

LEADING INDICATOR: NEW ENGLAND'S HIGHER EDUCATION ECONOMY

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Nowhere is higher education so obviously ingrained in a region's economic vitality as it is in New England.

Students from all over the world enroll in New England's premier institutions of learning and research. They bring resources to finance their education and living expenses, which then reverberate and multiply through local and state economies.

Human capital-based industries driven by New England's college-trained talent fuel New England's local and state economies.

Higher education has contributed directly to New England's extraordinary success in the "Human Capital Economy" of the past three decades. But today, the New England states face a variety of economic and demographic challenges. How well these challenges are addressed today will determine New England's future prosperity compared with other regions and, increasingly, other industrialized countries. So, how can New England preserve the engine of its economic vitality?

Educational attainment

New England is home to 5.1 percent of the U.S. population age 25 and over, but 5.3 percent of the nation's high school graduates and, more importantly, 6.2 percent of those with at least a bachelor's degree. In 2000, 31 percent of New England's population age 25 and over held bachelor's degrees or more—the largest share of any of the eight regions of the country. Nationally, 26 percent of adults have bachelor's

degrees. The college-educated adults and workers of New England provide the foundation for economic success in the Human Capital Economy.

Income trends

In the years following World War II, the incomes of individuals, families, cities and states at all levels of educational attainment were rising. But in the early 1970s, a fundamental change occurred that marked the advent of the Human Capital Economy: income growth after 1973 was limited to those with college educations. Real incomes of those with high school educations or less began to decline. Real incomes of college graduates continued to increase. Economic welfare and the prosperity of individuals, families, cities and states began to be redistributed according to educational attainment. This continues today.

New England has prospered in the Human Capital

New England's Human Capital in 2000

	Educational Attainment of Population Age 25 and Over			
	Completed High School		Earned Bachelor's or More	
	Percent	U.S. Rank	Percent	U.S. Rank
United States	84%		26%	
New England	87%	3	31%	1
Mideast	85%	5	28%	3
Great Lakes	86%	4	24%	7
Plains	89%	2	27%	5
Southeast	82%	7	23%	8
Southwest	81%	8	24%	6
Rocky Mountain	89%	1	29%	2
Far West	83%	6	27%	4
Connecticut	88%	13	32%	6
Maine	89%	12	24%	28
Massachusetts	85%	31	33%	3
New Hampshire	88%	14	30%	8
Rhode Island	81%	42	26%	18
Vermont	90%	7	29%	10

Note: Mideast includes Delaware, Maryland, New Jersey, New York, Pennsylvania and the District of Columbia. Source: U.S. Census Bureau.

Economy that has emerged since 1973. Between 1973 and 2001, New England had the fastest growth in real per-capita personal income of any region in the country. New England's per-capita personal income increased by nearly 70 percent, compared with 46 percent nationally and 55 percent in the Southeast, the country's second-fastest growing region.

Since 1973, the three states with the fastest growing per-capita personal incomes in the United States were Massachusetts, New Hampshire and Connecticut. The other three New England states had per-capita personal income growth rates that were also well above the national average.

New England's economic prosperity is driven by its college-educated workforce. Across the 50 states, the correlation between per-capita personal income and the share of state populations age 25 and over with a bachelor's degree or more was .78 in 2000. That is,

each 1 percent increase in the proportion of a state's population age 25 and over with at least a bachelor's degree added \$773 to state per-capita personal income.

Other data reveal that the relationship between income and education has been strengthening since 1973 when the Human Capital Economy began. This relationship shows up in state data reported since 1989 as well. In 1989, the correlation between state per-capita personal income and the share of people 25 and over with a bachelor's degree was .70. Economic growth measured by state per-capita personal income has been greatest in those states with the best educated workforces. This helps explain New England's extraordinary economic growth between 1973 and 2001.

High school preparation

The foundation for college is laid in high school. The 1983 federal report *A Nation at Risk* called for a substantial strengthening of the high school curriculum. However, across the United States, the rate at which public high schools have retained freshmen through to graduation has declined since the report appeared. Between 1982 and 2000, the public high school graduation rate for the United States declined from 75 percent to 67 percent.

Several New England states have successfully bucked this trend, and public high school graduation rates actually increased between 1982 and 2000.

High school graduation is good insurance against falling into poverty for individuals and states. Compared with other states, the New England states have done a good job getting their ninth-graders through high school to graduation. And indeed, in 2000, the poverty rates in the New England states were all below the national average.

College continuation rates

The proportion of public and private high school graduates who continue their educations in college as degree-seeking freshmen the following fall is the *college continuation rate*. Tracking this by state requires following students across state lines because many students, especially in New England, go to college in another

New England Income in the Human Capital Economy

	Per-Capita Personal Income			U.S. Rank in Income Growth, 1973-2001
	1973 (2001 Dollars)	2001	Percent Change	
United States	\$20,884	\$30,472	+46%	
New England	\$21,878	\$37,115	+70%	1
Mideast	\$22,945	\$34,968	+52%	3
Great Lakes	\$21,742	\$30,103	+39%	7
Plains	\$20,977	\$29,313	+40%	6
Southeast	\$17,610	\$27,246	+55%	2
Southwest	\$18,550	\$27,439	+48%	4
Rocky Mountain	\$19,861	\$28,859	+45%	5
Far West	\$23,208	\$32,047	+38%	8
Massachusetts	\$22,116	\$38,907	+76%	1
New Hampshire	\$19,442	\$34,138	+76%	2
Connecticut	\$24,865	\$42,435	+71%	3
Vermont	\$18,120	\$28,594	+58%	9
Maine	\$17,207	\$26,723	+55%	12
Rhode Island	\$19,809	\$30,215	+53%	18

Note: Mideast includes Delaware, Maryland, New Jersey, New York, Pennsylvania and the District of Columbia.
Source: Bureau of Economic Analysis

Public High School Graduation Rates

	1982		2000		Change	
	Rate	U.S. Rank	Rate	U.S. Rank	Rate	U.S. Rank
United States	75%		67%		-7%	
Connecticut	71%	36	77%	10	+6%	+26
Maine	70%	38	77%	12	+7%	+26
Massachusetts	76%	22	75%	15	-1%	+7
New Hampshire	78%	12	74%	19	-4%	-7
Rhode Island	73%	31	70%	29	-3%	+2
Vermont	78%	15	79%	7	+1%	+8

Source: Based on data from National Center for Education Statistics.

state. Nationally, 18 percent of freshmen left their home states in 2000 to start college. In New England, the proportion of freshmen leaving their home state was much higher: 60 percent left Vermont, 53 percent left New Hampshire, 48 percent left Connecticut, 43 percent left Maine, 37 percent left Rhode Island and 31 percent left Massachusetts.

(To be sure, interstate migration of college students in and out of these small states is a story in itself. Large numbers of New England students bypass in-state subsidized public institutions for more expensive institutions elsewhere, sometimes just to “get away from home.” Moreover, in New England the out-migration of students from New England is more than offset by the in-migration of students from other regions, who represent one in four freshmen at New England campuses.)

grew between 1993 and 2001. The increases were largest in Rhode Island (5 percent), Connecticut (2 percent) and Vermont (2 percent). Only in New Hampshire did the proportion of K-12 students approved for free or reduced-price school lunches decline during this period—and by less than 1 percent. (Nationally, the proportion of children approved for free or reduced price school lunches increased from 37 percent to 40 percent between 1993 and 2001.)

Meanwhile, state investment in higher education in New England is very modest due to the strength of the private sector of higher education. State and local governments in New England spend less of their tax resources on higher education than any other region of the country. In fiscal 2003, New Hampshire ranked 50th among the states in state tax “effort”—state tax

fund appropriations per \$1,000 of state personal income—in support of higher education. Massachusetts ranked 49th; Vermont, 48th; Connecticut, 47th; Rhode Island, 46th; and Maine, 31st.

Nevertheless, all the New England states have been reducing their state higher education investment effort over the past 25 years. New Hampshire, for example, reduced its investment effort by 50 percent between fiscal 1978 and fiscal 2003. Rhode Island’s

investment declined by 48 percent, Vermont’s by 48 percent, Massachusetts’s by 37 percent, Connecticut’s by 33 percent, and Maine’s by 5 percent. The current state budget climates suggest substantial further reductions in investment in higher education and attendant tuition increases at public campuses.

With growing populations of low-income students headed toward college age and sharp increases in public college charges, state policies in New England must focus on need-based student financial aid.

There is no more essential responsibility for states than preserving higher education’s contribution to New England’s prosperity. Institutions, both public and private, will raise tuition charges to students and their families to finance the delivery of educational services. Most students will require need-based financial aid to pay these costs. How well states help them to do so will determine a large part of New England’s future prosperity in the Human Capital Economy.

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College Continuation Rates

	1992		2000		Change in	
	Rate	U.S. Rank	Rate	U.S. Rank	Rate	U.S. Rank
United States	54%		57%		+2%	
Connecticut	57%	15	62%	14	+5%	+1
Maine	49%	42	54%	33	+6%	+9
Massachusetts	59%	10	69%	2	+10%	+8
New Hampshire	56%	17	59%	23	+3%	-6
Rhode Island	62%	7	66%	5	+4%	+2
Vermont	56%	20	45%	45	-11%	-25

Source: Based on data from National Center for Education Statistics.

In the fall of 2000, the college continuation rate for the United States was 57 percent. Four of the six New England states had higher college continuation rates; two had lower rates. In five New England States, the college continuation rate increased by more than the national average between 1992 and 2000. Only Vermont and New Hampshire slid in rank between 1992 and 2000.

Looking to the future

The number of public high school graduates in the United States will grow by 9 percent between 2000 and 2012, according to projections by the National Center for Education Statistics. But this growth will not occur everywhere. The number of high school graduates will increase in four New England states: by 16 percent in Connecticut, 10 percent in Rhode Island, 7 percent in Massachusetts and 6 percent in New Hampshire. But the number will decline by 16 percent in Vermont and by 12 percent in Maine.

Moreover, the students in New England’s K-12 pipeline who are headed toward traditional college age increasingly come from low-income families. In five of the six New England states, the proportion of K-12 students approved for free or reduced-price school lunches (incomes less than 185 percent of poverty level)