



Weighing the Costs and Benefits of a College Education

Douglas Webber, Federal Reserve Board

Questions about college affordability and student debt have dominated headlines recently. As the price of attending college has steadily outpaced inflation, the necessity of having a college degree to be competitive in the labor market has also grown. That raises an obvious question: Is attending college still worth the cost? The answers are of great interest to both policymakers and prospective students.

From the perspective of financial returns, attending college is somewhat like starting a small business – because many startups fail or generate insufficient returns. Many students who enroll in college will not make it past the first year or two – and even for those who can persist until they earn degrees, there is an enormous amount of variance in how much money they will make after college. Financial success for graduates depends on some things that can be controlled and others that cannot.

In recent research, I combined data from a variety of sources to estimate the expected lifetime financial return from attending college, using various sets of assumptions. The main takeaway from my work is that the potential financial returns from earning a college degree remain great. College attendance is a good investment even for students who are at a high risk of not graduating.

Expected Financial Returns from College Attendance

Major fields of study chosen by college attenders greatly influence expected financial returns. For example, the average arts or humanities major has an expected net present discounted return of roughly \$80,000, while the typical science, technology, engineering, or math major has an equivalent expected return of nearly \$300,000. These estimates take into account substantial probabilities that students may not finish their degrees; if they can finish the returns from actually holding degrees are much higher.

My research focuses only on the financial returns from attending college. Obviously, there are many other many other ways that college attendance matters apart from increases in earnings, so the numbers generated from my work should not be used to justify changes such as the elimination of particular majors. Instead, my results on financial returns can be used to educate students about the large consequences of choices they make at ages 18 or 19. In my experience, college students have a fairly good sense of how various majors are ranked in terms of earnings potential. But they often have an incomplete or inaccurate sense of the magnitude of differences across majors.

I find that having student loans totaling \$30,000 and a college degree at age 22 is on average, a much better situation than peers who decided to skip college and go directly into the labor market at age 18. Furthermore, this advantage for those who graduate from college holds true for academically average, above average, and below average students alike. Still, students can risk less advantageous economic returns depending on their

majors or the institutions they attend. Private colleges tend to charge considerably higher tuition than public institutions, even though higher cost institutions do not necessarily deliver better quality results. Put another way, there are many public colleges that provide an education equal to or greater in quality than educations provided by some high-priced private institutions. Further complicating the picture is the fact that students who enroll in for-profit colleges generally reap lower returns – and experience higher rates of default on college loans – compared to students who study at non-profit public or private colleges.

In related work, my fellow researchers and I examine the long term economic returns from a college education specifically for students who have been put on academic probation and are at risk of being kicked out of college at some point. This investigation is of special interest given recent national attention to programs such as the Tennessee Promise program, a scholarship and mentoring program focused on increasing the number of students that attend college in the state. Critics of such programs argue that students who would gain new access are usually less prepared academically than current college students, so they may not get the same labor market benefits as past graduates. But this conclusion is mistaken, our research finds. Even students who perform poorly in the classroom receive a substantial return to college, as long as they graduate.

Improving the Odds of Successful College Investments

From the individual student's perspective, information and financial literacy are of paramount importance, and the College Scorecard provides excellent information on outcomes for students who study at various colleges. Knowing likely job prospects for graduates of various institutions can help prospective students and their families decide how much money to borrow. For example, an undergraduate degree in biology has roughly the same earnings power as a degree in art history, while the typical graduate from the University of Florida has a starting salary of \$51,100 compared \$44,000 for graduates from Florida State University – even though Florida State University costs \$4,000 more per year to attend. Students and their families should also educate themselves on the wide array of student loan repayment options, because programs like Income Based Repayment may offer sizable benefits for certain types of students.

Institutions can also do more to improve their students' job prospects and odds of financial success – for example by investing in internships that match students to opportunities as well as by reducing time to degree or boosting graduation rates. Many enrolled students fail to graduate in a timely manner because they work long hours at part and full-time jobs to pay college costs, especially at public institutions.

Various state and national policies could reduce student debt and improve student outcomes. Risk-sharing programs could make a real difference. Under such programs, colleges assume some of the costs of repaying loans if students default. This creates a strong incentive for institutions to take steps to reduce the chances of students defaulting. In addition, requiring colleges to do a better job of keeping records on student progress and result would allow for further detailed research on the effectiveness of various programs and student loan policies.

Read more in Douglas A. Webber, "Are College Costs Worth It? How Ability, Major, and Debt Affect the Returns to Schooling," *Economics of Education Review* 53 (2016).