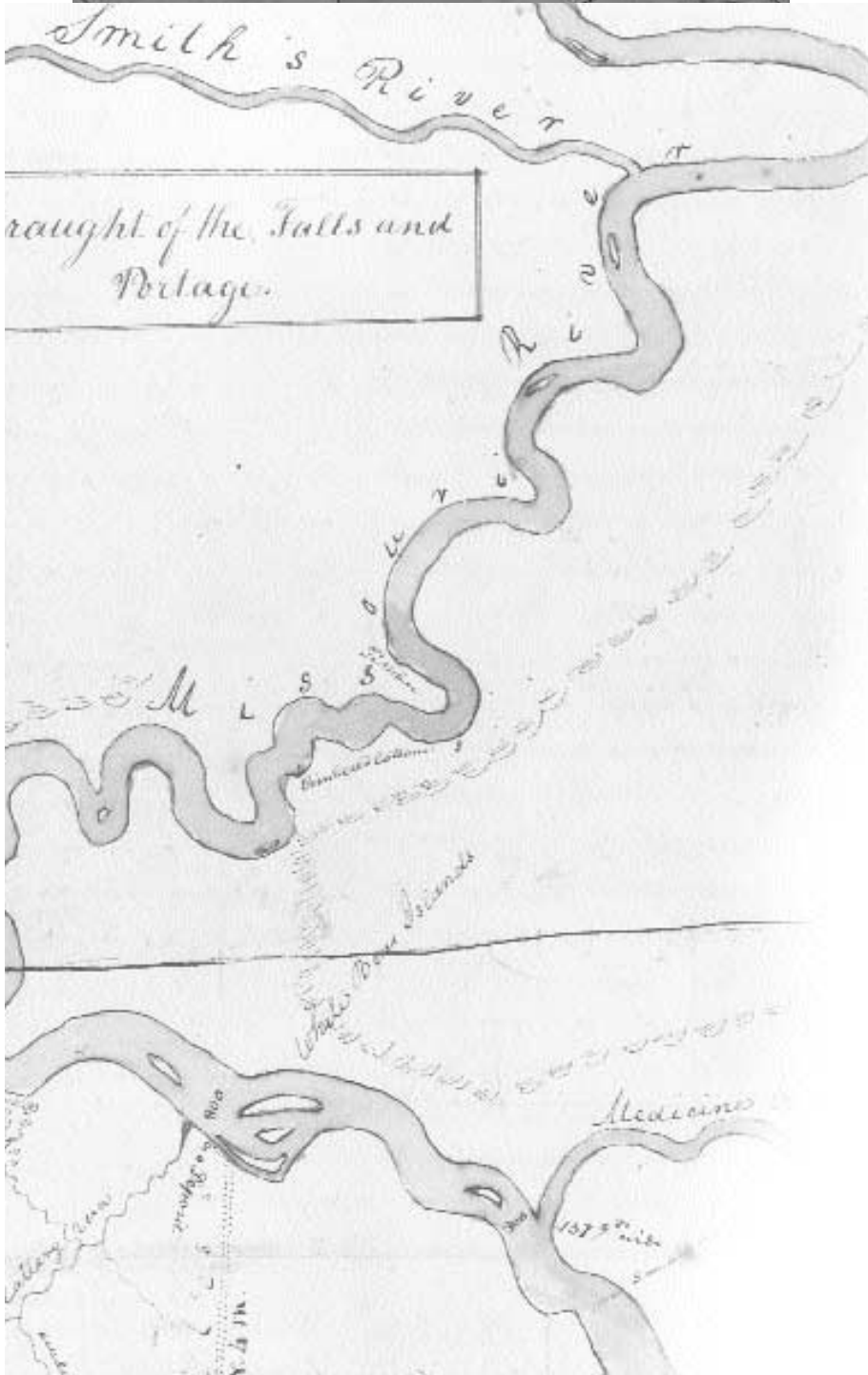




The Return to Attending a Highly Selective College

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Every year, families are faced with deciding whether a child who has been admitted to several colleges should attend a more selective, more expensive college, or a less selective, less expensive college. Is there a monetary return associated with graduation from a more selective institution? Caroline Hoxby, Morris Kahn Associate Professor of Economics at Harvard University, provides empirical data to answer that question, based on estimating the lifetime earnings of graduates of various colleges compared to the costs of attending those colleges.





The Study

There is general agreement in the literature that the return to education has been increasing since the early 1970s, and that the return has been increasing more for people of higher measured aptitude. To some extent, these trends are external to colleges and universities, and are probably wrought by changes in the broader environment related to technology and increased international trade. It is reasonable, though, to at least partially attribute the increasing return to education for people of higher measured aptitude to their attendance at selective colleges.

To compute the return to graduating from a more selective college, data on income, college attendance, and aptitude for a nationally representative sample of graduates were analyzed. These data are available in just three surveys: Occupational Changes in a Generation (a supplement to the 1973 Current Population Survey), the National Longitudinal Study of the Class of 1972, and the National Longitudinal Survey of Youth. They provide information about people who entered college in 1960, 1972, and 1982, respectively.

The study focuses only on the earnings of men because comparing their earnings over time is straightforward; women, in contrast, have changed their working and childbearing behavior significantly over the period of interest, making comparisons difficult. Fortunately, today, a female student can use recent men's earnings to make a reasonable projection of her own returns.

Colleges were divided into eight rank groups, based on Barron's Profiles of American Colleges' rating of their selectivity. Groups range from a high of rank one, including institutions such as Amherst, California Institute of Technology, Harvard, and Johns Hopkins, to rank eight, which includes all colleges that consider applicants who have grade point averages of C or above, and who rank in the top 75 percent of their graduating classes. All institutions below rank eight are considered non-competitive or non-selective and are not included in this study.

A review of average SAT scores for each college rank group over time shows that Barron's selectivity rankings do indeed reflect measured college aptitude, and that colleges in the top ranks have grown more selective. Average apti-

tude in colleges that have minimal selectivity has fallen over time, as has aptitude in non-selective colleges. These changes reflect the increasing tendency of students to be sorted among colleges on the basis of measured aptitude.

Results

Comparisons of earnings show that men who graduate from more selective colleges tend to earn substantially more by age 32 than men who graduate from less selective colleges. Projecting these earnings over a lifetime shows, for example, that a typical man who entered a rank one private college in 1982 can expect to earn \$2.9 million over his career, while a man who entered a rank eight private college at the same time can expect to earn about \$1.75 million over his career.

Moreover, the income differences between rank groups have been growing over time for post-1972 college entrants, particularly for more selective colleges. For example, there was a 6 percent income difference between men who entered in rank one and rank four private colleges in 1960, whereas the corresponding difference for men who entered colleges in 1972 or 1982 was about 20 percent.

It is obvious that career income differences swamp the differences in the total costs of attending more versus less selective colleges. Expressed in terms of the ratio of the earnings difference to the cost difference, the return to investment between men who entered rank one and rank three private

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colleges is 189.6. That is, rank one graduates earned 189 times more than the extra amount they spent to attend the higher ranked institution. This ratio is large not only because there are significant career income differences, but especially because there are small tuition differences between the colleges.

The effects of individual aptitude on lifetime earnings have not been controlled for in the analysis thus far; when earnings are corrected for differences in college admissions test scores, standardized test scores in English and mathematics, and high school grade point averages, the majority, but not all, of income differences between college rank groups is eliminated. That is, if we compare two men with the same measured aptitude, the one who graduates from a more selective college still tends to earn more over his career.

Table 1 shows the effects of moving up two selectivity levels among private colleges in terms of the ratio of return to investment and the years of earnings needed to break even on the move.

The ratios of return to investment vary widely, depending on which ranks the student is moving to and from. Further, the ratios are growing over time, indicating that attending a more selective college is an increasingly attrac-

tive investment. The best investments tend to be moves among highly selective colleges. Again, the large ratios for moving from rank three to rank one are generated not only by career income differences, but also by the small tuition differences between the colleges.

The number of years it takes to break even on the investment in a more selective college ranges from .3 to 5.8; that is, most students would earn their investment back in just a few years.

Although not shown here, effects also were calculated for moves from lower ranked public schools to higher ranked private schools. Results were similar to those for moves between private colleges, although not as pronounced.

To help today's families decide which institution a student should attend, returns to freshmen entering college in 1997 have been estimated. Career earnings patterns are assumed to match those of 1982 college entrants. The ratios of return to investment, while still favorable, are lower than for the 1982 entrants because real tuition is higher and incomes are assumed to be identical.

Table 2 shows predictions of the ratios of return to investment for 1997 freshmen, with the possibility of financial aid factored in. While the extreme choice presented is unrealistic—a “free ride” at the lower ranked

Table 1

Ratio of Return to Investment and Years Needed to Break Even for Moving Up Two Selectivity Levels

Corrected for College Aptitude and Based on Student Paying “List Price”

$$\text{Ratio of Return to Investment} = \frac{\text{Increase in Career Income for Moving Up 2 Selectivity Levels}}{\text{Increase in Tuition Payments for Moving up 2 Selectivity Levels}}$$

	Private College to Private College Ratio of Return men who entered college in:		Private College to Private College Years to Break Even men who entered college in:	
	1972	1982	1972	1982
from Rank 3 to Rank 1 College	104.1	128.5	0.3	0.3
from Rank 4 to Rank 2 College	51.8	63.0	0.7	0.5
from Rank 5 to Rank 3 College	12.6	7.2	2.7	4.7
from Rank 6 to Rank 4 College	5.8	14.6	5.8	2.3
from Rank 7 to Rank 5 College	10.2	25.5	3.3	1.3
from Rank 8 to Rank 6 College	12.9	10.0	2.6	3.4

lective college is an increasingly attractive investment ”

Table 2

Predictions for 1997 College Entrants Ratio of Return to Investment and Years Needed to Break Even

Corrected for College Aptitude

	Private College to Private College Ratio of Return				Private College to Private College Years to Break Even			
	full tuition to full tuition	average tuition paid to average tuition paid	compre- hensive cost to compre- hensive cost	free ride to compre- hensive cost	full tuition to full tuition	average tuition paid to average tuition paid	compre- hensive cost to compre- hensive cost	free ride to compre- hensive cost
from Rank 3 to Rank 1 College	not defined (rank 3 costs more than rank 1)		56.1	3.4	0	0	0.6	10.0
from Rank 4 to Rank 2 College	67.4	17.5	27.8	2.3	0.5	1.9	1.2	14.6
from Rank 5 to Rank 3 College	3.0	2.8	3.9	0.5	11.4	11.9	8.7	67.7
from Rank 6 to Rank 4 College	5.0	5.8	5.0	1.2	6.8	5.9	6.8	28.0
from Rank 7 to Rank 5 College	8.0	8.1	6.9	2.2	4.3	4.2	4.9	15.3
from Rank 8 to Rank 6 College	3.5	4.1	3.1	1.4	9.6	8.2	10.9	25.1

Predictions use actual 1997-98 tuition and assume that 1997 college entrants have the same earnings patterns as 1982 college entrants.

college versus paying full comprehensive costs at the higher ranked college—it is instructive.

The surprise of this data is that many offers of free rides are not better deals, and a number of offers are not even close calls. For example, the numbers suggest that a student should reject the free ride offer at a rank three private college to pay comprehensive costs at a rank one private college, because the student is predicted to earn that investment back 3.4 times over during his career. Rank three includes Barron’s “highly competitive” institutions, such as Carleton, Georgetown, and the University of Virginia. Only the free ride offer from a rank five college appears better than paying comprehensive costs at a rank three college, since it would take nearly 68 years—longer than one’s career—to recoup that investment.

Conclusion

The data indicate that people who invest in education at more selective colleges generally earn back their investment several times over during their careers, and that the return has been growing over time. This holds true across the entire spectrum of colleges. The data, however, con-

sider only the monetary benefits of attending a more selective college and do not address the important non-monetary aspects of collegiate choice.

One effect stemming from this analysis and the college choices it generates is that graduates of highly selective and expensive colleges often carry large debt burdens, and so tend to enter more lucrative fields to manage their loan payments. The social issue then becomes one of providing incentives to encourage well-educated graduates of top institutions to enter lower paying public service fields, such as teaching, where their skills are sorely needed. Efforts focused on mitigating the effects of sorting students among colleges, and the income disparities such a system begets, would benefit society as a whole.

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