

Bureau of the Census

Statistical Brief

*Return to
Education*

More Education Means Higher Career Earnings

Is it worth it to stay in school and earn a higher degree? As data from the Census Bureau's Current Population Survey show, the answer is a resounding yes!

This Brief examines the relationship between education and earnings during the 1992 calendar year; it also demonstrates how the relationship has changed over the last two decades. Additionally, it provides estimates (by level of education) of the total earnings adults are likely to accumulate over the course of their working life.

You'll see that more education means greater earnings over a year's time; over the length of one's working life, these differences become enormous. Moreover, this relationship between earnings and education is now even stronger than it was back in the 1970's.

We're more educated than ever.

In 1993, about four-fifths of American adults aged 25 and over had at least completed high school; over one in five had a Bachelor's degree or higher. Both figures are all-time highs.



SB/94-17
Issued August 1994

U.S. Department of Commerce
Economics and Statistics Administration
BUREAU OF THE CENSUS

Professional degree holders have the highest earnings.

Adults aged 18 and over who worked sometime during 1992 earned an average of \$23,227 that year. But this average masked the fact that the more education they received, the more money they made. (See graph below.) Earnings ranged from \$12,809 for high school dropouts to \$74,560 for those with professional degrees (such as M.D.'s and J.D.'s).

Earnings differences compound over one's lifetime.

Using 1992 data, we estimated the earnings a person would accrue over a typical "worklife." Here's

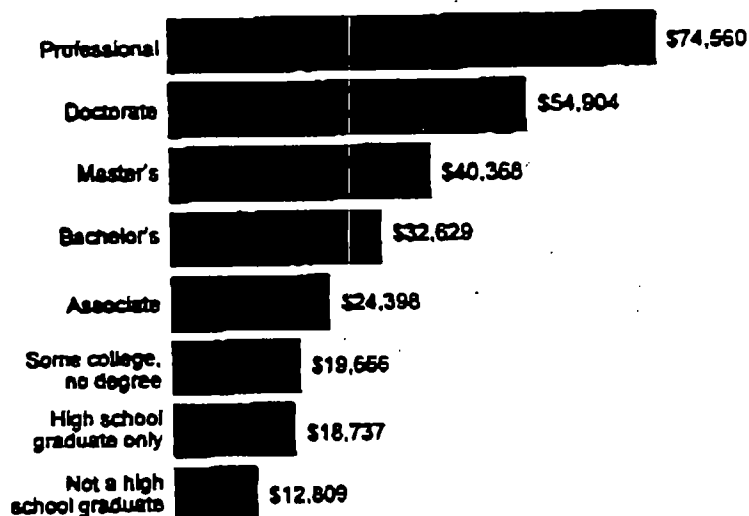
how we did it. First, we defined a worklife as lasting from ages 25 to 64 — a 40-year period. Then we began our calculations.

We started with high school dropouts. We took the 1992 mean earnings figure for persons of this group who were aged 25 to 34 and multiplied it by 10. The same thing was done for those aged 35-44, 45-54, and 55-64. Then, the four 10-year totals were added up. The result was an estimated lifetime earnings total for high school dropouts. This process was then repeated for each of the other seven educational levels.

These estimates dramatically illustrate the large earnings differences

Education Continues to be the Ticket to Higher Earnings

Mean annual earnings for persons aged 18
and over, by level of education: 1992



BUREAU OF THE CENSUS

STATISTICAL BRIEF

that develop between educational levels over the long term. As the graph below shows —

- High school dropouts would make (in 1992 dollars) around \$600,000 during their lifetime.
- Completing high school would mean about another \$200,000.
- Persons who attended some college (but did not earn a degree) might expect lifetime earnings in the \$1 million range.
- You could tack on nearly another one-half million dollars for holders of a Bachelor's degree.
- Doctorate and professional degree holders would do even better, at just over \$2 million and \$3 million, respectively.

Lifetime differences may become even more striking in the future.

These estimates of lifetime earnings assume that 1992 earnings levels will stay in effect throughout one's worklife. But the reality is that the value of the dollar continually changes. And recent history shows that the value of higher levels of education has risen faster than that of lower levels. When we compare 1975 and 1992 figures, we see that average earnings —

- Doubled for high school dropouts (from \$6,014 to \$12,809).
- Rose 2.5 times for those who were high school graduates only (from \$7,536 to \$18,737).
- Nearly tripled for holders of Bachelor's degrees (from \$11,574 to \$32,629).
- Tripled for those who held advanced degrees (from \$15,619 to \$48,653).

Keep in mind that in 1992 the consumer price index (which measures yearly changes in the value of the dollar) was 140, 2.5 times what it was in 1975. This means that the earnings of high school dropouts did not even keep up with infla-

tion, and high school graduates just barely managed to keep pace. Real wages rose only for persons with education beyond the high school level. If these patterns continue, lifetime earnings differences between low and high levels of education will become even more dramatic than current levels indicate.

More information:

Several Census Bureau reports have information on the relationship between earnings and education. These include —

- *Educational Attainment in the United States: March 1993 and 1992*, Current Population Reports, Series P20-476. Stock No. 803-005-00077-0. \$8.50.
- *What's It Worth? Educational Background and Economic Status: Spring 1990*, Current Population Reports, Series P70-32. Stock No. 803-044-00020-1. \$3.50.
- *Money Income of Households, Families, and Persons in the United States: 1992*, Current Population Reports, Series P60-184. Stock No. 803-005-30031-5. \$19.

■ *Education in the United States*, Series 1990, CP-3-4. Stock No. 003-024-08742-1. \$41.

To order any of these publications, call the U.S. Government Printing Office (202-512-1800).

Contacts:

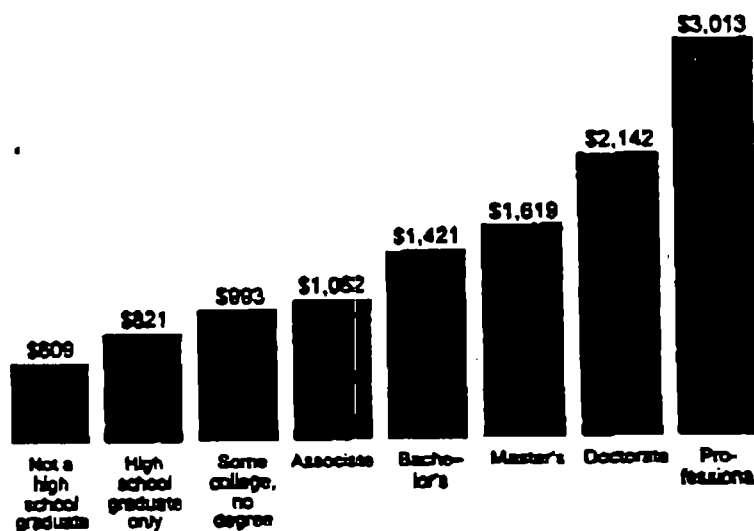
Earnings and education —
Robert Kominski
301-763-1154

Statistical Briefs —
Robert Bernstein
301-763-1584

This Brief is one of a series that presents information of current policy interest. It may include data from businesses, households, or other sources. All statistics are subject to sampling variability, as well as survey design flaws, respondent classification errors, and data processing mistakes. The Census Bureau has taken steps to minimize errors, and analytical statements have been tested and meet statistical standards. However, because of methodological differences, use caution when comparing these data with data from other sources.

Go to College, Make a \$Million

Estimates of worklife earnings, by level of education: 1992
(In thousands of dollars)



Economists, in Survey, Push Education and R&D Spending

By David Wessel

Staff Reporter of The Wall Street Journal

10601 Characters

03/06/97

(Copyright (c) 1997, Dow Jones & Company, Inc.)

WASHINGTON -- Two-thirds of academic economists surveyed by The Wall Street Journal believe the right government policies can boost the American economic growth rate by a substantial one-half percentage point a year, a profoundly optimistic view.

They have a harder time agreeing what it is the government should do, though. Given 10 choices, most economists responding to the poll said none of them would have a "major positive impact on growth."

Asked to pick one anyway, 43% say more government spending on education and research and development would give the biggest bang for the buck. Nothing else comes close.

"One of the few things that economists will agree upon is the fact that economic growth is very strongly dependent on our own abilities," says Patrick Conway, an international economist at the University of North Carolina at Chapel Hill. "If the government is willing to provide incentives to individuals to improve their abilities or to improve the rate at which we innovate in our economy, this will have a positive impact."

The economists' enthusiasm for education matches that of President Clinton, who has made education a centerpiece of his second-term economic strategy. Increasing federal spending on research and development, though favored by the president, is a lower priority in his new budget.

The Journal surveyed 1,500 economists randomly chosen from faculties of 100 leading U.S. economics departments and 10 major business schools. In all, 320 responded.

The economists' opinions about spurring economic growth contrast sharply with the prevailing Washington agenda:

- The economists don't see much reward from balancing the federal budget, the top economic priority of politicians. Only one in 10 of the professors say balancing the budget by 2002 would have a "major positive impact" on growth. Three-quarters say that amending the Constitution to require a balanced budget isn't sound economic policy.

- Only one-quarter predict a credible balanced-budget plan will reduce long-term interest rates by more than one-half percentage point. The Congressional Budget Office contends such a plan would trim rates by 0.7 percentage point, and Congress is counting on that.

- The economists don't see much benefit in the Republicans' cherished proposal to cut capital-gains tax rates or in a proposal, backed by both President Clinton and the GOP, to give the middle class a \$500-a-child tax cut. They would rather cut marginal personal tax rates, an option not on the table this year, or expand savings incentives for individuals as proposed by both Mr. Clinton and the GOP.

The majority of the economists polled expect the economy to expand between 2.0% and 2.5% a year over the next decade. Over time, an increase of one-half percentage point in the growth rate would make a huge difference: After 10 years, Americans would be enjoying \$375 billion more in goods and services.

Besides added spending on education and R&D, the bulk of the economists said the government could help the economy grow faster -- at

MORE

Economy cont.

least a little bit -- by more spending on infrastructure, deregulating more, reforming the tort and product-liability laws and replacing the income tax with a consumption tax.

The surveyed academics aren't all tax-and-spend liberals. Nearly one in five take the conservative view that reducing government spending (measured as a fraction of the overall economy) would have a major favorable impact on the growth rate. Half of those say this is the single most important thing the government can do.

Some emphasize that what matters most is how the government spends its money. "The level of government purchases is about right," says Miles Kimball of the University of Michigan, but he adds that the government spends too much on the elderly.

Politicians are never popular with academic economists, who complain their reasoned advice too often is spurned. They award Federal Reserve Chairman Alan Greenspan an A, but give Bill Clinton a B-, a harsher judgment than he gets from the public. Among professors who voted for Mr. Clinton, only 13% give his economic policies an A. The Republican Congress fares worse. On average, it earned a C for its economic policies.

Although economists are more conservative than other academics, professors tend to be more liberal than the general public. Half the respondents voted for Mr. Clinton. A quarter voted for Republican Bob Dole. And 25% voted for someone else or didn't vote.

The poll asked economists about issues outside their specialties, and several questioned the value of their own opinions. "There is tremendous uncertainty among research economists about the macroeconomic effects of policies," says Eric Leeper of Indiana University. "This uncertainty is rarely reflected by economists interviewed by the press."

The poll found strikingly little consensus on some issues, such as on ways the government might lift incomes of poor people. "We still don't know how much importance to attach to the various causes of the slowdown in . . . growth and the widening of the income distribution. Anyone who says otherwise is off base," says John McDonald of the University of Illinois at Chicago.

About one in three say boosting the nation's economic growth rate a modest one-quarter percentage point would do a lot for the poor. Roughly as many predict that spending more on education and training or on the Earned Income Tax Credit -- the \$28 billion a year in tax breaks and cash bonuses for low-wage workers -- would be a big help.

About half, 51%, say pursuing welfare reforms enacted last year would have a major or minor negative impact on the poor; 41% say it would have a positive impact.

On some other issues the survey found strong consensus:

-- More than 60% oppose making price stability the Federal Reserve's sole objective, as some in Congress have proposed. The Fed now is charged with maintaining maximum employment, stable prices and low long-term interest rates.

-- More than half say some Social Security funds, now invested exclusively in Treasury bonds, should be invested in the stock market, as advocated recently by a federal advisory commission. Two-thirds favor proposals allowing individuals to divert some payroll taxes into individual investment accounts as the individuals choose.

Among practitioners of what's sometimes called "the dismal science," there's a striking degree of optimism. One in five of the economists say the unemployment rate, now at 5.4%, can dip below 5% without sparking an inflationary outbreak. Most others say it can safely remain below 5.5%. Only a few years ago, many economists thought a jobless rate below 6% would spark inflationary wage increases.

And compared with the public, economists are more optimistic about prospects for their children. Seventy percent expect their children's

McKee-

generation to enjoy a higher standard of living than they do. Only 47% of the public agrees, according to a Wall Street Journal/NBC News poll.

In principle, the economists favor fewer restrictions on the labor market -- except when it hits home. Some 54% say the recent minimum wage increase wasn't desirable and 55% say the recent round of corporate downsizing is good for the nation's economy. But only 24% favor abolition of academic tenure.

Survey details are available on The Wall Street Journal Interactive Edition (<http://wsj.com>).

If the federal government wanted to increase the long-term economic growth rate, which one policy would have the most impact?

Spend more on education, R&D	43%
Reduce government spending as share of GDP	10%
Replace income tax with consumption tax	8%
Spend more on infrastructure	7%
More deregulation	6%
Cut marginal income tax rates	6%
Cut capital-gains tax	5%
Balance the budget by 2002	5%
Not sure/other	10%

If a credible plan to balance the budget by 2002 were enacted, by how much would the yield on 10-year Treasury notes fall?

0.1% to 0.5%	35%
Negligible amount	21%
More than 1.1%	21%
0.6% to 1.0%	15%

What has caused the widening wage inequality over the past 15 years?

% OF ECONOMISTS SAYING
HAS HAD A MAJOR IMPACT

Technological change	80%
Deterioration of public schools	35%
International trade	32%
Changing demographics	19%
Decline of unions	11%
Immigration	7%
Declining minimum wage	5%

Do you expect your children's generation to enjoy a higher standard of living than your generation?

	ECONOMISTS	PUBLIC
Yes	70%	43%
No	18%	47%
Not sure	12%	10%

How satisfied are you with the state of the U.S. economy today?

	ECONOMISTS	PUBLIC
Very/Somewhat Satisfied	82%	60%
Very/Somewhat Dissatisfied	17%	31%
Not sure	1%	2%

Source: The Wall Street Journal poll of academic economists

Journal Link: For the full text of the poll of economists, see The Wall Street Journal Interactive Edition at <http://wsj.com>

Quality Education: School Reform for the New American Economy

Executive Summary

**Anthony P. Carnevale
and
Jeffrey D. Porro**

**Prepared Under Contract by:
American Society for Training and Development
Contract Number: 433JAJ301013**

**U.S. Department of Education
Office of Educational Research and Improvement
1994**

In the new economic environment, production workers are more highly educated and work with a larger and more educated team to meet new competitive requirements.

- ◆ Front line workers use more autonomy and skill in combination with flexible technology and work processes to produce more per worker. In 1930 the value of output per production worker in manufacturing was \$22,000 compared to an output per shop floor worker of \$60,000 in 1993. Over the same period, the number of shop floor operators as a percent of the labor force has dropped from 27 percent to 15 percent.
- ◆ In order to meet new competitive standards, more highly skilled and productive front line workers are teaming up with a growing number of more highly educated workers. In 1930 for every production employee there were 12 non-production workers in various industries necessary to make the final sale; 4 more blue collar workers in transport; and 8 more highly educated workers in clerical, managerial, professional, and technical functions. Today, for every production worker it takes 21 nonproduction workers to meet new competitive standards. None of the 9 new workers are blue collar and all come from more highly educated sales, managerial, professional, and technical occupations.

The need to meet new standards by installing flexible technologies and high-performance work systems has accelerated basic changes in the structure of occupations favoring jobs that require education beyond high school.

- ◆ Between 1962 and 1992 farmers and production workers as a proportion of the total work force declined by 4 percent and 10 percent respectively. Only 5 percent of the decline in industry and farm jobs was due to increased imports. The vast majority of job losses was due to productivity increases through the installation of new technology and modern work practices.
- ◆ Over the same period, service workers increased by less than 1 percent.
- ◆ Virtually all of the increase in jobs since 1962 occurred among occupations that require college-level literacy and math skills. Sales, clerical, and administrative support workers increased by 6.38 percent. Managers, professionals, and technical workers increased by 7.4 percent.
- ◆ The shift to more highly educated workers was universal among American industries. For instance, today there are more managers, professional, and technical workers in service industries than there are production workers in manufacturing.
- ◆ Over the past decade, the scarcity of skilled workers has pushed up wages of those with postsecondary degrees and an oversupply of less skilled labor has driven down the wages of those with high school diplomas or less. College/high school wage differences doubled during the 1980s.

- ◆ Unemployment rates for college grads are at 3.2 percent compared with 6.8 percent for high school graduates and 11.4 percent for high school dropouts.
- ◆ Between 1992 and the year 2000, 89 percent of the jobs we will create will require postsecondary levels of literacy and math skills while only half the new entrants to the labor force are likely to possess postsecondary literacy and math skill levels. As a result, we should expect to see a continuation of the pattern of a surplus of low-skilled workers and a scarcity among high-skilled workers and an accelerating divergence between the wages of skilled and unskilled workers. 
- ◆ Between 1992 and 2000, we will likely create 13.2 million new jobs, while losing about 1.3 million farm jobs and another half million production jobs to modernization and increased productivity.
- ◆ Of the 13.2 million new jobs, only 1.5 million, about 11 percent of new jobs created before the end of the century will come in relatively unskilled service delivery occupations.
- ◆ The remaining 89 percent of the jobs, about 10.7 million, will come in occupations that require postsecondary levels of math and literacy. Among these 5.4 million jobs, about 41 percent of all new jobs, will be created in sales, clerical, and administrative support occupations. 
- ◆ The largest share of new jobs will come in managerial, professional, and technical occupations. We will create about 6.3 million such jobs over the period, about 47 percent of all new jobs. Interestingly, more than 80 percent of these new managerial, professional, and technical jobs will be created in service industries.
- ◆ Education barriers have dramatically reduced the ability of "trickle down" from economic growth to improve prospects for less educated workers. Simply increasing demand for more workers does not reduce poverty because the new jobs created require higher skill levels than typically found among poor Americans. For instance, in the 1960s, rapid economic growth reduced poverty rates by 10 percent. In the deficit-financed boom of the 1980s, however, the rising tide of economic growth did not raise all boats. By 1989 poverty had risen by a full 1 percent over the 1979 level.
- ◆ In the 1950s and 1960s, a single production worker with a high school diploma could earn a "family wage" -- enough money to support a spouse and child, buy a car, and own a home. In the 1990s it takes two earners with high school plus two years of postsecondary education to achieve the "family wage."

Integrating Academic and Experiential Learning

Available evidence suggests that the lack of transferability of academic learning into real-world