any substantive gain in their median real annual income over the supposed prosperous decade of the 1990s in the absence of additional work effort and earnings by the wife. In all families where the wife had completed fewer than 16 years of school, median real incomes would have declined in the absence of wives' additional earnings. This strategy for maintaining family living standards has, however, reached the stage of exhaustion in our state.

Trends in the Median Incomes of Single Female and Male Headed Families by Educational Attainment

Earlier, we presented findings on the changes in the median real incomes of families headed by men and women with no spouse present in the home. Overall, the state's female headed families experienced stagnation in their median incomes over the past decade. The growth rates of the median real incomes of these Massachusetts families headed by women with no male spouse present in the home did vary somewhat by educational attainment (Table 15). Somewhat surprisingly, those families headed by women lacking a high school diploma/GED actually fared the best, with a 36% increase in their real income over the decade. Increased work effort by these women brought about by a combination of state welfare reform and very strong labor market conditions at the end of the decade helped raise their median real income by slightly more than \$5,000. The only other educational group to experience a gain in their median real income over the decade was those holding a Master's or higher degree, whose median income rose by nearly \$4,900 or 9%. All other educational subgroups of female-headed families incurred modest declines in their median real incomes over the decade. The 1999 median incomes of these families were strongly associated with the educational attainment of the householder, ranging from a low of \$19,000 for those families with a householder lacking a high school diploma to a high of \$58,000 for those headed by women with a Master's or higher degree.

Table 15:
Changes in the Median Real Incomes of Single Female-Headed and Male-Headed
Families in Massachusetts Between 1989 and 1999 by Educational Attainment
(in Constant 1999 Dollars)

Family Type/ Educational Attainment	(A) 1989	(B) 1999	(C) Absolute Change	(D) Percent Change
<u>Female Head</u>				
• 0-12, no diploma or GED	14,075	19,120	+5,045	+36%
• H.S. diploma/GED, no college	28,203	28,020	-183	-1%
• 13-15 years, no college degree	30,809	29,600	-1,209	-4%
• Associate's degree	35,858	35,140	-718	-2%
• Bachelor's degree	47,005	46,400	-605	-1%
• Master's or higher degree	53,720	58,600	+4,180	+9%
<u>Male Head</u>				
• 0-12, no diploma or GED	33,987	32,000	-1,987	-6%
• H.S. diploma/GED, no college	45,930	39,900	-6,030	-13%
• 13-15 years, no college degree	51,705	42,310	-9,395	-18%
• Associate's degree	56,675	50,000	-6,675	-12%
• Bachelor's degree	67,821	64,000	-3,821	-6%
• Master's or higher degree	69,836	68,400	-1,436	-2%

Source: 1990 and 2000 Census, PUMS data files, tabulations by Center for Labor Market Studies.

Massachusetts families headed by men with no female spouse present in the home fared poorly in the 1990s. As noted earlier, the median real income of such families headed by a male under 65 years of age declined by 13 percent between 1989 and 1999. To identify how the income growth of such families was associated with the educational attainment of the heads of these families, we estimated median income growth rates for male headed families in six educational subgroups. In each subgroup, the median real incomes of these families declined over the decade; however, the size of these declines ranged from lows of -2% for those families headed by a man with a Master's or higher degree to -13% for high school graduates and -18% for those men with one to three years of college, but no post-secondary degree. On average, those men with a bachelor's or higher degree fared the best in avoiding the more severe real income losses during the 1990s decade in our state, but their higher levels of schooling did not protect them from experiencing some decline in their real incomes.

The Changing Distribution of Family Incomes in Massachusetts in the 1990s

Despite strong growth in the total number of wage and salary jobs, labor productivity, and mean annual earnings in covered employment in the state from 1992 to 1999, the typical family in Massachusetts experienced only a very modest growth in its real income over the decade.²⁴ Given the higher estimates of growth in mean annual earnings and per capita real incomes, how can we explain this limited growth in median family incomes? One major answer is the sharp rise in family income inequality in the Commonwealth during the 1990s. As will be revealed below, families from the 80th percentile on up achieved double-digit growth rates in their family incomes over the decade, and those in the top five percent obtained increases ranging from 21 to 51 percent. The bulk of the real income gains accrued to families in the top quintile of the family income distribution.

The family income data from the 1990 and 2000 Censuses were used to estimate the level of incomes at each percentile of the distribution in 1989 and 1999. The income data for 1989 were converted into 1999 dollars via use of the Consumer Price Index for All Urban Consumers (CPI-U). Findings on the growth of real family incomes at selected percentiles of the distribution are displayed in Table 16. These percentiles range from the 5th and 10th lowest to the 95th, 97th and 99th highest. It should be noted that, as a consequence of upward and downward income mobility, the formation of new families between 1989 and 1999, and the dissolution or out-migration of other families present in the state in 1999, families at a given percentile in one year (1989) are not necessarily the same as those at that same percentile in 1999. Changes in real incomes along the distribution do, however, reveal whether the gains in incomes were uniform along the entire distribution or concentrated in certain segments of the distribution.

²⁴ The term “covered employment” refers to those jobs covered by the federal and state unemployment insurance laws. Employers report quarterly data to the Massachusetts Department of Employment and Training on the total wages and salaries, including bonuses and stock options, of wage and salary workers on their formal payrolls.

Table 16:
Changes in the Real Incomes of Massachusetts Families at Selected
Percentiles Along the Family Income Distribution Between 1989 and 1999
(in Constant 1999 Dollars)

	(A)	(B)	(C)	(D)
Percentile	1989	1999	Absolute Change, 1989 – 99	Percent Change, 1989 – 99
5	\$10,490	\$10,500	10	.1%
10	17,555	18,000	445	2.5%
15	24,048	24,000	-48	-.2%
20	29,558	29,700	142	.5%
30	40,306	40,000	-306	-.8%
40	49,711	50,610	899	1.8%
50	59,056	61,200	2,144	3.6%
60	68,897	73,170	4,223	6.1%
70	80,613	87,200	6,587	8.2%
80	96,735	107,050	10,315	10.7%
90	124,950	143,400	18,450	14.8%
95	159,278	192,504	33,226	20.9%
97	188,097	284,000	95,903	51.0%
99	\$276,919	\$371,200	\$94,281	34.0%

Source: 1990 and 2000 Census, PUMS files, tabulations by authors.

Findings in Table 16 reveal quite clearly that gains in the real incomes of families were highly uneven, over the past decade, with the size of the gains tending to rise steadily as one moves up the income distribution. For example, among families in the bottom thirty percent of the income distribution, real incomes were essentially unchanged over the decade, with most groups experiencing changes between $\pm 1\%$. From the 40th percentile on up, all families experienced gains in their real incomes with the size of these gains rising steadily from the 40th to the 97th percentile. At the 40th percentile, the gain in family income was 1.8%, rose to 6% at the 60th percentile, 11% at the 80th percentile, and 51% at the 97th percentile. Due to top coding procedures of the U.S. Census Bureau, the estimated income gain of 34% for families at the 99th percentile was likely biased downward.²⁵

²⁵ In reporting earnings and income data for individual respondents on the public use files, the U.S. Census Bureau top codes annual earnings at \$299,999 and income from property (rents, interests, dividends) at \$99,999. An

As a consequence of the highly divergent gains in the real incomes of Massachusetts families at various points along the distribution, the shares of income received by families in various deciles and quintiles of the distribution changed during the 1990s. Only families in the top decile of the distribution increased their percentage share of total family income over the decade. The top decile increased their share from 26.4% in 1989 to 31.3% in 1999, a gain of nearly five full percentage points (Table 17). Families in each other decile of the distribution experienced declines in their shares with sizable reductions taking place for those in the third to eighth decile. Families in the ninth decile (the second highest) experienced only a .2 percentage point decline in their share from 15.7 to 15.5 percent. The top quintile of families captured just under 47 percent of all money incomes in the state during 1999. Their combined share was equal to that of all families in the bottom 75% of the distribution.

Unfortunately, the sharp rise in family income inequality in Massachusetts during the 1990s as measured with the 2000 Census data is a conservative estimate of the true degree of income inequality. As noted above, the U.S. Census Bureau top codes the incomes of the most affluent families in the state, the property incomes reported to the U.S. Census Bureau are known to be substantially downward biased, and the Census money income measures exclude capital gains and key elements of compensation for corporate executives, such as stock options and annual bonuses. In a separate research paper prepared by the Center for Labor Market Studies that examines Massachusetts Department of Revenue data on the 1999 incomes reported by households to DOR, we find that the total amount of income reported by taxpayer units in the top two to three percent of the distribution is considerably higher than that reported to the U.S. Census Bureau. The top quintile of tax reporting units capture well over 50 percent of the income reported to DOR.²⁶

This widening degree of inequality in family incomes would be less troublesome if families in the lower half of the income distribution had obtained substantive increases in their real incomes over the past decade. However, as revealed above, families in the bottom thirty percent of the income distribution faced stagnant real incomes while those in the 30th to 50th

analysis of DOR state income tax return data for 1999 reveals many more millionaires in the state than suggested by the U.S. Census Bureau's findings for the 2000 Census.

²⁶ A tax reporting unit is not the same as a family household. Tax reporting units include unrelated individuals, teens and young adults who file separately from their parents, and married couples who file separate income tax returns.

percentiles obtained only modest gains (2 to 3 percent) despite increased employment and annual hours worked by wives in married couple families. Improvements in the income of families in the lower half of the distribution will require increases in the real wages and annual earnings of workers in these families over the current decade. The Workforce Development Initiative can play a key role by calling for concerted efforts by state and local governments, Workforce Investment Boards and Community Based Organizations, private sector employers, and labor unions to boost the training and productivity of the state’s current front line workers. These productivity gains also will need to be more broadly shared with workers than they were in the past decade if they are to succeed in raising real annual earnings and family incomes over the current decade and reverse the tide of rising earnings and income inequality across the state.²⁷

Table 17:
Shares of Total Pre-Tax Money Income Obtained by Families in Each
Decile of the Family Income Distribution in Massachusetts, 1989 – 99
(in %)

Decile	(A)	(B)	(C)
	1989	1999	Percentage Point Change
Lowest	1.6	1.3	-.3
Second	3.6	3.2	-.4
Third	5.2	4.6	-.6
Fourth	6.6	6.0	-.6
Fifth	7.9	7.3	-.5
Sixth	9.3	8.6	-.7
Seventh	10.9	10.2	-.7
Ninth	15.7	15.5	-.2
Tenth	26.4	31.3	+4.9
Top Quintile	42.1	46.8	+4.7

²⁷ Preliminary estimates of the authors based on combined use of the 2000 Census and DOR income tax return data for 1999 indicate that the top quintile of families in Massachusetts may have received as much as 56% of the total money incomes received by all families in 1999, including bonuses, stock options, and capital gains.

Appendix A: The Median Annual Earnings of Massachusetts Married Men Under 65 Years of Age

In the text of this paper, we presented estimates of the 1989 and 1999 median annual earnings of the husbands of married women under the age of 65. As noted earlier, some of these men (approximately 5% of the total) were 65 or older. Since most of the men over 64 years of age have withdrawn from active participation in the labor market, how would the earnings of these married men have fared if we excluded those men 65 and older from the analysis? To answer this question, we estimated the median real annual earnings of all married men under age 65 in Massachusetts in 1989 and 1999, both overall and for six educational subgroups. Findings of our analysis are displayed in Appendix Table A.

The median real annual earnings of all married men under age 65 increased modestly from slightly under \$43,000 in 1989 to \$45,000 in 1999, an increase of \$2,024 or nearly 5%. This increase was two percentage points higher than that for all men who were the husbands of wives under age 65. Similar to the findings for the latter group of husbands, however, the changes in the median real annual earnings of these men varied considerably by their years of educational attainment. Not one group of married men with less than a bachelor's degree was able to improve its real annual earnings over the past decade. Those men with an Associate's degree came closest to holding their own, experiencing a decline of only .5%. Those married men with a high school diploma incurred a 7 percent decline in their median annual earnings while high school dropouts experienced a near 11% drop in their real annual earnings over the decade. At the upper end of the educational distribution, the median annual earnings of bachelor degree recipients rose by nearly 10 percent while those with a Master's or higher degree boosted their median real annual earnings by four percent.

Over the decade, the absolute and relative sizes of the earnings differences between better educated and less educated married men rose across the board. During 1999, the median annual earnings of married men with a bachelor's degree exceeded those of men with only a high school diploma by \$24,000 or nearly 70% versus a difference of only \$16,000 or 42% at the time of the 1990 Census. Earnings differentials also widened between high school graduates and dropouts and between Associate degree holders and high school graduates. The economic prosperity of

the 1990s did little to improve the earnings prospects of those non-elderly married men who completed fewer than four years of college. This experience stands in sharp contrast to that of the 1980s where nearly every group of married men was able to improve its real annual earnings. Seldom in our state's economic history has an economic boom done so little for so many.

Appendix Table A:
Growth in the Median Real Annual Earnings of Husbands Under 65 Years of
Age in Massachusetts, by Educational Attainment, 1989 – 99
(in Constant 1999 Dollars)

	(A)	(B)	(C)	(D)
Educational Attainment	1989	1999	Absolute Change, 1989 – 99	Percent Change, 1989 – 99
All	\$42,976	\$45,000	+\$2,024	+4.7%
0 – 12 years, no diploma or GED	\$26,860	\$24,000	-\$2,860	-10.6%
High school diploma or GED	\$37,714	\$35,000	-\$2,714	-7.2%
13 – 15 years, no degree	\$41,633	\$40,200	-\$1,433	-3.5%
Associate's degree	\$44,856	\$44,600	-\$256	-.5%
Bachelor's degree	\$53,720	\$59,000	+\$5,280	+9.8%
Master's or higher degree	\$67,150	\$70,000	+\$2,850	+4.2%

Source: 1990 and 2000 Censuses of Population and Housing, PUMS files, tabulations by authors.

Note: ⁽¹⁾ The universe of husbands includes those with no paid work experience during calendar years 1989 and 1999. Those with no paid work experience were assigned an earnings value of zero.