Chattanooga Times Free Press

Where are all of our engineers and scientists? Headed to simpler subjects and foreign lands, if we are to believe the cry being heard around the country, from corporate CEOs to university presidents.

A variety of recent reports call policymakers, business executives, and educators to the battlements, warning of a rising threat posed by hordes of scientists and engineers graduating from Chinese and Indian universities.

America's innovative capacity is at risk, they argue, and something must be done to improve K-12 science and math education and encourage more young people to pursue careers in technology. By their calculation we should always have more scientists and engineers than other countries.

These proposals miss the mark on four counts: The United States can't hope to continue producing more scientists and engineers than China and India; a weakness in our educational system is not the main reason we don't have more scientists and engineers; promising career opportunities for scientists and engineers aren't a sure thing; and global prosperity will not come from zero-sum competitions to dominate technology development.

Although it has been shown that the number of Chinese and Indian technology graduates has been widely exaggerated, it is only a matter of time before the United States is no longer tops in turning out technically competent graduates. After all, China and India each have four times our population.

But does it matter? Recall the cries of alarm in the 1950s, when the Soviet Union was producing more engineers than the United States. Or in the 1980s, when the majority of bright, young Japanese were said to be earning degrees in engineering, while their U.S. counterparts were getting business and law degrees.

Despite these perceived dangers, we did just fine in technological competitions with the Soviet Union and Japan, and not because we started graduating more engineers than those countries. Rather, U.S. technological strengths lie in our open and flexible economic system, which fosters innovation in companies big and small. What's more, we make good use of the technical skills, business savvy, and creativity of some of our college dropouts: Bill Gates is not an anomaly, but part of the 40 percent of the information technology work force that never completed college yet contributed to the productivity leaps of the past decade.

While no one would argue against improving K-12 science and math education, classroom deficiencies are not driving our shortage of scientists and engineers. Each year about 235,000 students in the United States earn undergraduate natural science or engineering degrees, but less than a third continue to work or study in these fields. And only half of those with graduate degrees - 36,000 new professionals - enter science and engineering occupations. When we lose so many qualified college graduates after 16 or 18 years of educational investment, it pays to ask why.

At the same time policy-makers call for more scientists and executives lobby for more H-1B visas for temporary workers, Wall Street analysts tell managers to move operations offshore. For any student reading the newspapers, the luster of these occupations is dimmed by the perception that these tech jobs are ultimately destined for foreign lands. Many of the managers and engineers in firms we have studied told us they are discouraging their own children from these careers.

But, in fact, job prospects are not so gloomy. Although some highly publicized decisions moved a number of technical jobs offshore, there also have been gains in the United States from new global collaborations and increased productivity. If the number of positions headed overseas is relatively small, perhaps firms trying to attract talent should be clear about their commitments to domestic jobs rather than just catering to Wall Street analysts by touting their offshore investments.

Similarly, clamoring for more H-1B visas to bring in foreign-born scientists and engineers is counterproductive. Instead, business executives should focus on more strategic use of global human capital in a two-pronged approach.

First, better retention of science and engineering immigrants graduating from stateside universities is more efficient than increasing the supply. Currently, about a third of foreign-born students head home after graduation or after a few years working here.

Second, the United States and other economies should get juiced by this global flow of human capital since the return migration paves the way for future collaborations. Rather than seeing this reverse flow as the defection of free agents to rival teams, policymakers and strategies should focus on enlisting them as collaborators, becoming part of a global all-star team.

Our goal as a nation should not be to award more engineering degrees than other countries, but to provide the broad education and flexibility that will enable our country to prosper in the global economy. Those worried about our technological position - whether they’re in the boardroom or classroom - should fret instead about the unmet need for more training of American scientists and engineers to fit into new global supply chains.

In an increasingly integrated world in which U.S. and foreign firms span the globe, U.S. policy should promote collaboration and nurture educational programs for those with the winning mix of technology, business, liberal arts and social skills.

Technonationalism is not the way forward. The United States should instead invest in education, research, and development with a mind to global community and markets. Policy should focus on developing collaborative advantage, not a futile attempt at supremacy of numbers.

Then the measure of our success will be innovation and broad-based prosperity, not degrees.

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