ON THE DEMAND SIDE: MARKETS MAKE KNOWLEDGE PAY MORE

Why does knowledge pay off so handsomely for Americans?

We're not necessarily any smarter than the rest of the world, but we're fortunate to live in a country with a dynamic economy, one offering vast opportunities and rewards for individual initiative. In turning learning into earning, America's free enterprise system matters as much as education and experience.

Our market economy rewards workers according to the value of what they produce. Formal education gives employees knowledge that makes them more productive, so they receive higher incomes. Learning by doing and workplace training make workers more productive, too, and they see it in their paychecks.

The impetus for productivity comes from the quest for profits. Companies gain by hiring workers with the education and skills to work a better way. Self-interest gives companies the incentive to recruit, train and reward the most productive workers, just as it motivates workers to learn and become more skilled.

Modern market economies create a demand for knowledge, but they don't put the same value on all education. Capitalism's invisible hand nudges workers toward the economy's needs by sending dollars-and-cents signals on how much society values one type of knowledge relative to another.

In 2004, starting salaries for graduates with bachelor's degrees averaged $78,593 in pharmacy, $52,539 in chemical engineering, $49,036 in computer science, $41,058 in accounting and $38,920 in nursing. Other disciplines aren't as lucrative. On their first jobs, graduates in English earned $31,113; in history, $30,344; in psychology, $28,230; and in journalism, $26,758. (*See Exhibit 2.*)

Market-driven earnings disparities also exist in occupations that usually don't require a bachelor's degree. Workers make an average of $95,272 as air traffic controllers, $71,444 as real estate brokers, $59,795 as dental hygienists and $57,077 as elevator repairers. Learning remains the key, of course. Air traffic controllers go through a rigorous training program, often in the military. Real estate brokers and dental hygienists take courses to prepare for licensing exams. Vocational schools and companies teach elevator maintenance.

Highly paid noncollege workers have found ways to acquire knowledge, talents and skills that meet the test of the marketplace. Those who don't invest time and effort in learning earn a lot less—$18,055 as parking lot attendants, $19,373 as sewing machine operators and $20,763 as janitors. All are well below the average U.S. income of $36,999 a year.

Using carrots and sticks, market-based economies put a high rate of return on learning. Nations without a tradition of economic freedom tend to lag in transforming knowledge into income. Nonmarket nations don't tie wages to productivity. They might educate their workers, but pay doesn't induce society to use knowledge effectively.

Still plagued by the legacy of three generations of central planning, Russia manages just a fifth of U.S. per capita GDP, although it averages only two fewer years of schooling. Poland, Romania and Bulgaria also trail in

EXHIBIT 2 More Carrots for Some Shticks

AVERAGE STARTING SALARY FOR BACHELOR'S DEGREE

$95,000

$85,000

Pharmacy

$75,000

$65,000

Petroleum engineering

$55,000

Chemical engineering

Computer science
Actuarial science

$45,000

Mathematics and statistics

Accounting
Economics and finance
Nursing

$35,000

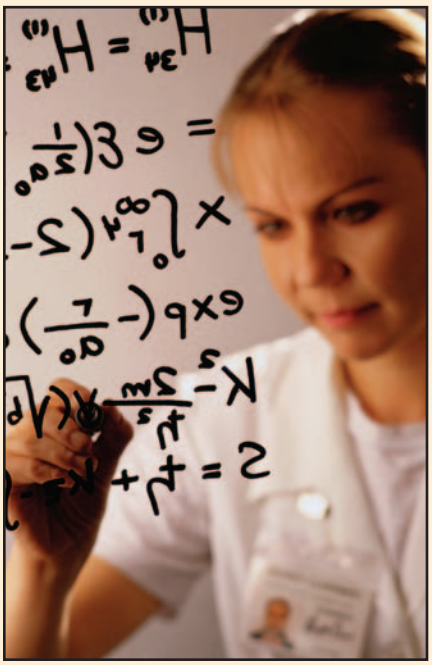
Marketing
Health and related sciences
English
History
Psychology
Journalism

$25,000

$15,000

A free enterprise economy doesn't place equal value on all learning. Among college graduates (left), starting salaries vary widely for different majors—from $26,758 in journalism to $78,593 in pharmacy. Pay differentials encourage students to major in disciplines highly demanded in the economy.

Markets offer the same kinds of incentives for jobs that usually don't require four-year degrees (right). Average incomes range from $95,272 for air traffic controllers down to $34,046 for auto mechanics. Learning still carries weight. The best-paid noncollege workers have acquired specialized skills through the military, vocational schools or on-the-job experience. Workers with the least education earn the lowest pay.



AVERAGE SALARY FOR EXPERIENCED WORKERS

Air traffic controller — $95,000

$85,000

$75,000

Real estate broker

$65,000

Fashion designer

Dental hygienist

Elevator repairer — $55,000

Construction supervisor

Flight attendant

Electrician — $45,000

Brick mason

Crane operator

$35,000

Auto mechanic

Highway maintenance worker

$25,000

Barber

Janitor
Sewing machine operator
Parking lot attendant

$15,000

making education pay off. (*See Exhibit 3.*)

Communist North Korea and Cuba boast relatively high levels of education, but their moribund, state-dominated economies offer few opportunities to put knowledge to use making money. The average North Korean gets more than nine years of schooling—about equal to the average Brit—but the country's per capita GDP is only $1,083. Cuba's eight years of education yield only $1,841 per person. The typical Spaniard is slightly less educated, but the country's per capita GDP is 12 times higher than Cuba's. The difference lies in Spain's move to capitalism a generation ago.

Today, more countries than ever are in the capitalist camp, but America stands out with one of the world's freest labor markets. More than most other nations, we allow companies the freedom to hire and fire. Employers decide how many workers they need, so they're not stuck with unproductive or unnecessary people on the payroll. At the same time, workers are free to leave one job for another in search of higher pay, greater satisfaction or career advancement.

Knowledge can't achieve its full economic potential without labor market freedom. Germany, Italy, France and other countries impose barriers that slow the movement of workers, such as lengthy appeals before layoffs and government-mandated severance packages. These policies, though well-meaning, interfere not only with the quest for productivity but also with incentives to learn.

When companies and workers are free to make job decisions, scarce labor resources are channeled to their best uses, making the economy more productive and allowing learning to yield greater dividends. What we know matters. Just as important, though, is an economic system that puts our knowledge to work.

EXHIBIT 3 Ignorance Is Misery; Knowledge Is Bliss.

Free economies get the most out of education. The top quarter of the 108 nations in the Index of Economic Freedom (in green) cluster toward the top of the chart, indicating they're getting a lot of per capita GDP from years of schooling. The least-free quarter (in orange) tend to get less from their education, which pushes them toward the bottom of the chart. The remaining countries (in purple) make up the middle two quarters of the index.

The solid lines summarize the positive relationship between years of schooling and per capita GDP for the three groups of countries. Nations above the line of their peer group are getting higher returns on schooling. Being below the green line suggests Americans aren't getting as much income as we could from our years in the classroom.