



FIVE REASONS TO SKIP COLLEGE: A REPLY

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PROSPERITY PROJECT**

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**A Report from the Productivity and Prosperity Project (P3),
Supported by the Office of the University Economist**

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Education decisions are among the most important choices people ever make. So we were surprised and disappointed to see an article so loosely reasoned and reckless in its conclusions as “Five Reasons to Skip College” published in Blank Slate at Forbes.com on 4/18/06. The article never provides a numerical assessment of the costs and benefits of going to college, uses statistics inappropriately and in a way that biases the conclusions against college, contains conceptual errors on how to evaluate the return on a college education, and greatly exaggerates the only substantive criticism of typical evaluations of the financial worth of a college degree.

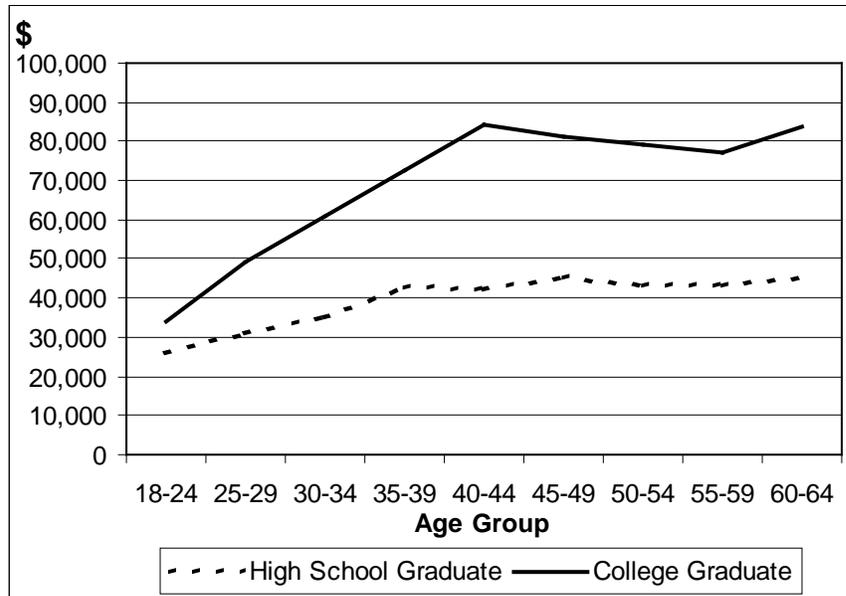
We hope that readers are only amused and not for a moment persuaded by Reason #5 for skipping college—the one that reminds us that many financially successful people, including Bill Gates, never finished college. There are an order of magnitude more examples of successful CEOs, doctors, lawyers, engineers, etc. who could not possibly have achieved their level of financial success without a college education. When weighing the evidence on whether college pays, surely it makes more sense to look at information from a large sample of people who did and did not complete college and compare their earnings experiences. The prospective student does not want to play the lottery; he wants to know how to play the odds.

Data on earnings by educational attainment are collected each year by the U.S. Census Bureau in its Current Population Survey. Chart 1 shows results from the most recent survey on mean annual earnings of men who were fully employed in 2004, arranged by age group and for two levels of education: high school graduates and those with a bachelor’s degree (but no further education). Because men are less likely to have career interruptions than women, data on male earnings at a given age provide a more reliable picture of the partial contribution of educational attainment to an individual’s earnings.

The data for 2004 show the same unmistakable pattern that data in other years show—that college graduates enjoy a huge earnings premium over those who only complete high school. More detailed data from the decennial census on earnings by individual age show that this premium is present almost immediately upon graduation (in contrast to what the authors claim in the last sentence of Reason #1). Using data for 2004 and looking at a lifetime of earnings from ages 18 to 65, college graduates on average earn \$1.28 million, or 69 percent, more than high school graduates. Of course, the information in Chart 1 is for people of different generational cohorts. There is no guarantee that a presently young worker will experience the same earnings advantage later in life. But if trends over the last 25 years are any guide, these earnings differentials are more likely to increase than to decrease.

The Blank Slate article correctly points out that the earnings advantage enjoyed by college graduates represents only the gross benefits of a college education. To properly evaluate the return on a college investment, the benefits must be compared with the full costs of going to college. These costs include not only tuition, fees, etc., but the earnings foregone during the four years a person is attending college rather than working. This latter component of cost, which teachers of introductory college courses in economics commonly use to illustrate the idea of opportunity cost, is given as Reason #1 for skipping college. We do not object to pointing out this type of cost. What we do not like is that the cost is left hanging out there without any numerical perspective, allowing the reader to conclude that these opportunity costs may be large enough to make college a poor financial investment. It is easy to show, and we

CHART 1
MEAN ANNUAL EARNINGS BY AGE AND EDUCATIONAL ATTAINMENT
IN THE UNITED STATES
Full-Time, Year-Round Male Workers, 2004



Source: U.S. Department of Commerce, Census Bureau, Current Population Survey.

will do so shortly, that the lifetime earnings advantage of college easily swamps this four-year opportunity cost.

Another significant and more obvious aspect of the cost of going to college is tuition which, as the authors point out, can run as high as \$160,000 for four years at an elite private college. What we object to here is the deceptive pairing of tuition costs for an elite school with data on average income earned by those who graduate from all U.S. colleges and universities, many of them much more affordable state universities. Since the only kind of earnings data that are widely available are for general college graduates, it is only fair to compare these earnings figures with average tuition expenses across all institutions of higher education.

Recent data from the National Center for Education Statistics show that average instructional expenses at all U.S. public and private research universities in 2003 were around \$15,000 per year. This places the average four-year cost of college at \$60,000, not \$160,000. It turns out that the earnings benefits from college are so great that college would be a good investment even at the much higher tuition figure. But this misuse of statistics leaves the reader generally suspicious about the objectivity with which the authors are writing their article.

What any article that speaks to the economic value of a college education must provide is a minimal, rudimentary numerical presentation of benefits and costs. This kind of analysis should include not only a full representation of costs, including the opportunity cost of

attending college, but also a recognition of the time value of money. A basic presentation of this kind of analysis is provided in Table 1.

Using the 2004 earnings data from the Current Population Survey, the simple lifetime sum of the earnings advantage of the college graduate from age 22 to age 65 is approximately \$1.36 million. However, as every college business student knows, to make good investment decisions, these benefits must be discounted and expressed in present value terms. At a 4 percent real interest rate, the present value of the lifetime earnings differential is \$484,000. The simple sum of the four-year costs of going to college is \$135,000, with 56 percent of that being foregone earnings and the rest being instructional expenses. Since these costs are incurred shortly after age 18, their present value is not much different from their simple sum—about \$127,000.

So should a potential college graduate skip college? The answer is clearly “No!” The present value of the net benefit of a college education is over \$350,000. A student who could successfully complete college but for whatever reason chooses not to do so is effectively turning down a gift of \$350,000 to be given to him at age 18.

Another way of expressing the investment value of a college education is to calculate its “internal rate of return.” This is the discount rate that would equalize the present value of benefits with the present value of costs. Using the same figures presented above, earning a college degree is seen to provide a real internal rate of return of nearly 12 percent. This means that if a student were to borrow the money to cover all of the costs of going to college and pay a real interest rate of 12 percent, he would have just enough in additional earnings over his lifetime to pay off the loan with interest. Actual borrowing rates are, of course, much less than this. So the student makes out on the deal.

TABLE 1
VALUE OF A BACHELOR’S DEGREE
Based on Mean Earnings of Full-Time Year-Round Male Workers
in the United States in 2004

Costs (Ages 18 to 21):	
Tuition, Fees, Government Appropriations	\$60,000
Foregone Earnings	75,200
Total Costs	135,200
Total Costs Discounted at 4 Percent Real Interest	127,400
Benefits (Ages 22 to 65):	
Earnings with a High School Diploma	1,764,900
Earnings with a Four-Year Degree	3,123,500
Differential in Earnings	1,358,600
Earnings Differential Discounted at 4 Percent Real Interest	484,300
 Net Present Value of a Bachelor’s Degree	 356,900
Internal Rate of Return	11.9%

Source: W. P. Carey School of Business, Arizona State University, from the U.S. Department of Commerce, Census Bureau.

The concept of internal rate of return allows the value of alternative kinds of investments to be directly compared. It is estimated that over the past 100 years, the average annual real return on stocks has been 7 percent. So an investment in a college education beats what is regarded as the best long-term financial investment—the stock market—and does so by a wide margin.

In Reason #3, the authors claim that to properly evaluate the financial worth of a college education, the student should consider what could have been earned if the tuition money—again the high \$160,000 figure associated with a Harvard education—had been invested in financial markets. When investments are evaluated in present value terms, as we have done in Table 1, there is no need to include this interest. The tuition expenses are paid now and so have an equivalent present value. Reason #3 only serves to confuse the analysis, again in a direction that works against college.

It is possible to do the entire analysis from a future value perspective, expressing all costs and benefits in future value terms, i.e., what would the future value of tuition expenses be if they were invested at say 4 percent over a 45+ year period from the time the person is in college until the time he reaches age 65. Using our four-year instructional expense total of \$60,000, this would represent a tidy sum—about \$350,000. But what the authors fail to point out is that if one takes this approach to the evaluation, the earnings differentials should also be expressed in future value terms. In other words, the benefits of college should be measured in terms of what you would accumulate by age 65 if you invested each year's college earnings premium at 4 percent interest. This amounts to \$3.1 million!

The most serious challenge the authors make to conventional evaluations of the returns to a college education, such as the one we have given here, is that the earnings premium observed for college graduates is partly a reflection of the fact that people who are successful in school are often those with high innate abilities and that these abilities also help them to be successful in the job market. In the authors' words, it is “smart” people who are most likely to finish college. They go on to earn high incomes not because of what they learned in college, but because they are smart (see Reason #2). This is a well-known problem that labor economists refer to as the issue of “ability bias” when estimating the effects of education on earnings. But to acknowledge that ability bias may distort our perception of the contribution of education to earnings outcomes does not mean that a college curriculum provides no value added—that what seems like an enormous effect from Chart 1 is all a mirage. In a recent survey article titled “The Causal Effect of Education on Earnings,” noted labor economist David Card concludes after reviewing 89 scholarly papers published over the last 30 years that the true average return on education is not much below the estimate suggested by simple education-earnings correlations.¹

We have no problem with the authors raising the issue of ability bias. But after citing the research and opinions of one dissenting economist, the authors try to plant the impression that innate smarts and not education are primarily responsible for financial success. This is completely at odds with the consensus view of labor economists. It borders on the absurd when the authors suggest that all people need is to be certified that they could have been admitted

¹ D. Card, “The Causal Effect of Education on Earnings,” in O. Ashenfelter and D. Card, *Handbook of Labor Economics* Vol. 3A, North-Holland, 2002.

into an elite college and that this will more efficiently serve the screening function of colleges. If college curriculum is so void of practical content, why do engineers and accounting majors receive much higher entry-level salaries than liberal arts majors? Why would employers ever look at a transcript or a GPA? It is also worth noting from our own numerical analysis that the earnings differentials between college and high school are so large that even if you reduced them by one-half, much more than what is suggested by studies of ability bias, the internal rate of return to a college investment would still be 7 percent, as high as the long-run return on stocks.

It is certainly possible that some colleges are overpriced and that some fields of study provide poor financial rewards. People who are not college prepared may waste their money if they enroll in college but then wash out in the first or second year. But the recent Blank Slate article offers a much broader indictment against a college education that is inconsistent with factual data and sound financial analysis.

THE PRODUCTIVITY AND PROSPERITY PROJECT

The Productivity and Prosperity Project: An Analysis of Economic Competitiveness (P3) is an ongoing initiative begun in 2005, sponsored by Arizona State University President Michael M. Crow. P3 analyses incorporate literature reviews, existing empirical evidence, and economic and econometric analyses.

Enhancing productivity is the primary means of attaining economic prosperity. Productive individuals and businesses are the most competitive and prosperous. Competitive regions attract and retain these productive workers and businesses, resulting in strong economic growth and high standards of living. An overarching objective of P3's work is to examine competitiveness from the perspective of an individual, a business, a region, and a country.

THE CENTER FOR COMPETITIVENESS AND PROSPERITY RESEARCH

The Center for Competitiveness and Prosperity Research is a research unit of the L. William Seidman Research Institute in the W. P. Carey School of Business, specializing in applied economic and demographic research with a geographic emphasis on Arizona and the metropolitan Phoenix area. The Center conducts research projects under sponsorship of private businesses, nonprofit organizations, government entities and other ASU units. In particular, the Center administers both the Productivity and Prosperity Project, and the Office of the University Economist.

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