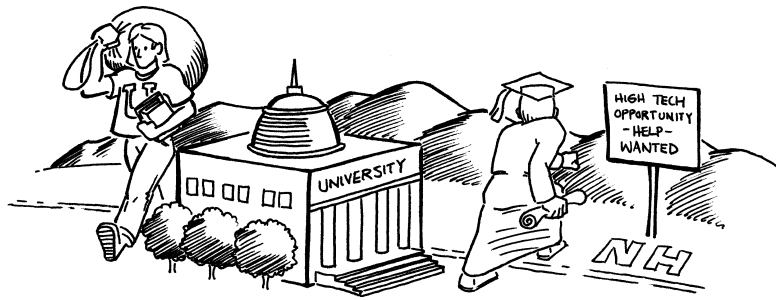


Brain Gain

New Hampshire Looks to Grow its Own Talent

ROSS GITTELL, BRIAN GOTTLLOB AND STEPHEN RENO



Over the past quarter-century, New Hampshire has become a high-technology leader. The state's economy has been transformed to one marked by high value-added and high-output per-worker along with significant increases in per-capita income. Yet, in contrast to some high-technology states such as Massachusetts and California, higher education in New Hampshire has not played a leading role in the state's economic performance. In fact, higher education in New Hampshire has lagged behind changes in the economy. The number of college degrees granted as a percentage of the labor force is falling. And the number of degrees granted in high-technology fields (computer science, engineering and mathematics) does not come close to the number of high-tech jobs.

To support its increasingly high-tech economy, New Hampshire has relied heavily on the in-migration of college-educated workers from other states. New Hampshire and Alaska are the only states in the country without a broad-based personal income or sales tax. New Hampshire has used its low tax burden as a magnet to attract in-migrants.

New Hampshire has used what may be characterized as a "free rider" approach to higher education. That is, the migration of college-educated workers into New Hampshire has allowed the state and its economy to enjoy the benefits of a well-educated workforce without a commensurate financial commitment to higher education. In the short-term, this is viewed by some as an economically rational state policy. The problem with the free rider approach is that the good or service in question—in this case, higher education—tends to be devalued. And that would clearly be harmful to New Hampshire over the long term.

The state has ranked near the bottom of the 50 states in terms of state support of public higher education, appropriating just \$82 per capita in 2001, compared with \$222 nationally, and near the top in public higher

education tuition and fees for state residents, which now top \$7,000 per year at the University of New Hampshire campus in Durham. These are primary reasons why only about half of New Hampshire high school graduates enroll in colleges in their home state, ranking the state 47th in the nation by this measure. A brain drain of sorts is underway as many of New Hampshire's best and brightest go to college in other states and never return.

A magnet?

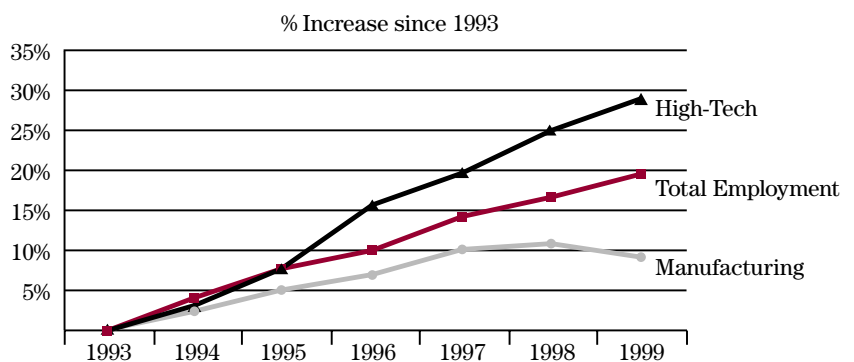
In contrast to the brain drain among high school graduates, New Hampshire

has been a leader in attracting adult in-migrants, particularly college-educated adults from neighboring states. New Hampshire ranks eighth nationally and first in New England in the percentage of the population that has moved into the state since 1980. Between 1994 and 1999, during New Hampshire's recent boom in technology employment, the state experienced net domestic migration of 43,030 residents and added another 5,104 international migrants.

Such in-migrants are 2.5 times more likely to have a four-year college degree than are native residents, according to the University of New Hampshire Survey Center. Along the so-called e-Coast around Portsmouth, more than four out of five college-educated workers were born outside the state.

This in-migration of educated people helps explain why—despite losing so many college-bound students—New Hampshire shines on two other measures of brainpower. The Granite State ranks seventh nationally (tied with New Jersey) in the percentage of adults holding at least a four-year college degree—more than 30 percent. And the state ranks second nationally

Figure 1: New Hampshire Employment Growth, 1993-1999



in employment concentration in high-technology industries, according to the American Electronics Association.

Having obtained a skilled workforce with limited public investment, there appears at first blush to be little justification for New Hampshire to increase its investments in higher education. A closer look at economic, demographic and education trends, however, suggests that New Hampshire cannot sim-

ply rely on the higher education investments of nearby states as a workforce development strategy.

Free ride

New Hampshire's relatively small population and proximity to states with higher levels of private and public investment in higher education have made the free rider approach possible. About half of in-migrants to New

Hampshire come from other New England states and half of those come from New Hampshire's neighbor to the immediate south, Massachusetts. Much of New Hampshire's recent in-migration consists of families with two college-educated wage earners. In addition, Internal Revenue Service data from the tax filings of state-to-state migrants shows that in-migrants to New Hampshire have higher incomes on average than out-migrants. Such findings lend support to the belief that many of the in-migrants have been attracted to New Hampshire by the absence of an income or sales tax. This has worked to New Hampshire's advantage, particularly compared to the common perception of Massachusetts as a high tax state—derisively nicknamed “Taxachusetts.” The data support the view that New Hampshire is a low tax state for individuals and families. The Granite State ranks lowest in the nation in state and local government revenue per \$1,000 in personal income. Yet, Massachusetts also does relatively well on this measure, ranking 14th lowest in the nation and 3rd lowest in New England.

Recently, New Hampshire increased state support for the public University System of New Hampshire with a legislative commitment of \$100 million for capital improvement pro-

jects this session—about 10 times last year's level—and 5 percent increases in the system's operating budget for each of the next two years. Lawmakers also increased scholarship support for state residents (including doubling of funding for the New Hampshire Incentive Grant program). And the state enhanced higher education's connection to the economy through the creation last year of the New Hampshire Forum on Higher Education.

Figure 2: Distribution of New Jobs Created in New Hampshire, 1990-1998

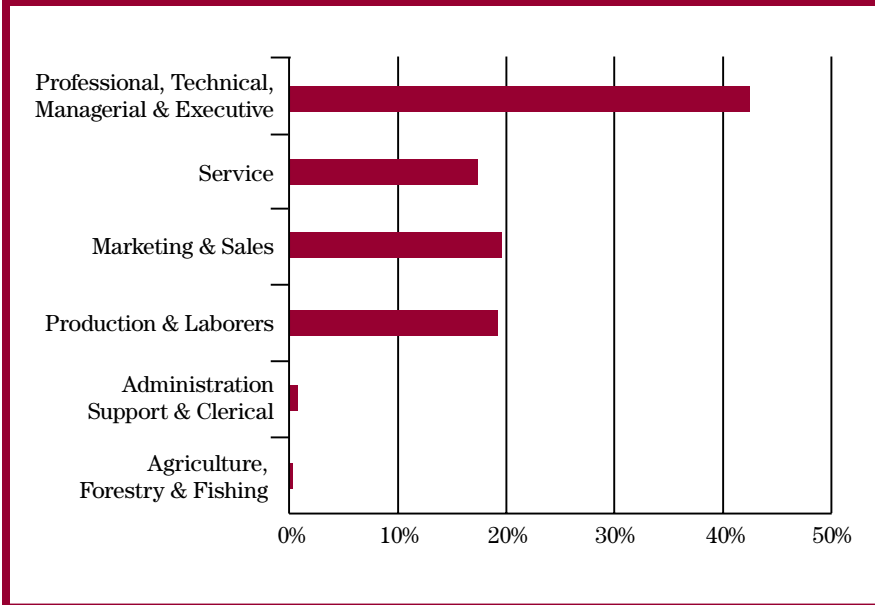


Figure 3: Graduates of New Hampshire Colleges as a Share of the State's Labor Force, 1987-1999

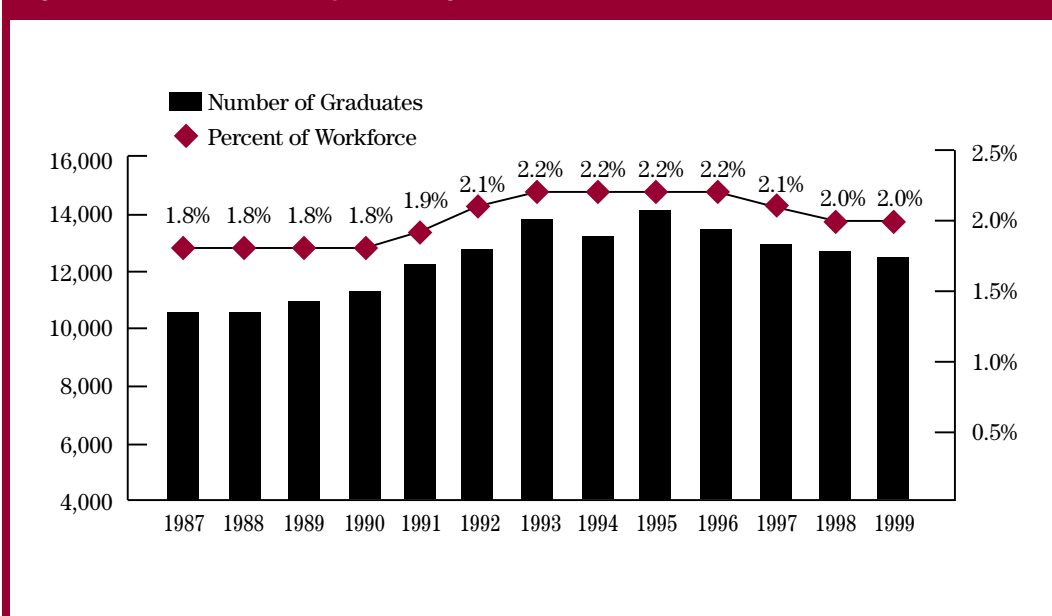
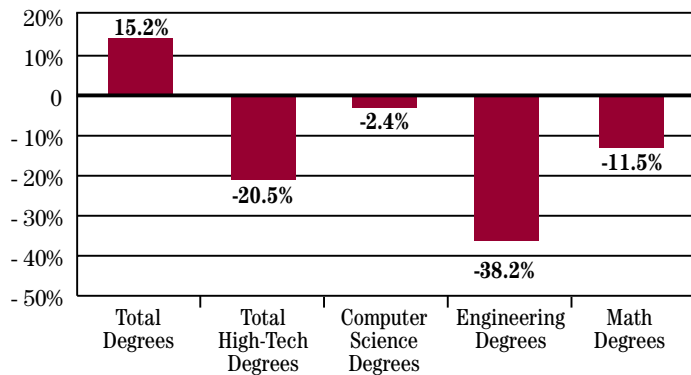


Figure 4: Technical Degrees Awarded Annually in New Hampshire between 1990 and 2000



Collaborating

A spirit of collaboration among a few organizations has been an important element in New Hampshire's transformation into a high-tech leader. Starting in 1999, four of these organizations—the New Hampshire College & University Council, the New Hampshire Higher Education Assistance Foundation, the New Hampshire Postsecondary Education Commission and the New Hampshire Charitable Foundation—began cooperating to develop a detailed analysis of the state economy. The collaborating groups sponsored additional reports and convened summits attended by a Who's Who of New Hampshire leaders, including the governor, state Senate president and major business leaders.

In a nutshell, the analysis found that New Hampshire had experienced significant economic growth without investing in higher education at nearly the level of other leading high-technology states. The research noted how the free rider approach had worked in the past, but also how occupational forecasts had underestimated the growth in college-educated positions, namely the fact that more than half of

future job openings would require a college degree. It showed how long-term demographic trends in New England mean the free rider approach to preparing a skilled workforce is neither sustainable nor economical.

Why? New England's relatively older population and slow population growth will provide New Hampshire with fewer potential in-migrants. Quality-of-life and environmental pressures created by recent in-migration also have many questioning the desirability of continuing to attract skilled workers to New Hampshire. At the same time, data indicate that a high percentage of New Hampshire's high school students fail to complete high school and that a surprisingly low percentage (compared to peer states) continue on to postsecondary schools. In combination, these trends suggest that the best opportunities for expanding the skilled workforce may stem from a stronger commitment to higher education within New Hampshire.

Finally, the analysis quantified the net economic benefits of increased investment in higher education. Even relatively modest investments in higher education, including a commitment to increase high school completion

rates and increase enrollments and graduations from New Hampshire institutions, would help meet the growing demand for college-educated labor and provide net increases in worker productivity and wages. An initially modest increase in state and local revenue of about \$3 million would yield more than \$20 million annually (or enough to justify additional investments) by year eight.

As a result of the findings from the analysis, the New Hampshire Forum on Higher Education was organized as a tri-sector (public, private and nonprofit) collaborative focused on helping New Hampshire higher education meet the state's education and training needs. Notably, the forum has been supported by newly engaged businesses such as Fidelity Investments and Tyco Corp., who share a common concern about New Hampshire's workforce and the need to increase the supply of knowledge workers. The forum has also been able to get more than 30 business, government and higher education leaders to agree to serve on its board.

The New Hampshire Forum will focus on issues of awareness, advocacy and increased access to postsecondary education. It will work to strengthen the image of New Hampshire higher education institutions as dynamic, successful places for educating state residents of all ages and for providing ongoing training for its workforce.

Ross Gittel is an associate professor at the University of New Hampshire's Whittemore School of Business and Economics and vice president of the New England Economic Project.

Brian Gottlob is president of PolEcon Research, a Dover, N.H.-based economic and public policy consulting firm. **Stephen Reno** is chancellor of the University System of New Hampshire.