

NEAL R. PEIRCE AND CURTIS JOHNSON

urvey the world scene in the early 21st century, seeking out the region with the best credentials for higher learning, and what place on earth emerges?

New England, of course.

But is New England really well positioned to build on its cachet, its genius as the region devoted to the "industry of the mind"? Can it protect its advantages with globally famed universities and research preeminence in fields from nanotechnology to biotechnology?

More specifically, can a region that relies on private higher education, that's slow to invest in public universities, that's not distinguished for its community college programs, adapt to the new realities of training people for 21st century work? Is the region ready to meet multiple challenges in a global climate that punishes the slow and the timid, and is merciless toward those who try to cruise along on past successes?

Last year, we conducted a six-state reconnaissance of strategic regional issues for the New England Council, the region's oldest business group. Immediately, we were struck by New England's abundance of great research and teaching universities, medical centers, Ph.D.s, inventors, patents, management consulting, computer and biotechnology firms, venture capital and amazing lead in federal research contracts. All this represents, cumulatively, a true global treasure.

But the more we've probed, the more perils we've discovered.

As Frank Newman, the distinguished higher education scholar and former college president who now

heads the Futures Project at Brown University points out, New England takes comfort in how many students enroll at its colleges, even though less than half of students from New England's own working-class families get past high school. If this trend persists, will major employers remain willing and able to fill jobs by recruiting talented people into an increasingly high cost-of-living environment?

Additionally, says Newman, college enrollment numbers always look good in New England, but graduation rates are another story. About half of students at New England's private colleges and universities and more than 60 percent at the region's four-year public institutions fail to earn bachelor's degrees within six years of starting. "It's a ton of young people showing up and a trickle leaving with the right training," says Newman.

The implications for the region's future labor supply are especially serious. New England already tends to experience labor shortages in a range of occupations between the scientists at the high end of the labor market and the service jobs filled largely by high school dropouts at the low end. And the region is not producing sufficient numbers of graduates to fill those middle-range jobs. During the 1990s, the number of bachelor's degrees granted rose by 18 percent nationally, but by just 2 percent in New England. The number of associate degrees granted rose by nearly 25 percent nationally, but actually *fell* 7 percent in New England.

A plan?

Northeastern University President Richard Freeland is among those suggesting that New England needs a comprehensive education and skills training system targeting young adults who would otherwise disappear from the productive economy. There are some isolated programs that attempt to fill the gap. The Boston Private Industry Council helps school-aged children acquire on-site job skills in such areas as health care and banking. And kids involved in programs that connect school and work are more likely to attend school each day, do well and go on to college. Surely the program is a factor in the 65 percent college-going rates the Boston Foundation tracked for Boston Public Schools in its recent Indicators Report. Meanwhile, programs such as Rhode Island's "Times Squared" try to inspire minority students with opportunities in math and science.

Still, such efforts won't matter much until they're distributed far and wide across the six states.

The problem is equally serious among adults who've never walked through any institution's admissions doors. Some fall below literacy levels required for the most basic types of jobs. As skill level demands on workers continue to escalate, so does this problem. Foreign immigration accounts for more than 80 percent of New England's 1990s population growth, clearly raising the stakes on literacy. But in Rhode Island, for example, which currently spends a little over \$1 million a year on literacy programs, 20 years would go by while those waiting in today's line got served. And the line gets longer every day.

What Do You Think?

The Citistates Group (www.citistates.com) is currently conducting interviews on strategic issues facing the Boston metropolitan area, to be included in a report to The Boston Foundation and the Barr Foundation and be made available to the Boston Globe and other media in the fall of 2003. The authors hope to mount a similar effort for all six New England states in 2004. Responses to this article may be emailed to the authors at: npeirce@citistates.com and cjohnson@citistates.com.

In some American regions, population growth pushes these issues into the background. Not here. In most New England states, there was a clear pattern of people moving out in the 1990s. Only the influx of immigrants avoided a net loss of population.

Does that matter? Absolutely. While we've found no one wishing to trade places with fast-growth Las Vegas or Atlanta, a stagnant population pattern drags down investment. If New England is such a great place, business investors may ask, why isn't it growing? While the Mountain states showed robust labor force growth of 30 percent in the 1990s, and the whole nation managed 12 percent growth, New England saw only 2 percent growth, and that thanks entirely to foreign immigration. Connecticut's labor force actually shrank. Says

Northeastern University economist Paul Harrington, "The danger is that New England is becoming France," with high taxation and extended public employment to address slow growth.

And there's at least one predictable aspect to stagnant population growth: labor shortages will intensify in critical high-skill fields where New England hopes to, indeed *must*, prosper in the years ahead.

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By the late 1990s, double-digit vacancy rates appeared in some New England professional occupations. Some firms, we've been told, decided to expand outside New England because of such skill shortages. Some highly professional technical work was jobbed out, eventually, to such countries as India, Ireland and Israel—places with strong supplies of technically trained university graduates.

New England's treasured hospitals and health care research facilities were hit especially hard. They continue to be impacted seriously by labor shortages. To date, we hear, one of 10 jobs in health care in New England is vacant. And educators can hardly claim the problem is outside their purview: the number of associate and bachelor's degrees awarded in health care fields in New England declined by 18 percent between the mid-1980s and 2000.

It seems that where the jobs are, students are not. The national and regional economies may still be stumbling, with many workers left unemployed. But some New England employers say they're desperate to find skilled workers. The shortages are in the very fields where SAT data show declining student interest—in the health care field, interest is down by a third. The gap between industry's demand for students graduating in technologies and the number showing up as new freshmen gets wider every year.

Kip Bergstrom, executive director of the Rhode Island Economic Policy Council, points to focus group efforts to find out why students run from math and science courses. Those focus groups revealed that by ninth grade, kids saw science as too hard or insufferably boring and disconnected from real life-or just something for geeks. Result: most students weren't even getting through Algebra I, which Bergstrom calls "essential weight training for the brain."

One would think there would be some very vocal worrying over this. But instead the usual public comment takes comfort in the record of recruiting talent from India or Ireland or anywhere where young people actually study math and science. If there is a trend worth watching now, it's companies deciding that it's just as effective and a lot less expensive to simply let the engineers stay in Bangalore and outsource the work to them.

Growing our own

New England has to grow its own skilled workforce. But how is it doing now holding on to the annual harvest of college graduates?

Data collected for a year 2000 report by the public policy group Mass Insight suggest that a least some New England colleges are attracting talent to the region for the long haul. The data, for example, reveal that 22 percent of Harvard graduates were residing in Massachusetts, though only 14 percent were originally state residents. For MIT, 21 percent lived in Massachusetts after graduation, though only 9 percent were originally from the state. At Boston College, 44 percent of graduates lived in the state, while 24 percent originated there.

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"Not so fast," says Harrington, who warns that surveys like that can be misleading. "Look," he says, "we grabbed one of 15 new U.S. jobs in the 1980s, and fell to one in 53 in the 1990s. There's something really systemic going on here and we'd better pay attention."

One explanation: high housing costs are pushing young people out of New England. We don't have hard numbers, but in a few months of interviewing people we've heard plenty of stories. One business executive told us his son stayed in Arizona after going to graduate school there because the housing prices were so much lower than in New England. We heard about a medical school graduate taking her elite New England credentials to Birmingham, Ala., and a job that paid the same as one in New England but also paid off her school loans. Are these stories harbingers of tough times to come, or just colorful exceptions to a stable comparative New England advantage?

A final thought about the New England future: is the region marketing its scientific and technical skills sufficiently to keep it on the curve of economic development in the United States and the world in the early 21st century?

We have our doubts. Despite a number of admirable but small efforts, the region has no counterpart to the strategic—and state-funded—alliances with businesses that such states as New York and California are now fostering. New York, with its many private institutions,

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is a little like New England. But in New York, a series of "centers of regional excellence" are being formed with roots running into both the public State University of New York (SUNY) system and the state's private universities. The state is pouring tens of millions of dollars into a new Center of Excellence in Environmental Systems based at the private Syracuse University. With \$37 million in up-front state investment followed by corporate and philanthropic contributions, the project is expected to secure \$170 million in early funding. The partners include 11 Central New York universities and research institutions, more than 30 corporations and local government arms.

Why did IBM make its largest grant ever—\$100 million—to SUNY Albany for a microchip research center, when Massachusetts alone boasts that almost 20 percent of its workforce is made up of scientists and engineers? Because, according to Mass Insight President William Guenther, the Bay State has "no long-term technology vision or strategy."

Competitor states—California, Texas and New York—are raising the stakes in capital investment in technology, even as they grapple with operating deficits just as severe, if not more severe, than those in New England. University of Texas system Chancellor

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Mark Yudof told us this spring that the SUNY maneuver set off a bit of shock-and-awe in Texas circles; it had them scrambling to nail down their own technology advantages. It sounds like the Texans will do just that. In this higher-stakes game, that old attitude sometimes attributed to premier New England institutions—"We're good, send money"—won't cut it anymore.

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