



## ON THE SUPPLY SIDE: MAKING AMERICA A SMARTER PLACE

■ Iconic images of one-room prairie schoolhouses, noisy neighborhood classrooms and ivy-covered colleges belie the fact that the United States emerged as an economic superpower without overwhelming brainpower.

For most of the nation's history, Americans were largely self-educated, if at all. In 1940, only a quarter of the population in their prime working years had graduated from high school and 5 percent held college degrees. As recently as 1965, half of U.S. workers still lacked a high school diploma. (See *Exhibit 4*.)

We're much better educated now. High school and college graduation rates are at all-time highs. Dropout rates have fallen to record lows. Americans have put enormous time, effort and money into education—not surprising, given that learning's rewards are big and consistent.

Over the years, we've built an extensive infrastructure to deliver the knowledge vital to our sophisticated, growing economy. The supply of learning activities arose in response to demand, expressed through both private markets and the political process.

Children begin learning in the home—and from the world around them—the day they are born. America's formal learning assets start with the educational system—the preschool programs, elementary and secondary schools, community colleges, universities and professional schools that cater primarily to younger people. Schools are public, private, state-chartered and home-based. In 2003, enrollment from kindergarten through graduate school reached nearly 70 million—a quarter of the U.S. population.

In terms of time spent in school, the United States ranks as the world's most educated nation, an average of 12.3 years per person. It leads in college graduates, too, at 28 percent of the population age 25 and over.

Knowledge doesn't come cheap. The United States leads the world in education spending, with \$11,480 per student on public and private schooling at all levels.

Millions of Americans are also learning through military training and vocational schools that teach everything from computing to the culinary arts. The Internet puts a staggering amount of information at our fingertips, pro-

viding opportunities for self-paced instruction. In 2003, 2.6 million U.S. students took college classes online.

People also learn later in life through adult education. Half of workers over age 16 took job-related courses in 2001, testimony to Americans' drive for success. Participation was highest among workers with more years of formal education. They also earn the most, suggesting that higher pay increases the incentive to learn.

Most companies offer some sort of training to build employees' skills in computers, management, communications and other areas. In 2004, per worker corporate spending on in-house education reached \$370, compared with \$52 two decades earlier. A growing industry provides companies with outside trainers and consultants who bring proven concepts and techniques to workplace education programs.

From kindergarten through adult education, Americans are busy expanding their knowledge. Our efforts have helped forge a high-quality labor force, but a 21st century economy will demand even more.

The challenge starts with our schools. For decades, studies have

shown American students trailing their overseas counterparts academically. The Organization for Economic Cooperation and Development's latest study of 29 countries, released in 2003, ranked American 15-year-olds 24th in math, 24th in problem solving, 19th in science and 15th in reading.

Perhaps more alarming, American students fare worse the more time they spend in school. Fourth-grade students rank close to the top on international tests. By eighth grade, students have slipped into the middle of the pack, but they at least score above the international average in math and science. By the 12th grade, U.S. students' performance has dropped off sharply, falling well below the international average in the two subjects. (See Exhibit 5 on page 18.)

These middling results are all the more glaring because the United States spends a lot of money on education. The Czech Republic, with just a third of the financial resources for secondary schools, produces students whose test scores equal Americans'. Australia, Canada, Finland, Japan, South Korea and other countries get more educational quality, as measured by test scores, for less spending per student.

U.S. schools may possess strengths that international tests fail to capture, but the data on the basics suggest a harsh lesson. The United States has *quantity* in education, leading the world in years of schooling. But it trails other countries in *quality*.

Take another look at Exhibit 3, which shows how years of schooling and economic freedom impact per capita GDP (page 12). The United States lies below the green line that reflects its peer group of most economically free countries. How can that be? America

ranks above average in that group, in both schooling and economic freedom.

The answer lies in the other factors that influence GDP. Nations with abundant natural resources tend to do better than the standard for their group. Oil producers Iran and Venezuela, for example, sit well above the line for the least-free countries. Tourism can provide a similar economic boost, suggesting why Spain, Italy, Greece and Portugal outperform their freedom-index peers.

Now take Japan, a country more efficient than most in converting

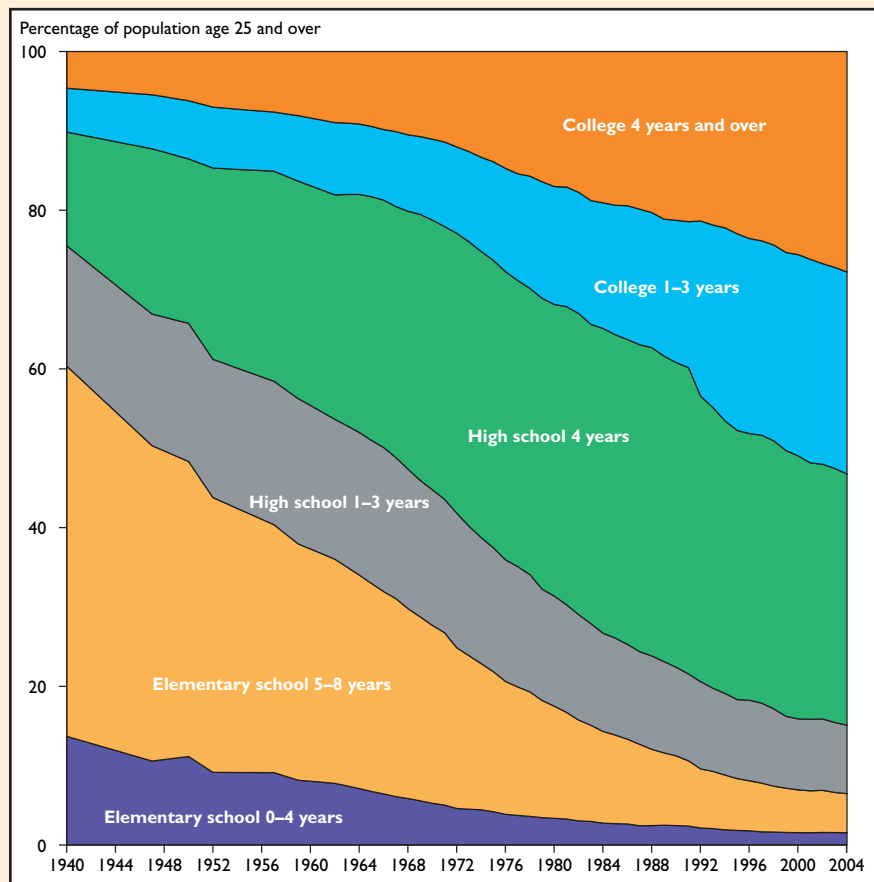
schooling into income. Japan's a big oil importer and a big tourist exporter. So it doesn't outperform for the same reasons as Venezuela or Spain. Japan's students, however, do well on international tests, indicating a high degree of proficiency in the classroom. Educational quality, as opposed to years in school, appears to be another key factor in generating GDP.

Educational quality could be a factor in why the United States lies below the green line. Data aren't available to compare test scores for all 108 nations in Exhibit 3. High school science and

**EXHIBIT 4**

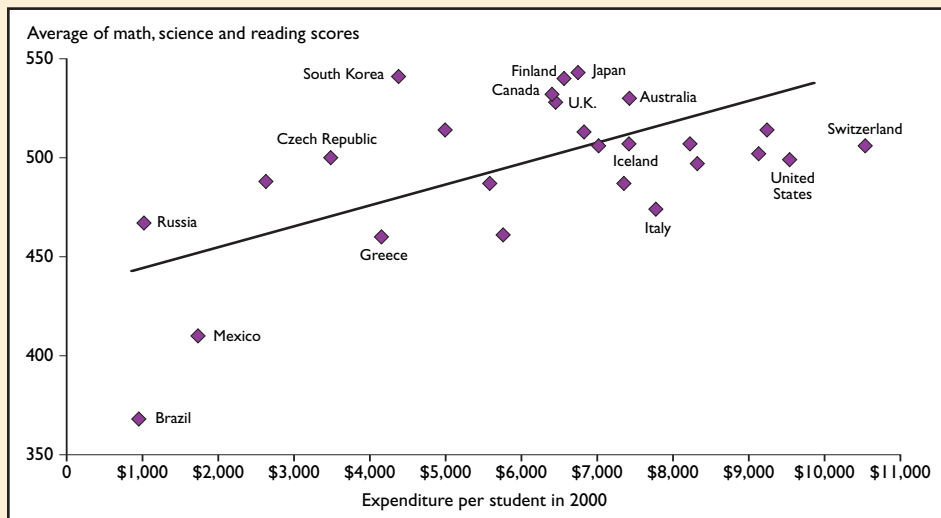
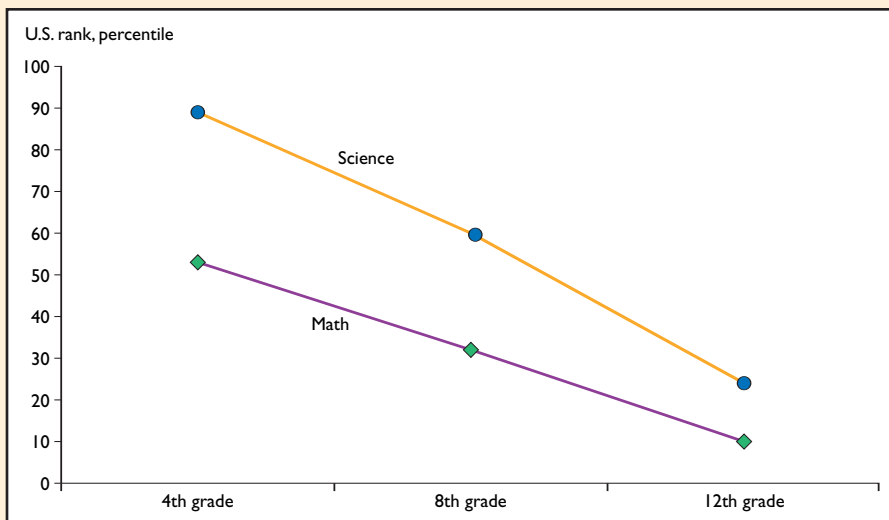
**An Educated America: A Relatively Recent Phenomenon**

Economic rewards have led Americans to seek more education. With each decade, a smaller percentage of the population has dropped out before finishing high school, while a greater proportion has gone to college. Today, more than half of Americans have at least some postsecondary education.



**AMERICAN STUDENTS  
LOSE GROUND . . .**

On international math and science tests, U.S. students' relative performance deteriorates as they move from the fourth to eighth to 12th grade. By the end of high school, they've fallen to near the bottom in educational achievement.

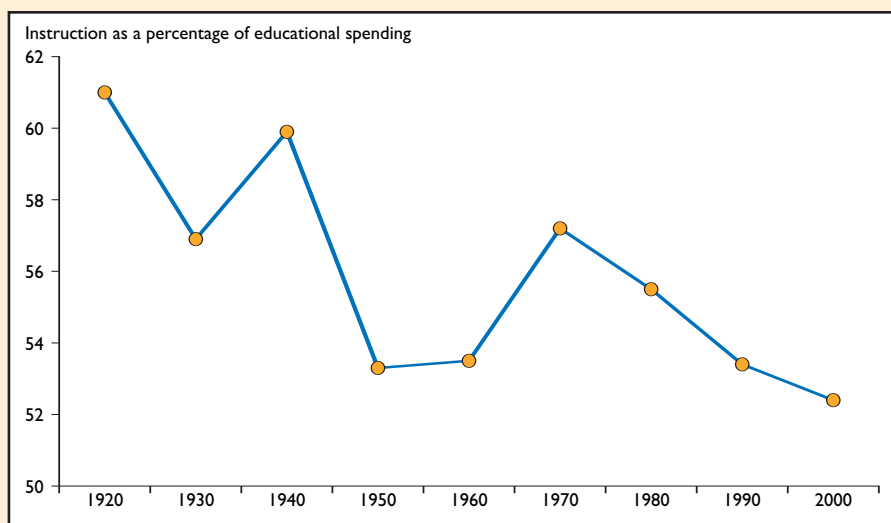


**. . . DESPITE HEFTY OUTLAYS  
FOR SCHOOLING**

America ranks near the top in spending per student on secondary education, but its 15-year-olds lag in math, science and reading. The solid line shows the positive relationship between spending and test scores. The United States and the other countries below it are underperforming.

**TEACHING GETS LESS  
OF THE MONEY**

Over time, a smaller portion of America's education budget has been going to teaching and a larger share to administration. Recent measures show teaching's slice of the pie shrinking to an all-time low of 52 percent, the result of a steady decline that began in 1970.



math scores only exist for about 20, mostly OECD countries. These data indicate that raising U.S. test scores to the OECD average could increase America's per capita GDP \$4,600 to \$5,200 a year. Improving educational quality would produce big gains for the United States.

Americans are keenly aware of their schools' shortcomings. Education has been a front-burner issue since at least 1983, when the National Commission on Excellence in Education released the galvanizing *A Nation at Risk: The Imperative for Educational Reform*.

The national debate on education has sparked reforms from Washington all the way down to the local level. Initiatives include computer-equipped classrooms, back-to-basics instruction and rigorous standardized testing.

We've tried more money and more teachers. In elementary and secondary schools, per student spending has risen in real terms from \$4,616 in 1980 to \$8,416 in 2002. The ratio of pupils to teachers fell from 27 in 1955 to 18.6 in 1980 to 16.1 in 2002. Still, American schools aren't what they should be—except at the college level.

The United States distinguishes itself in higher education. On the *London Times'* 2004 ranking of the world's 200 best institutions of higher learning, the United States took 62 spots, including the top four and seven of the top 10. Runner-up Britain trailed with 30 schools.

At the college level, students are free to deliver a verdict on quality with their feet. America's colleges and universities enrolled 586,000 foreign students in 2003, more than second-place Britain and third-place Germany combined.

The quality of American higher education contrasts sharply with our

declining performance in elementary and secondary schools. An important reason is competition. College students are mobile, and for more than a century both public and private institutions have competed for students without regard to where they live.

There's little competition in elementary and secondary education, where public schools dominate. Students aren't free to choose among education producers—unless their families can afford to move to districts with better schools or spend thousands of dollars for private schools. And many parents do make these sacrifices, indicating the high value Americans place on education.

Some economists advocate injecting competition and consumer choice into education, an approach Nobel laureate Milton Friedman champions in *Capitalism and Freedom* (1962) and *Free to Choose* (1980).

Friedman's idea of applying market principles to education has won adherents over the decades, particularly among free enterprise economists. They argue that stripping public schools of their monopoly power would spur quality and encourage innovation, just as it does in the private sector. Society could still support education with public funding, but parents would have an opportunity to shop around for what's best for their children. They'd shun bad schools; they'd favor good ones. Average quality would rise as better schools expanded to meet demand and worse ones improved or withered away.

Pilot programs featuring competition among schools have shown generally positive results in Milwaukee, Cleveland, New York, Dayton and other cities.<sup>2</sup> But the idea remains for the

most part untested on a large scale. Many educators are skeptical of the Friedman approach, saying schools aren't the same as cars, TVs and other consumer goods. Government mandates, economic inequality, community instability and other issues complicate the act of "buying" education.

Even supporters concede that market discipline isn't a magic bullet. Competition isn't effective without information. Markets work best when consumers receive timely, accurate data on product, performance and price. Even with good information, schools can't compete in a strait-jacket. Society can set broad standards, but schools can best adapt to students' needs when they're as free as possible from ponderous regulations.

Many Americans are working to improve our schools, but formal education by itself won't deliver the workforce we need for a knowledge-based economy. More Americans need to develop a habit of learning every day.

We're not there yet, even though many Americans are actively pursuing knowledge on the job. We could do more at work. Once off, we're enjoying one of the true blessings of American capitalism—more leisure. Those of us who strive to get ahead can use some of that time to better prepare ourselves for an age of global competition and knowledge-based jobs.

Many of us aren't doing that. The typical American aged 25 to 34 spends two hours, 20 minutes a day watching TV but just 17 minutes on educational activities. The learning effort drops off sharply as we grow older.

The United States offers plenty of ways to learn—at work and on our own. But many Americans aren't taking full advantage of them.