

MASSACHUSETTS BENCHMARKS

The quarterly
review of
economic
news &
insight

summer 2002 • volume five issue 3

- Economic Currents
- Massachusetts Current and Leading Indices
- College and Knowledge: A New View of the State's Labor Force
- Southeast Region: Building a New Economy
- Street Signs: The Threat of Emigration
- Endnotes: The Anatomy of a Massachusetts Recession

A PUBLICATION OF
THE UNIVERSITY
OF MASSACHUSETTS

IN COOPERATION WITH
THE FEDERAL RESERVE
BANK OF BOSTON





ILLUSTRATION: NAOMI SHEA

RALPH WHITEHEAD, JR., AND ROBERT J. LACEY

College and Knowledge: *A New View of the State's Labor Force*

The difference between workers with college educations and those without has long been recognized as a key distinction in the labor force. Analysis of recent census data suggests that there is another important distinction, one between workers in several of the knowledge-based sectors of the economy and workers in other sectors. Hence, the value of combining college and knowledge: a college degree and a job in the knowledge sector. Moreover, this sector distinction is especially notable in Massachusetts, because no other state has a larger share of its labor force in these knowledge sectors, and nowhere else do these sectors employ a larger percentage of the state's college-educated workers.

For years, the difference between workers with four-year college degrees and workers without has been widely recognized as a key division in the state's labor force. And with reason: since the 1970s, the earnings gap between these two groups has grown substantially.

Recently, a second earnings gap has become apparent. This one reflects a distinction between the people who work in several of the economy's knowledge-based sectors—areas of the economy that put a high premium on specialized knowledge—and the people who hold jobs in all other sectors.¹ The first group, not surprisingly, is on the high side of this annual earnings gap; the second group is on its low side.

As recently as 1980, the dollar size of this gap was a modest \$2,300. By 2000, it had quadrupled to \$9,400.² The gap is even larger for college-educated workers. In 2000, a college-educated worker in the knowledge sectors typically out-earned a college-educated worker in the other sectors by \$13,700.

Indeed, though the median earnings of all college-educated workers rose during the 1990s, the increase was actually concentrated in these knowledge sectors. The earnings of college-educated workers in the other sectors fell—from \$41,400 in 1990 to \$40,300 in 2000. Meanwhile, the earnings of college-educated workers in the knowledge sectors rose from \$51,000 to \$54,000.

A New View of the Labor Force

To recognize the sector gap is also to establish a revealing new way to view the labor force. This view sorts workers by a combination of education and employment sector. Thus, they fall into four groups: college-educated workers in the knowledge sectors, college-educated workers in other sectors, workers in knowledge sectors *without* college educations, and workers in the other sectors *without* college educations.

College-educated workers in the knowledge sectors. The share of workers with both college degrees and jobs in these sectors has grown—from 12 percent in 1980 to 19.35 percent in 2000. During the same period, earnings for this group grew from \$46,500 to \$54,000. In 1980, college-educated workers were only 37 percent of all workers in the knowledge sectors. By 2000, this number had grown to 53 percent. The percentage of women in this group rose from 32 percent in 1980 to 44 percent in 2000.

College-educated workers in other sectors. During this 20-year period, the share of workers with college degrees and jobs in other sectors of the economy grew from 13.1 percent to 17.6 percent, as their earnings rose from \$37,100 to \$40,300. The female share of the group rose from 38 percent to 47 percent, and the median age increased from 34 to 42.

Workers in knowledge sectors without college educations. The share of workers without college degrees holding jobs in the knowledge sectors fell from 20 percent to 17.1 percent, but their earnings grew from

Education and Employment Sectors: Percentage of MA Workforce and Workers' Median Earnings

	Knowledge Sectors	Other Sectors	Unemployed
With College Degree	19.4% \$54,000	17.6% \$40,300	0.8%
Without College Degree	17.1% \$28,000	43% \$25,800	2.1%

Source: 1999-2001 March Current Population Survey, authors' analysis

Cognitive Elite or Mainstream Employee?

At one time, it might have been accurate to describe the college-educated workers in the knowledge sectors as a tiny cognitive elite, but this definition does not currently fit such workers in Massachusetts. In fact, nearly 20 percent of the state's labor force hold college degrees and are employed in the knowledge sector. Two notable conditions set the state apart.

For one, an unusually large share of the state's labor force works in these sectors. Nationally, the share is 27 percent; for Massachusetts, it is more than 36 percent, the largest share in the country.

Massachusetts	36.5%
Rhode Island	32.6%
New Jersey	31.8%
Colorado	31.7%
New Hampshire	31.6%

For the other, an unusually large share of the state's college-educated workers (51 percent) is employed in these knowledge sectors. Nationally, the share is 40 percent. Again, Massachusetts ranks first in the country.

Massachusetts	51.2%
District of Columbia	46.5%
Kansas	45.3%
Rhode Island	44.9%
New York	44.8%

\$25,900 to \$28,000. In 1980, 63 percent of this group were women, increasing to 69 percent by 2000.

Workers in the other sectors without college educations. In 1980, half of the labor force in Massachusetts consisted of workers without college degrees who were not employed in the knowledge sectors. This group, also with the lowest earnings, dropped to 43 percent of the labor force by 2000. Over this time period, this group's earnings, unlike those of the other three groups, actually fell. They dropped from \$28,500 to \$25,800.

In 1980, 40 percent of the members of the group were women, increasing slightly to 41 percent 20 years later. In 1980, 5 percent of these workers were members of minority groups. In 2000, the figure was 17 percent. For 2000, this group also had the highest percentage of workers who were born outside the United States (20 percent).

Significant Earnings Contrasts

As described, there is an especially sharp contrast between two of the four groups: college-educated workers in the knowledge sectors and workers without college educations in the other sectors. The \$28,200 annual earnings gap between them reflects both the education gap and the sector gap.

There is also a significant contrast between what happened to earnings in the 1980s and what happened to them in the 1990s. The 1980s saw increased earnings in all four of the groups. For all but the first group, this represented all of the increases realized in the 20-year period. In the 1990s, only the first group—college-educated workers in the knowledge sectors—saw their earnings rise. By 2000, the earnings for each of the other three groups were actually lower than they had been a decade before.

The Commonwealth's Two Economies

It is often said that Massachusetts has two economies. The distinction between them can be geographic: Greater Boston versus the rest of the state, or the cities versus the suburbs. The distinction can be educational: college-educated workers versus those without college degrees. Now, there is reason to argue that sector is also a crucial distinction.

When the members of the labor force are sorted by sector, what is striking is this: Outside of the knowledge sectors, the percentages of workers with and without college degrees are almost the same as those for the whole of the national labor force. Approximately 30 percent of these workers have college degrees, and roughly 70 percent do not. In this respect, the labor force in one of the state's so-called two economies is a close reflection of the nation's labor force.

In the knowledge sectors, however, the story is a different one. The share of college-educated workers in these sectors outweighs those without degrees by 53 percent to 47 percent, setting this side of the Massachusetts labor force apart from the national pattern—certainly by degree, and maybe even by kind.

This view of the labor force by sector as well as education has implications for workforce development policy. Recent discussions of this policy put an emphasis on improving the skills of workers at the low end of the earnings scale. This is a sound objective, since these are the workers with the greatest need. Lifting the earnings of some of these workers might also take such measures as wage subsidies

The Education Gap

1980

Workers with college degrees 25% of labor force, earning **\$40,100**

Workers without college degrees 75% of labor force, earning **\$26,000**

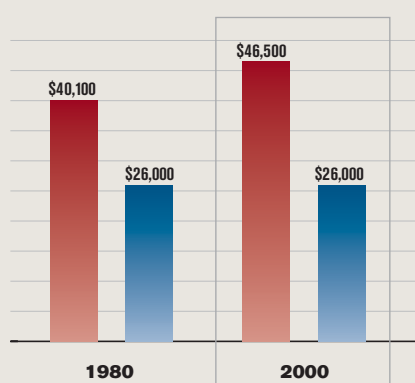
Gap in annual median earnings: **\$14,100**

2000

Workers with college degrees 38% of labor force, earning **\$46,500**

Workers without college degrees 62% of labor force, earning **\$26,000**

Gap in annual median earnings: **\$20,500**



The Sector Gap

1980

Workers in knowledge sectors 32% of labor force, earning **\$30,800**

Workers in other sectors 63% of labor force, earning **\$28,500**

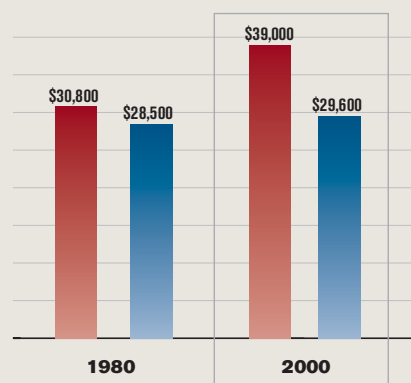
Gap in annual median earnings: **\$2,300**

2000

Workers in knowledge sectors 36% of labor force, earning **\$39,000**

Workers in other sectors 63% of labor force, earning **\$29,600**

Gap in annual average salaries: **\$9,400**



and bargaining rights. At the same time, there could be an emphasis on enabling more people to become college-educated workers in the knowledge sectors. This is also a sound objective, since these are the workers with the greatest opportunity. ▮

1 The knowledge sectors referred to in this article are professional services (knowledge creation), health care, financial services, and information technology.

2 Data in this article are from the March CPS in 1999, 2000, and 2001. The universe is people aged 25 to 62 in the U.S. labor force, weighted to represent total population. All dollar figures are expressed in 2000 dollars.

RALPH WHITEHEAD, JR., is the Public Service Professor at the University of Massachusetts in Amherst.

ROBERT J. LACEY is a doctoral candidate in political science at the University of Massachusetts in Amherst.